APPENDIX C:

Hazard Assessments

Phase I Environmental Site Assessment

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Phase I Environmental Site Assessment
950 East 33rd Street
Signal Hill, California 90755
Volume I

February 12, 2020

Prepared for:

Venture Point Inc.
4685 MacArthur Court
Newport Beach, California 92660

Prepared by:

Mearns Consulting LLC
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February 12, 2020

via email

Venture Point Inc.
4685 MacArthur Court
Newport Beach, California 92660

RE: **Phase I Environmental Site Assessment**
950 East 33rd Street, Signal Hill, California 90755

Dear Messrs. Lee and Clement:

I am pleased to present this Phase I Environmental Site Assessment (Phase I ESA) for the 9.067-acre property located at 950 East 33rd Street in Signal Hill, California (the site) pursuant to the contract executed on January 21, 2020.

This Phase I ESA was conducted in accordance with ASTM guidance E 1527-13, ASTM Standard E 2600-15 and USEPA's All Appropriate Inquiries Standard (AAI Standard) as cited in the Code of Federal Regulations (40CFR 312) in order to evaluate whether historical and/or current site operations, and/or activities conducted at properties within a one-mile radius of the subject site, pose an adverse environmental impact to the site.

Conclusions –
The 9.067-acre site was an oil field since at least 1924; there are two previously abandoned oil wells onsite. Historically, the site had these two oil wells, aboveground storage tanks and oil field activities that visually impacted the land.

The Tesoro Service Station formerly located at the northwestern corner of the site has caused soil matrix, soil vapor and groundwater contamination.

Recognized Environmental Conditions onsite include: (1) the two previously abandoned oil wells; (2) the aboveground storage tanks and visible soil impacts in the 1928, 1947 and 1953 aerial photographs; and (3) the former Tesoro Service Station.

The adjacent contiguous property to the south is an oil field and historically had aboveground storage tanks. Adjacent properties to the north, east and west of the site are a mix of residential, commercial and industrial properties and oil fields including tank farms.

Recommendations -
Suspect building material samples should be collected and submitted for analysis of lead and asbestos. If lead-based paint and/or lead or asbestos containing building materials are present at concentrations that exceed threshold criteria, abatement of lead-based paint and lead or asbestos containing building materials by a licensed contractor and appropriate disposal of building materials should be performed prior to demolition of the buildings.

A Limited Phase II Environmental Site Assessment (Phase II ESA) should be performed on the approximately 9.067-acre site. The Phase II ESA should include soil matrix and soil vapor sampling adjacent to the former Tesoro

Service Station at the planned location of a new drive-thru restaurant, adjacent to the previously abandoned oil wells, at the planned location of an additional 11,500 square feet of retail, and at the planned location of 5,000 square feet of shopping.

Soil should be collected from 5-feet below ground surface (bgs) and 10-feet bgs or the depth of anticipated construction activities and submitted to a State of California certified laboratory for analysis of TPH-gasoline range, (TPH-g), TPH-diesel range (TPH-d), TPH-oil range (TPH-o), speciated carbon chains, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs) and total threshold limit concentration (TTLC) metals. Nested soil vapor probes should be installed at 5-feet and 10-feet bgs and sampled for VOCs.

A methane assessment of the site should be conducted pursuant to the City of Signal Hill Oil and Gas Code §16.24.080 and Property Development Guidelines to determine if methane concentrations warrant mitigation, i.e., installation of a vapor barrier and modified active vapor collection/diffusion system, during construction of any buildings.

A baseline human health risk assessment should be performed with the data generated during the proposed soil matrix and soil vapor investigations to determine whether residual concentrations of constituents detected in onsite soils and in soil vapor underlying the site pose a risk or an adverse impact to human health or the environment.

As the site contains abandoned oil wells redevelopment of the site will require City oversight pursuant to the City of Signal Hill Oil and Gas Code §16.24 and Property Development Guidelines.

A soil management plan should be prepared prior to any grading activities to be conducted onsite. This soil management plan should provide instructions for the contractor to implement in the event discolored or odiferous soils are discovered during any grading operations.

Should you have any questions or desire additional information, please do not hesitate to contact me at 310.403.1921.

Sincerely,

× Susan Mearns

Susan L. Mearns, Ph.D.

Mearns Consulting LLC

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EXECUTIVE SUMMARY

At the request of Messrs. Tom Lee and John E. Clement and to comply with the City of Signal Hill Project Development Guide (June 20, 2017) Mearns Consulting LLC performed a Phase I Environmental Site Assessment (Phase I ESA) for the 9.067-acre property located at 950 East 33rd Street in Signal Hill, Los Angeles County, California 90755 (the site).

The main objective of the Phase I ESA is to develop an opinion regarding the potential for soil, soil vapor or ground water contamination resulting from present or past activities at the site or from known hazardous waste sites in the surrounding area that might result in significant environmental impairment of the site. This Phase I ESA included a review of environmental agency databases, historical documents; visual observation of the site and neighboring properties. This assessment was performed in accordance with ASTM Standard E 1527-13, ASTM Standard E 2600-15 and the USEPA All Appropriate Inquiries Standard (AAI Standard) as cited in Title 40 of the Code of Federal Regulations (40CFR 312). A summary of the findings and conclusions are listed below:

Adjacent Properties

The adjacent properties include single family residential, commercial and industrial enterprises, and oil fields, including aboveground storage tanks. The adjacent properties are not recognized environmental conditions that could impact the site.

Site Historical Reviews

Agency and Environmental Database Review

The site name, Target, in addition to the addresses 950 East 33rd Street and 700 East 33rd Street, are listed on the federal and State databases searched, primarily due to the former Tesoro Service Station (GeoTracker – Target Store #T-292, ID. No. T0603701871).

CVS Pharmacy #17385 also is listed on federal and State databases at 950 East 33rd Street, Suite B.

There are numerous facilities listed on both federal and State databases searched within ¼-mile to 1-mile radius of the site. These facilities were determined not to be Recognized Environmental Conditions that could impact the site.

Asbestos-Containing Building Materials

Suspect asbestos containing building materials may be present due to the age of the original building. Prior to demolition it would be prudent to perform an asbestos building material survey and sample building materials identified as potentially containing asbestos to determine whether abatement of asbestos containing building materials by a licensed contractor was warranted.

Lead-based Paint

It is possible that lead-based paint was applied to the interior and to the exterior of the original building and subsequent renovations. Prior to demolition it would be prudent to collect and analyze paint chips to determine whether concentrations of lead-based paint warrant abatement prior to demolition.

Conclusions

The 9.067-acre site was an oil field since at least 1924; there are two previously abandoned oil wells onsite. Historically, the site had these two oil wells, aboveground storage tanks and oil field activities that visually impacted the land.

The Tesoro Service Station formerly located at the northwestern corner of the site has caused soil matrix, soil vapor and groundwater contamination.

Recognized Environmental Conditions onsite include: (1) the two previously abandoned oil wells; (2) the aboveground storage tanks and visible soil impacts in the 1928, 1947 and 1953 aerial photographs; and (3) the former Tesoro Service Station.

The adjacent contiguous property to the south is an oil field and historically had aboveground storage tanks.

Recommendations

Suspect asbestos containing building materials and lead-based paint should be tested and appropriately abated by a licensed contractor prior to demolition of the building if warranted.

A Limited Phase II Environmental Site Assessment (Phase II ESA) should be performed on the site. The Phase II ESA should include soil matrix and soil vapor sampling adjacent to the former Tesoro Service Station at the planned location of a new drive-thru restaurant, adjacent to the previously abandoned oil wells, at the planned location of an additional 11,500 square feet of retail, and at the planned location of 5,000 square feet of shopping.

A methane assessment of the site should be conducted pursuant to the City of Signal Hill Oil and Gas Code §16.24.080 and Project Development Guide (June 20, 2017).

A baseline human health risk assessment should be performed with the data generated from the Phase II ESA.

As the site contains abandoned oil wells redevelopment of the site will require City oversight pursuant to the City of Signal Hill Oil and Gas Code §16.24 and Project Development Guide (June 20, 2017).

A soil management plan should be prepared prior to any grading activities to be conducted onsite. This soil management plan should provide instructions for the contractor to implement in the event discolored or odiferous soils are discovered during any grading operations.

1.0 INTRODUCTION

This report summarizes the results of a Phase I Environmental Site Assessment (Phase I ESA) for the 9.067-acre property located at 950 East 33rd Street in Signal Hill, Los Angeles County, California 90755 (the site).

1.1 Purpose and Scope

The purpose of this report was to identify potential environmental problems at the site and at adjacent and surrounding properties at the time of the reconnaissance. This assessment was conducted utilizing generally accepted Phase I ESA industry standards in accordance with the ASTM Standard Practice E 1527-13 and the U.S. Environmental Protection Agency (USEPA) All Appropriate Inquiries Standard (AAI Standard) as cited in Title 40 of the Code of Federal Regulations (40CFR 312). The scope of work completed for this assessment included the following:

1. Physical characteristics of the site through a review of available topographic, geologic, wetland, and groundwater data.

2. Site history through a review of reasonably ascertainable standard sources such as fire insurance maps, historic topographic maps, aerial photographs and published materials.

3. Current site conditions including observations regarding the presence or absence of hazardous substances/petroleum products; generation, treatment, storage, or disposal of hazardous, regulated, or medical wastes; electrical equipment that utilizes oils which potentially contain PCBs; and storage tanks (above or below ground).

4. Review of previous environmental investigations, if any.

5. Review of environmental liens, if any.

6. Usage of adjacent and nearby properties to identify the potential for environmental problems (if present and/or suspected) to migrate onto the site.

7. An evaluation of information contained within federal and state environmental databases and other local environmental records, within specific search distances.

2.0 SITE DESCRIPTION

2.1 Site Location and Description

The 9.067-acre site is located at 950 East 33rd Street in Signal Hill, California 90755 (Figures 1 and 2). The latitude of the site is 33° 48' 59.41" north and the longitude is 118° 10' 53.32" west.

The legal description of the 9.067-acre site is all real property located in the City of Signal Hill, being a portion of Lot 15, the American Colony Tract as shown on the Map filed in Book 19 at pages 89 and 50 of miscellaneous records in the office of the County Recorder of said County, described as follows.

Beginning at a point 15.00 feet west of the east line of said Lot 15, said point being south 44.00 feet and west 45.00 feet from the center line intersection of thirty-third Street and California Avenue, thence south 89° 49' 35" west, parallel with the centerline of thirty-third Street, said centerline also being the north line of said Lot 15, 1031.97 feet; thence south 0° 10' 25" east 195.94 feet, to a point that is 25.00 feet northerly, measured at right angles, from the northerly right-of-way line of San Diego Freeway. Thence south 80° 43' 59" east parallel with the northerly right-of-way line 185.03 feet; to the beginning of a tangent curve concave southwesterly, thence southeasterly along said curve central angle 55° 06' 48" and radius 215.00 feet, an arc distance of 206.91 feet to appoint on said curve with radial line through said point south 64° 22' 49" west; thence leaving said north 89° 49'N 35" east 89.61 feet; thence south 0° 10' 25" east 42.00 feet thence north 89° 49' 35" east 413.00 feet; thence south 0° 10' 25" east 220.21 feet, thence north 89° 54' 50" east 201. 98 feet to the east line of said Lot 15, said point also being the west line of California Avenue, 60 feet wide, thence north 0° 6' 10" west along the west line of said California Avenue 593.48 feet, thence north 45° 07' 48" west 21.20 feet to the point of beginning, containing 9.067 acres more or less.

The Los Angeles County Assessor Number for the site is 7148-005-028. The 9.067-acre site is occupied by a 135,911 square foot slab on grade commercial building constructed in 1971.

2.2 Physical Setting - *Topography*

The driveway, parking lots and loading docks are asphalt. The topography is fairly level. Drainage is by sheetflow towards East 33rd Street and California Avenue.

Geology and Hydrology

The following information was obtained from the *Alternative Groundwater Remediation Work Plan, 950 East 33rd Street, Signal Hill, California, Target Store T-292, RWQCB File #I-11132* (Orion Environmental Inc., January 31, 2017). The site and surrounding area are composed of Holocene, Pleistocene, and Pliocene-age marine and alluvial sediments. The sediments include sand, silt, and clay deposits of varying thickness (California Department of Water Resources [CDWR], 2004).

Quaternary-aged alluvial aquifers in the area include the semi-perched, Bellflower, Gaspur, and Gardena aquifers. The Gage, Lynwood, and Silverado aquifers are semi-consolidated Pleistocene-age aquifers. The site monitoring wells are likely screened into the upper portion of the Gage aquifer. Pumping for groundwater production in the area is primarily from the Silverado aquifer (CDWR, 2004). Based on the variable depth of the Silverado aquifer, production wells in this aquifer are screened from 400 to 600 feet below ground surface. The site monitoring wells are screened from approximately 110 to 150 feet below ground surface.

The Newport-Inglewood fault zone trends in a northwest-southeasterly direction near the site. The Cherry Hill fault, which is part of the Newport-Inglewood fault zone, is approximately 1,800 feet to the south of the site (Orion, 2001b). The fault zone is apparently a barrier to groundwater movement (CDWR, 1961; CDWR, 2004; Orion, 2001b; Southern California Water Replenishment District [WRD], 2004).

The Wardlow-Airport fault trace has been mapped approximately 1,100 feet to the north of the site (Orion, 2001b). It apparently trends in a northwest-southeasterly direction, and may intersect the Cherry Hill fault northwest of the site. The Wardlow-Airport fault has been mapped only in the subsurface at a depth of approximately 6,500 feet (Orion, 2001b). It is not considered potentially active (City of Signal Hill, 1986).

The Cherry Hill fault escarpment forms part of the boundary between the West Coast Basin and the Central Basin, which are two sub basins of the Coastal Plain of Los Angeles County Groundwater Basin (CDWR, 1961; CDWR, 2004). The West Coast Basin lies on the southern, or down-dropped side of the fault, while the Central Basin is on the northern, or uplifted side, of the fault. Based on the basin boundary definition referenced in the West Coast Basin adjudication document and subsequent Water Replenishment District of Southern California (WRD) maps, the site lies within the Central Basin.

The Los Angeles River trends north-south approximately 1-mile west of the site. The Dominguez Channel trends circuitously north-south approximately 2-miles west of the site. The WRD purchases Colorado River water and injects the water into strategically located injection well barriers to prevent the intrusion of seawater into the production aquifers. The northern extent of the Dominguez Gap Barrier is approximately 2.5-miles southwest of the site. The Alamitos Barrier is a series of groundwater injection wells approximately 5-miles southeast of the site. The West Coast Basin Barrier is a series of groundwater injection wells approximately 10-miles west of the site.

Groundwater elevations have risen by an average of approximately 16-feet since Orion began groundwater monitoring in 1996. Since 2002, groundwater levels at the site have risen by more than 8-feet. The depth to groundwater in well MW-1, which is now screened below the water table, has risen from 141-feet below grade to 121-feet below grade. Rising groundwater elevations observed in monitoring wells at the site are consistent with regional data showing groundwater elevations increasing throughout the West Coast basin and portions of the Central basin. The increase appears to be due to a combination of groundwater injection at the Dominguez Gap barrier and reduced groundwater extraction within the West Coast basin.

Borehole drilling and lithologic logging at the site have shown that the vadose zone generally consists of fine- to medium-grained sand with occasional layers of silty sand and sandy silt. Groundwater is encountered in a sandy unit at a depth of approximately 120-feet below grade. The groundwater gradient is generally towards northeast. However, the hydraulic gradient (dh/dl) is relatively flat and estimated at 0.001 (feet per feet).

There were no visible indications during the site reconnaissance that the site is classified or could be classified as wetlands.

3.0 SITE RECONNAISSANCE

3.1 Current Site Use

The 9.067-acre site is accessible from the East 33rd Street and California Avenue. The 135,911 square foot retail store occupied by Target and CVS Pharmacy and surface level asphalt paved parking occupy the site. Susan L. Mearns, Ph.D. performed a visual reconnaissance of the site for potential environmental problems on February 6, 2020. The weather conditions were sunny and the temperature was approximately 48°F. Site photographs are included in Appendix A.

There are two previously abandoned oil wells onsite (1) Chevron U.S.A. Inc. "Field" 18, API 037-11543 and (2) Chevron U.S.A. "Field" 24, API 037-11549. According to the State of California Department of Conservation, Geologic Energy Management Division (CalGEM) oil wells files, "Field" 18 was reabandoned pursuant to division requirements in 2007 with plugging deficiencies at 4021'-3950', 1850'-1750' and 764'-660' noted; "Field" 24 was reabandoned pursuant to division requirements in 2007.

A Phase I ESA questionnaire was electronically submitted to the property owner on February 5, 2020; a copy will be added to the file when it is completed and submitted.

3.2 Adjacent Properties

The contiguous property to the south of the site is an oil field with three previously abandoned oil wells and four operating oil wells or water injection wells, in addition to settling basins. Single family residences are located to the east and north of the site. Oil fields including an operating unit and two aboveground storage tanks are located at the southeast corner of the intersection of East 33rd Street and California Avenue. Commercial and industrial enterprises are located north and west of the site. The I-405 Freeway is located south of the site.

3.3 Asbestos-Containing Materials

Most products made today do not contain asbestos. The few products made that still contain asbestos with friable fibers are required to be labeled. However, until the 1970s, many types of building products and insulation materials contained asbestos because asbestos fibers are strong, durable, resist heat, acids, and friction, i.e., they are virtually indestructible.

Asbestos was mined and used commercially in North America beginning in the late 1800s. Its use increased during World War II. It has been used in many industries; (1) the building and construction industry has used it for strengthening cement and plastics as well as for insulation, fireproofing, and sound absorption, (2) the shipbuilding industry has used asbestos to insulate boilers, steampipes, and hot water pipes, and (3) the automotive industry uses asbestos in vehicle brakeshoes and clutch pads. More than 5,000 products contain or have contained asbestos.

The U.S. Consumer Product Safety Commission (CPSC) banned the use of asbestos in wallboard patching compounds and gas fireplaces in the late 1970s because the asbestos fibers in these products could be released into the environment during use.

The USEPA issued a final rule banning most asbestos-containing products in 1989. This regulation was overturned by the Fifth Circuit Court of Appeals in New Orleans in 1991, allowing uses established prior to 1989. As a result of the Court's decision, the following specific asbestos-containing products remain banned: flooring felt, rollboard, and corrugated, commercial, or specialty paper. The regulation continues to ban the use of asbestos in products that have not historically contained asbestos, otherwise referred to

as "new uses" of asbestos (54FR 29460, 57FR11364, 58FR 58964, 59FR 33208).

Building materials that historically have contained asbestos include, but are not limited to: insulation of pipes and boilers, HVAC duct insulation, sprayed-in insulation, blown-in insulation, thermal paper products, electrical wiring insulation, acoustical plaster, decorative plaster, textured paint or coatings, fire blankets, fire curtains, fire doors, caulking, putties, joint compounds, adhesives, tapes, thermal taping compounds, high temperature gaskets, tiles, wallboard, siding, roofing shingles, roofing felt, base flashing, cement wallboard, cement siding, ceiling tiles and lay-in panels, asphalt floor tile, vinyl floor tile, vinyl sheet flooring, flooring backing, vinyl wall coverings, elevator brake shoes, elevator equipment panels, ductwork, electrical panel partitions, electrical cloth and cooling towers (USEPA 1993).
It is noteworthy that the presence of asbestos containing materials is not a health concern in and of itself; the materials must be in a degraded condition such that friable asbestos fibers are released and entrained in the breathing zone (USEPA 2017).

A survey of potentially asbestos containing building materials should be performed prior to demolition and suspect asbestos containing building materials should be removed by a licensed abatement contractor prior to building renovation and/or demolition of the existing building.

3.4 Lead-based Paint

Lead was added to paint to speed up drying, increase durability, maintain a fresh appearance, and resist moisture that causes corrosion. It is one of the main health and environmental hazards associated with paint.

Paint containing more than 0.05% (by weight of dried product) lead was banned for residential use in the United States in 1978 by the U.S. Consumer Product Safety Commission (16CFR 1303).

Lead-based paint is currently defined by the USEPA as paint with lead levels greater than or equal to 1.0 milligram per square centimeter (mg/cm), or more than 0.5% by weight. Lead-containing paint is currently defined by the USEPA as lead in new dried paint in excess of 90 parts per million (ppm) by weight (USEPA 2013).

Structures built before 1940 have a 87% chance of containing at least some lead paint, structures built between 1940 and 1960 have a 69% chance of containing lead paint, structures built between 1960 and 1978 have a 24% chance of containing lead paint, and structures built after 1978 are unlikely to have lead-based paint (USEPA 2013).

The routes of exposure from lead-based paint include ingestion of paint chips or soil onto which lead-based paint dust or chips have fallen, inhalation of lead-based paint dust and ingestion of lead-based paint dust after it has deposited on food (USEPA 2013). Children under the age of 6 years are particularly susceptible to adverse health effects due to the ingestion of lead.

It is noteworthy the exposure to lead in lead-based paint is from deteriorating paint that is flaking and peeling, during renovation and/or remodel activities that release lead-based paint dust into the atmosphere and from chewing or teething objects such as windowsills or ledges to which lead-based paint was applied (USEPA 2013).

It is possible that lead-based paint was applied to the interior and to the exterior of the existing building. Prior to any demolition activities it would be prudent to collect and analyze paint chips to determine

whether concentrations of lead-based paint require abatement prior to demolition.

3.5 Polychlorinated biphenyls (PCBs) in fluorescent light ballasts

PCBs are contained within the fluorescent light ballasts (FLB) capacitors and interior potting material of old, magnetic T12 lighting fixtures. The capacitor regulates the amount of electricity flowing into the lighting fixture, and the potting material insulates the FLB and reduces the "humming" noise. Because all PCB-containing FLBs currently in use have exceeded their designated life span, they are susceptible to leaking or rupturing. USEPA recommends all PCB-containing FLBs be removed from lighting fixtures.

PCB manufacturing in the United States was banned in 1976 due to the toxic effects of exposure to PCBs. The USEPA phased out the processing and use of PCBs, except in totally enclosed equipment in 1979. Some fluorescent lights installed before the 1976 ban or after 1979 may contain PCBs (40CFR 761.62 and 40CFR 761.125 (c)(1)).

The following criteria are provided to help identify FLBs that may contain PCBs: (1) FLBs manufactured before July 1, 1979 may contain PCBs, (2) FLBs manufactured between July 1, 1979 and July 1, 1998 that do not contain PCBs must be labeled "No PCBs" (3) if an FLB is not labeled "No PCBs," it is best to assume it contains PCBs unless it is known to be manufactured after 1979, and (4) FLBs manufactured after 1998 are not required to be labeled (USEPA 2017).

Care should be exercised during demolition activities and used fluorescent light bulbs should be disposed appropriately.

4.0 SITE HISTORICAL REVIEW

4.1 Overview

The history of the site was drawn from a review of historical aerial photographs, fire insurance maps, topographic maps and databases obtained from Environmental Data Resources, Inc. (EDR), from CalGEM, from City of Signal Hill Building files, and from the site reconnaissance.

The site was an oil field until the existing building was constructed in 1970. There are two previously abandoned oil wells onsite.

4.2 City of Signal Hill Records

The City of Signal Hill Building Department has records for the site dating to 1971 when a Certificate of Occupancy (CO) was issued for Van de Kamp's, a retail bakery. A 1974 CO was issued for Dorman's Inc., doing business as (dba) Gemco Automotive Center #527. A 1987 CO was issued for Target Stores. It appears additions to the Target Store were constructed in 1998 and in 2007. A permit to fence the former Tesoro Service Station during remediation was obtained by Orion Environmental Inc. in 2005. Copies of the City records are included as Appendix B.

4.3 Historic Topographic Maps

Historic topographic maps were reviewed for information regarding past uses of the site. Historical topographs were available and provided by EDR for the years: 1896, 1899, 1902, 1925, 1942, 1943, 1947, 1949, 1964, 1972, 1981 and 2012. Oil wells are depicted onsite on the 1943, 1947 and 1949. Aboveground storage tanks were depicted onsite in 1947 and 1964. The site in its current configuration is shown on the 1972 and 1981 historic maps. The site appears to be undeveloped land from 1896 through 1925. Copies of these topographic maps are included in Appendix C.

4.4 Sanborn Fire Insurance Maps

Sanborn fire insurance maps were not found for the site. A copy of this determination is included as Appendix D.

4.5 Aerial Photographs

Historic aerial photographs were reviewed for information regarding past uses of the site. Historical aerial photographs were available and provided by EDR for the years: 1928, 1947, 1953, 1963, 1977, 1979, 1981, 1989, 1994, 2002, 2005, 2009, 2012 and 2016. Copies of these aerial photographs are included as Appendix E.

The 1928 aerial photograph shows Chevron U.S.A. Inc. "Field" 18, API 037-11543, a few structures and oil field activity, including discolored soil, in the northwestern corner of the site later developed as the Tesoro Service Station. The remainder of the 1928 aerial shows undeveloped land.

The 1947 aerial photograph shows the same structures, discolored soil and aboveground storage tanks in the northwestern corner of the site later developed as the Tesoro Service Station. What appears as aboveground storage tanks also are visible along the southern property boundary of the site.

The 1953 aerial photograph shows the same structures and aboveground storage tanks in the northwest corner of the site later developed as the Tesoro Service Station, although the soil no longer appears discolored. The apparent aboveground storage tanks along the southern property boundary are no longer visible, instead a structure along the southeastern corner of the site is shown.

The 1963 aerial photograph shows undeveloped land where the Tesoro Service Station was later developed; the aboveground storage tanks and structures are no longer visible. The structure on the southeastern corner of the site still is visible.

The 1977, 1979, 1981, 1989 and 1994 aerial photographs show the site developed with the original building and surface level asphalt paved parking. The Tesoro Service Station is visible in the northwestern corner of the site.

The 2002 aerial photograph shows the building with the 1998 addition, the Tesoro Service Station is no longer visible. The 2005 aerial photograph shows the building with the 1998 addition, the northwestern corner of the site formerly occupied by the Tesoro Service Station now appears to have lateral piping, and aboveground storage tanks, possibly the soil vapor extraction system Orion Environmental, Inc. operated.

The 2009 aerial photograph shows the building with the 2007 addition; the northwestern corner of the site formerly occupied by the Tesoro Service Station appears unchanged from the 2005 aerial.

The 2012 and 2016 aerial photographs show the site in its current configuration, the northwestern corner of the site appears as a parking lot.

4.6 CalGEM Well Records

A request for well records was made to the State of California Department of Conservation, Geology Energy Management Division (CalGEM). Oil well records for the two previously abandoned oil wells located onsite are included as Appendix F.

Chevron U.S.A., Inc. "Field" 18, API 037-11543 – was originally drilled in 1926 and redrilled in 1930. The well was abandoned to CalGEM requirements on March 4, 1940. The casing record in 1939 was 13" casing cemented at 788'; 8 ¼" casing cemented at 4230'; water shut off approved; the 5 ¾" casing was cemented at 6210', water shut off approved, perforations 4880'-4870', 4830'-4785', 4770'-4745', 4740'-4730', 4650'-4610', 4525'-4485', 4435'-4405', 4350'-4230', pulled from 4051'; the 4 ¾" perforated the liner 6120'-6366'; total depth present hole 7483'; plugged with cement 7483'-6828'; 6500'-6442'; 6366'-6190'; 6120'-6106'; 4848'-4776'; 4550'-4385'; 4375'-4185'; 4048'-4021 and 670'-627'; junk (1st hole); the 6 ¼" casing was landed at 4529', perforated 4273'-4529', pulled from 4273'; total depth (1st hole) 4529'; plugged with cement 4529'-4280'.

"Field" 18 was reabandoned in 2007 by AllenCo. CalGEM noted three deficiencies: (1) plug from 4021'-3950' not placed; (2) unable to cavity shot at 1850' or plug 1850'-1750'; unable to place plug from 764'-660'. CalGEM stated the requirements of CalGEM could NOT be met and stated "Field" 18 was not to be built over without further consideration. The casing record in 2007 was 13" cement at 788'; 8 ¼" casing cemented at 4230' water shut off, shot and pulled from 764'; 5 ¾" casing cemented at 6210' water shut off, cut and pulled 4730' and 4870', perforated at intervals 4830'-4230', shot 4170', 4100' and 4051', pulled from 4051', junk below 4828' and 4051'; 4 ¾" ID casing 6120'-6360', perforated 6120'-6366'. Total Depth (present hole) 7483', Plugged with cement 7483'-6828', 6500'-6106', 4848'-4776', 4560'-4385', 4375'-4185', 4048'-4021', 627'-5'.

CalGEM's Construction Site Review Program reviewed the well file for "Field" 18 in April 21, 1998, May 6, 1998, February 7, 2007 and May 10, 2007. CalGEM stated no further work was required for "Field" 18 in their April 21, 1998 correspondence as "Field" 18 was located approximately 170-feet from

the proposed building expansion in the parking lot. CalGEM stated in their May 6, 1998 correspondence "Field" 18 was not abandoned to current standards but no additional well work is required. CalGEM stated in their February 7, 2007 correspondence that "Field" 18 must be abandoned or reabandoned to current standards or equivalent standards, a bond securing the work must be filed with CalGEM, a gas vent must be placed on "Field" 18 after an approved methane gas leak test of the well head. The May 10, 2007 CalGEM correspondence stated it supersedes the February 7, 2007 review, and stated "Field" 18 was not abandoned to current standards but no additional work was required, a well vent system is recommended and an approved methane gas leak test was performed on April 5, 2007. Copies of these letters are included as Appendix E.

Chevron U.S.A., Inc. "Field" 24, API 037-11549 – was originally drilled in 1944 and abandoned to CalGEM requirements in 1947. The record states junk (1st hole) drill collar and bit 3792'-3939', total depth 3939', plugged with cement 3939'-3792'; 10 ¾" casing cemented at 20'; 5 ½" cement at 5050', cut and pulled 730', four test holes at 4242', water shut off, perforated at 4835'-4770', 4725'-4610', 4300'-4255', bad 3686'-3702'; junk (in hole) 2 ½" tubing 4100'-4763'; total depth (present hole) 5047', plugged with cement 3893-3864' and 3730'-3662'. The hole could not be cleaned out below 3893'.

"Field" 24 was reabandoned in 2007 by AllenCo. CalGEM approved the reabandonment. The casing record in 2007 was 10 ¾" cement at 20'; 5 ½" cement at 5050', cut and pulled 727' and 1845', perforated at 4242', water shut off, perforated at 4255'-4300', at intervals 4470'-4825'. Junk below 4100'. Total Depth 5050'. Plugged with cement 3892'-3864', 3730'-3600', 1845'-1591', 740'-588' and 100'-6'.

CalGEM's Construction Site Review Program reviewed the well file for "Field" 24 in April 21, 1998, May 6, 1998, February 7, 2007 and May 10, 2007. CalGEM stated no further work was required for "Field" 24 in their April 21, 1998 correspondence as "Field" 24 was located under an existing structure. CalGEM stated in their May 6, 1998 correspondence "Field" 24 was not abandoned to current standards but no additional well work is required. CalGEM stated in their February 7, 2007 correspondence that "Field" 24 must be abandoned or reabandoned to current standards or equivalent standards, a bond securing the work must be filed with CalGEM, a gas vent must be placed on "Field" 18 after an approved methane gas leak test of the well head. The May 10, 2007 CalGEM correspondence stated it supersedes the February 7, 2007 review, and stated "Field" 24 was not abandoned to current standards but no additional work was required, a well vent system is recommended and an approved methane gas leak test was performed on April 5, 2007. Copies of these letters are included as Appendix E.

4.7 Tesoro Service Station

The following information is from *Remedial Action Plan for Impacted Soil, 950 East 33rd Street, Signal Hill, California, Target T-Store 292, RWQCB File No. I-11132* (Orion Environmental, Inc. August 28, 2006). The northwestern corner of the site was originally developed as a service station between 1970 and 1974. Three 12,000-gallon gasoline underground storage tanks (USTs) and one 1,500-gallon waste oil UST were removed from the site in November 1991. Subsequent investigations detected gasoline-impacted soil at the site. Soil is impacted by total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, and xylenes (BTEX); and oxygenates including methyl tert-butyl ether (MTBE) and tert-butyl alcohol (TBA).

The area of impacted soil was delineated by soil investigations conducted between February 1993 and September 1994. The initial soil investigation was followed up with two step-out soil boring investigations to define where TPHg and benzene concentrations were above 100 milligrams per

kilogram (mg/kg) and 0.3 mg/kg, respectively (McLaren/Hart, 1994). The impacted unsaturated zone soil spans an approximately 100-foot-diameter circular area, to a maximum depth of approximately 120 feet below grade.

One groundwater monitoring well (designated as well MW-1) was installed onsite in February 1993. The depth to groundwater measured in February 1993 was approximately 141 feet below grade. During the May 1995 groundwater monitoring event, groundwater was encountered approximately 131 feet below grade and approximately 3 feet of free product was observed in the monitoring well (Orion, 1995).

In May 1996, a site assessment was conducted to investigate the extent of gasoline-impacted groundwater and free product detected in well MW-1. Three groundwater wells (MW-2 through MW-4) were installed. In 1996 and 1997, a free product removal program was conducted in well MW-1 and approximately 5 gallons of free product was removed.

Between 1997 and 2001, wells MW-5 through MW-8 were installed to evaluate offsite downgradient groundwater conditions. The well installations are described in several reports (Orion, 1996, 1997, 2000, 2001a).

Free product was detected again in well MW-1 intermittently between October 2004 and February 2005. Approximately 1 gallon of free product was removed until free product was no longer detected in March 2005.

In June 2005, wells M-1A and MW-9 were installed on site. Groundwater well MW-1A was installed to replace well M-1 whose screen interval was submerged beneath the water table due to rapidly rising groundwater levels at the site. Downgradient well MW-9 was installed to assess and monitor the downgradient extent of impacted groundwater at the former service garage. Groundwater analytical results for downgradient well MW-9 indicated the presence of petroleum hydrocarbon-impacted groundwater beneath the former service garage.

Groundwater monitoring well MW-10 was installed in February 2006 to assess the extent of gasoline-impacted groundwater directly south of the former service garage.

Groundwater analytical results for well MW-10 confirmed the presence of low TPHg, BTEX, MTBE, and TBA concentrations at the property boundary.

The site is listed on GeoTracker as Target Store #T-292 (T0603701871) and indicates 57,000 pounds of soil vapor (presumably volatile organic compounds) have been removed using soil vapor extraction from July 1, 2007 to September 13, 2016 and 71 gallons of free product have been removed from August 11, 2005 to September 6, 2018.

4.8 City Directory

EDR's City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. For each address, the directory lists the name of the corresponding occupant at five year intervals. Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1972 through 2013. A copy of the search results is included as Appendix G.

Target is listed at the property address in 2006, 2010 and 2014. Gemco is listed as a watch repair and department store at the property address in 1975, 1980 and 1985. King Bear Auto Service is listed at the property address in 1985. Dons tire center is listed at the property address in 1980.

The address 930 East 33rd Street had the following notable listings: Hunter lab, Haynes auto washer in 1924 and Dow lab in 1929.

4.9 Environmental Lien and AUL Search

EDR's Environmental Lien and AUL Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

The EDR Environmental Lien Search found no environmental liens or other activity and use limitations (AUL) on the site. A copy of the search results is included as Appendix H.

5.0 AGENCY AND ENVIRONMENTAL DATABASE REVIEW

The databases discussed in this section, provided by Environmental Data Resources, Inc., (EDR), were reviewed for information regarding documented and/or suspected releases of regulated hazardous substances and/or petroleum products on or near the site. Mearns Consulting LLC also reviewed the "orphan" listings within the database report, cross-referencing available address information and facility names. Unmapped facilities are listings that cannot be plotted with confidence, but are identified as being located within the general area of the site based on the partial street address, city name, or zip code. In general, a listing cannot be mapped due to inaccurate or incomplete address information in the database that was supplied by the corresponding regulatory agency. Any listings from the unmapped summary which were identified by Susan L. Mearns, Ph.D. as a result of the area reconnaissance and/or cross-referencing to mapped listings are included in the corresponding database discussion within this section.

The following USEPA lists were reviewed to search for facilities within the area of the site:

1. National Priority List (NPL);
2. Delisted NPL;
3. Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List;
4. CERCLIS No Further Remedial Action Planned (NFRAP) List;
5. Resource Conservation and Recovery Act (RCRA) Corrective Action Sites (CORRACTS) List;
6. RCRA Treatment Storage and Disposal Facilities (TSD) List;
7. RCRA Hazardous Waste Generators List;
8. Emergency Response Notification System (ERNS) List

NPL and RCRA CORRACTS within 1-mile of the site; RCRA-TSDF and CERCLIS facilities within ½-mile of the site; RCRA generators within ¼-mile of the site; and US Brownfields within ½-mile of the site are listed below and/or in Appendix I.

The site address was listed on several federal, State, local and/or tribal databases searched.

5.1 Federal Agencies

National Priorities Listing (NPL) – Environmental Protection Agency Superfund List
The NPL is a subset of the CERCLIS and lists facilities that are ranked as high priority for cleanup under the Superfund program. Source: NPL database updated October 25, 2019.

No facilities were listed within ½-mile radius of the site on the Federal NPL.

Federal RCRA CORRACTS facilities list - CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

Federal RCRA generators list - RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on facilities which generate, transport, store, treat and/or dispose of hazardous waste as defined by the RCRA. Large quantity generators (LQGs) generate over 1,000 kg of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Federal RCRA generators list - RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the RCRA of 1976 and the HSWA of 1984. The database includes selective information on facilities which generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

5.2 State and tribal Agencies

The following state and tribal lists and/or files were reviewed to search for facilities within the area of the site:

1. State and tribal equivalent NPL List;
2. State and tribal equivalent CERCLIS List;
3. State and tribal Solid Waste Facilities/ Landfill Sites (SWF/LF) List;
4. State and tribal Leaking Underground Storage Tank (LUST) Sites List;
5. State and tribal Registered Storage Tank (UST) List;
6. State and tribal Voluntary Cleanup Sites (VCP) List;
7. Local Brownfields List;
8. Local Lists of Landfill/Solid Waste Disposal Sites;
9. Local Lists of Hazardous Waste/Contaminated Sites;
10. Local Land Records;
11. Records of Emergency Release Reports; and
12. EDR high Risk Historical Records

Facilities on these lists are discussed in Appendix I.

State- and tribal - equivalent CERCLIS CA ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

State and tribal leaking storage tank lists (CA LUST) – Leaking Underground Storage Tank (LUST) sites included in GeoTracker. A review of the CA LUST list, as provided by EDR, has revealed that there are 6 CA LUST facilities within approximately 0.5 miles of the site; one of these LUST facilities is at equal or higher elevation than the site.

California Statewide Spills, Leaks, Investigations and Cleanups (SLIC) Database - The SLIC listings include unauthorized discharges from spills and leaks other than underground storage tanks or other regulated sites. Source: State Water Resource Control Board, last updated March 13, 2017.

State and tribal registered Storage Tank (UST/AST) Database - The UST list is provided by the State of California Water Resources Control Board's Hazardous Substance Storage Container Database, last updated March 12, 2017. The AST list was last updated July 6, 2016. The UST/AST list contains registered USTs and ASTs. USTs are regulated under Subtitle I of RCRA.

5.3 Local Agencies

Regional Water Quality Control Board
Mearns Consulting LLC accessed the SWRCB's GeoTracker database. The site address is listed on GeoTracker as previously discussed. A copy of the low threat closure program summary is included in Appendix J.

California Department of Toxic Substances Control
Mearns Consulting LLC accessed the State of California Department of Toxic Substances Control (DTSC) EnviroStor database. The database does not have any records for the site address.

South Coast Air Quality Management District
Mearns Consulting LLC conducted an online search of the South Coast Air Quality Management District (SCAQMD) records. The SCAQMD does not have any records for the site address.

MAPPED SITES SUMMARY

Target Property Address:
930 E 33RD STREET
SIGNAL HILL, CA 90807

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	TARGET STORE T2319	950 E 33RD ST	RCRA-LQG	Lower	1 ft.
A2	TESORO-TARGET STORE-	950 EAST 33RD STREET	HAZNET	Lower	1 ft.
A3	TARGET	950 E 33RD ST	HAZNET	Higher	1 ft.
A4	TARGET	950 E 33RD ST	HAZNET	Higher	1 ft.
A5	CVS PHARMACY #17385	950 E 33RD ST STE B	HAZNET	Lower	1 ft.
A6	TESORO	950 EAST 33RD STREET	FINDS, ECHO	Lower	1 ft.
A7	TESORO	950 E 33RD ST	HAZNET	Lower	1 ft.
A8	CVS PHARMACY #17385	950 E 33RD ST STE B	CERS HAZ WASTE	Lower	1 ft.
A9	TARGET T2319	950 E 033RD ST	CERS HAZ WASTE, CERS	Higher	1 ft.
A10	TESORO PETROLEUM CO	950 E 33RD ST	HAZNET	Lower	1 ft.
A11	TESORO	950 E 33RD ST	HAZNET	Lower	1 ft.
A12	TARGET 292A	950 E 33RD ST	HAZNET	Higher	1 ft.
A13	TESORO ENVIRONMENTAL	950 E 33RD ST	HAZNET	Lower	1 ft.
A14	TARGET T 2319 - SIGN	950 33RD	CIWQS	Lower	1 ft.
A15	TARGET STORE #T-292	950 033RD ST E	LUST, Cortese, HIST CORTESE, CERS	Lower	1 ft.
A16	TESORO	950 EAST 33RD STREET	HAZNET	Lower	1 ft.
A17	1X TARGET #292	950 E 33RD STREET	HAZNET	Lower	1 ft.
A18	TESORO	950 E 33RD ST	HAZNET	Lower	1 ft.
A19		950 EAST 33RD STREET	CHMIRS	Lower	1 ft.
A20	TESORO PETROLEUM CO	950 E 33RD ST	HAZNET	Lower	1 ft.
A21	TARGET STORE T2319	950 E 33RD ST	FINDS, ECHO	Lower	1 ft.
A22	TARGET STORE T2319	950 E 33RD ST	HAZNET	Lower	1 ft.
A23	TESORO ENVIRONMENTAL	950 E 33RD ST	HAZNET	Lower	1 ft.
A24	TESORO	950 EAST 33RD STREET	RCRA NonGen / NLR	Lower	1 ft.
A25	TARGET STORE T-2319	950 E 33RD ST	HAZNET	Higher	1 ft.
A26	CVS PHARMACY #17385	950 E 33RD ST STE B	RCRA-VSQG, FINDS, ECHO	Lower	1 ft.
27		32ND AND CALIFORNIA	CHMIRS	Higher	5, 0.001,
B28	KING BEAR AUTOMOTIVE	750 E 33RD ST	RCRA-SQG, FINDS, ECHO, HAZNET	Higher	10, 0.002, WNW
B29	TESORO GASOLINE DIGA	700 E 33 ST	RCRA-SQG, LUST, FINDS, ECHO, HIST CORTESE	Higher	11, 0.002, WNW
B30	ARCO	700 E 33RD ST	SWEEPS UST, HIST UST	Higher	11, 0.002, WNW
B31	TARGET STORES INC.	700 33RD ST	SWEEPS UST	Higher	11, 0.002, WNW
B32	FILE ONLY - CALIF TA	0700 E 33RD ST	UST	Higher	11, 0.002, WNW
B33	TARGET STORES INCORP	700 E 33RD ST	CA FID UST	Higher	11, 0.002, WNW
B34	BILL S AUTO CONSTRUC	3301 LIME AVE	EDR Hist Auto	Higher	35, 0.007, WNW
35	FIELDS LEASE NORTH	3199 CALIFORNIA AVE	UST	Higher	36, 0.007, SSE
A36	EMERALD METAL PRODUC	801 E 33RD ST	DRYCLEANERS, LOS ANGELES CO. HMS	Lower	78, 0.015, NW
37		3280 CALIFORNIA AVE	AST	Lower	96, 0.018, ENE
B38	SCHULTZ MECHANICAL C	3323 LIME AVE	RCRA NonGen / NLR	Higher	193, 0.037, WNW
B39	VICTORY OIL CO	3311 OLIVE AVE	UST, SWEEPS UST	Lower	216, 0.041, NW

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MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
C40	SHELLY MOTORS	3300 ATLANTIC AVE	UST	Higher	252, 0.048, WNW
C41	ODELL S SUNSET SERVI	3300 ATLANTIC AVE	EDR Hist Auto	Higher	252, 0.048, WNW
C42	PALMER IMPORTS MTRS	3300 ATLANTIC AVE	RCRA-SQG, FINDS, ECHO, HAZNET	Higher	252, 0.048, WNW
43	BOOTH G E	3261 ATLANTIC AVE	EDR Hist Auto	Higher	288, 0.055, West
D44	ALVIN'S AUTO BODY AN	3333 OLIVE AVE	CERS HAZ WASTE, HAZNET, CERS	Lower	291, 0.055, NW
D45	MARK'S MOBILE TRUCK	3346 OLIVE AVE	RCRA NonGen / NLR	Lower	356, 0.067, NW
D46	TRICO INDUSTRY	3356 LIME AVE	CPS-SLIC, CERS	Higher	364, 0.069, NW
D47	TRICO INDUSTRIES	3356 LIME AVE	CPS-SLIC, UST, CERS HAZ WASTE, SWEEPS UST, EMI, LA...	Higher	364, 0.069, NW
E48	WEATHERFORD ARTIFICI	3356 LIME AVENUE	RCRA NonGen / NLR, FINDS, ECHO	Higher	367, 0.070, NW
D49	MARKS MOBILE TRUCK S	3348 OLIVE AVE	CERS HAZ WASTE, CERS TANKS, CHMIRS, CERS	Lower	394, 0.075, NNW
D50	BIG TRUCKS INC	3348 OLIVE ST	RCRA-SQG, FINDS, ECHO	Lower	394, 0.075, NNW
E51	KIROG S AUTO REPAIR	3360 ATLANTIC AVE	CERS HAZ WASTE, CHMIRS, CERS	Higher	526, 0.100, WNW
E52	KIRO AUTO REPAIR AND	3360 ATLANTIC AVE	RCRA NonGen / NLR	Higher	526, 0.100, WNW
E53	SKILLMAN S AUTO SERV	3360 ATLANTIC AVE	EDR Hist Auto	Higher	526, 0.100, WNW
F54	RINGLER S UPTOWN LAU	3377 CALIFORNIA AV	EDR Hist Cleaner	Lower	530, 0.100, NNE
E55	FOASBERG LAUNDRY	640 E WARDLOW RD	EDR Hist Cleaner	Higher	561, 0.106, NW
E56	CHAI FIVE LAUNDRY SE	640 E WARDLOW RD	DRYCLEANERS, HAZNET	Higher	561, 0.106, NW
E57	CHAI FIVE LAUNDRY SE	640 E WARDLOW RD	DRYCLEANERS	Higher	561, 0.106, NW
E58	CHAI FIVE LAUNDRY SE	640 E WARDLOW RD	RCRA NonGen / NLR	Higher	561, 0.106, NW
E59	FOASBERG LAUNDRY & C	640 E WARDLOW RD	UST, CERS HAZ WASTE, SWEEPS UST, HIST UST, CA FID...	Higher	561, 0.106, NW
F60		3381 MYRTLE AVE	UST	Lower	569, 0.108, North
F61	LONG BEACH OFFICE	3381 MYRTLE AVE	SWEEPS UST, CA FID UST	Lower	569, 0.108, North
G62	DOLLAR TREE #04313	3075 CALIFORNIA AVE	RCRA NonGen / NLR	Higher	581, 0.110, SSE
G63	DOLLAR TREE #04313	3075 CALIFORNIA AVE	CERS HAZ WASTE, HAZNET, CERS	Higher	581, 0.110, SSE
F64	ADAMS MUFFLERS	1000 E WARDLOW RD	UST	Lower	582, 0.110, NNE
E65	LSENBERG E F	3396 ATLANTIC AVE	EDR Hist Auto	Higher	599, 0.113, NW
E66	RAPID GAS	3396 ATLANTIC AVE	LUST, Cortese, ENF, HIST CORTESE, CERS	Higher	599, 0.113, NW
E67	SHELL	3396 ATLANTIC AVE	HIST UST	Higher	599, 0.113, NW
E68	SHELL	3396 ATLANTIC AVE	CERS HAZ WASTE, SWEEPS UST, CERS TANKS, CA FID...	Higher	599, 0.113, NW
E69	UNITED #115	3396 ATLANTIC AVE	UST	Higher	599, 0.113, NW
E70	APRO LLC DBA UNITED	3396 ATLANTIC AVE	RCRA NonGen / NLR	Higher	599, 0.113, NW
H71		3385 ATLANTIC AVE	UST	Higher	608, 0.115, WNW
E72	BING S AUTO SERVICE	702 E WARDLOW AV	EDR Hist Auto	Higher	631, 0.120, NW
E73	BING'S AUTO SERVICE	0702 E WARDLOW RD	UST	Higher	631, 0.120, NW
E74	BINGS AUTO SERVICE	702 E WARDLOW	RCRA-SQG, SWEEPS UST, HIST UST, CA FID UST, FINDS,...	Higher	631, 0.120, NW
F75		920 EAST WARDLOW RD	RCRA NonGen / NLR	Lower	641, 0.121, North
76		0816 E WARDLOW RD	UST	Lower	681, 0.129, NNW
H77	FORMER TIDEWATER SER	3395 ATLANTIC AVE	LUST, CERS	Higher	694, 0.131, WNW
H78	RICHCOLOR PHOTO AND	3395 ATLANTIC AVE	RCRA-SQG, FINDS, ECHO	Higher	694, 0.131, WNW

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MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
H79		3395 ATLANTIC AVE	UST	Higher	694, 0.131, WNW
H80	FORMER TIDEWATER SER	3395 ATLANTIC AVE.	UST	Higher	694, 0.131, WNW
I81	FEE WELL NO 1	3329 LINDEN AVE	AST	Higher	714, 0.135, WNW
G82	PETCO STORE #1181	3065 CALIFORNIA AVE	RCRA NonGen / NLR	Higher	741, 0.140, South
G83	PETCO STORE #1181	3065 CALIFORNIA AVE	CERS HAZ WASTE, HAZNET	Higher	741, 0.140, South
F84		3401 CALIFORNIA AVE	UST	Lower	776, 0.147, NNE
G85	3100 CALIFORNIA AVEN	3100 CALIFORNIA AVEN	US BROWNFIELDS	Higher	787, 0.149, SSE
H86	DR. LIN'S DENTAL OFF	554 E WARDLOW RD	CERS HAZ WASTE, HAZNET	Higher	803, 0.152, NW
H87	HONG MING LIN DDS	554 E WARDLOW ROAD	RCRA NonGen / NLR	Higher	803, 0.152, NW
J88		1058 E WARDLOW RD	UST	Lower	809, 0.153, NE
K89	FRONTIER CA INC	3440 CALIFORNIA AVE	RCRA NonGen / NLR	Lower	813, 0.154, NNE
K90	FRONTIER CALIFORNIA,	3440 CALIFORNIA AVE	UST	Lower	813, 0.154, NNE
K91	GENERAL TELEPHONE	3440 CALIFORNIA AVE	SWEEPS UST, HIST UST, CA FID UST, EMI	Lower	813, 0.154, NNE
L92	TEXACO	3402 ATLANTIC AVE	LUST, CERS	Lower	817, 0.155, NW
L93	TEXACO SERVICE STATI	3402 ATLANTIC	LUST, AST, CERS HAZ WASTE, CERS TANKS, Cortese,...	Lower	817, 0.155, NW
L94	TEXACO SERVICE STATI	3402 ATLANTIC BLVD	LUST, UST, RCRA NonGen / NLR	Lower	817, 0.155, NW
L95	VALVOLINE INSTANT OI	3402 ATLANTIC AVE	RCRA NonGen / NLR	Lower	817, 0.155, NW
L96	KIMS AUTO REPAIR	3402 ATLANTIC AVE	RCRA-SQG, FINDS, ECHO	Lower	817, 0.155, NW
G97	ROSS DRESS FOR LESS	3055 CALIFORNIA AVE	RCRA NonGen / NLR	Higher	822, 0.156, South
G98	ROSS DRESS FOR LESS	3055 CALIFORNIA AVE	CERS HAZ WASTE, HAZNET	Higher	822, 0.156, South
I99	EUREKA-CHRISTENSON	3301 N PASADENA AVE	SWEEPS UST, HIST UST, CA FID UST	Higher	838, 0.159, WNW
I100	SIGNAL HILL PETROLEU	3301 PASADENA AVE	HIST UST, CERS	Higher	838, 0.159, WNW
L101	R & J, FOASBERG LAUN	675 E WARDLOW	DRYCLEANERS	Lower	871, 0.165, NW
M102		3165 ATLANTIC AVE	UST	Higher	963, 0.182, SW
N103		0525 E WARDLOW RD	UST	Higher	970, 0.184, WNW
O104	FIELDS LEASE-AREA OF	3033 CALIFORNIA AVE	HIST UST	Higher	974, 0.184, South
N105	BIXBY KNOLLS CAR WAS	577 WARDLOW RD E	LUST, Cortese, HIST CORTESE, CERS	Higher	978, 0.185, NW
N106	BIXBY KNOLLS CAR WAS	577 E WARDLOW RD	HIST UST	Higher	978, 0.185, NW
N107	BIXBY KNOLLS CAR WAS	0577 E WARDLOW RD	UST	Higher	978, 0.185, NW
N108	BIXBY KNOLLS CAR WAS	577 E WARDLOW RD	SWEEPS UST, HIST UST, CA FID UST, HAZNET	Higher	978, 0.185, NW
J109	JOE'S AUTO CENTER	1079 E. WARDLOW RD	CERS HAZ WASTE, CERS	Lower	989, 0.187, NE
J110		1079 E WARDLOW RD	RCRA NonGen / NLR	Lower	989, 0.187, NE
J111	INTERNATIONAL MOTORS	1079 E WARDLOW RD	SWEEPS UST, HIST UST, CA FID UST, RCRA NonGen /...	Lower	989, 0.187, NE
112	HERLEY KELLY COMPANY	3215 PASADENA AVE	UST	Lower	1000, 0.189, WSW
O113	TEXACO PRODUCING INC	3033 CALIFORNIA AVE	LUST, SWEEPS UST, HIST CORTESE, CERS	Higher	1010, 0.191, South
M114		3154 ATLANTIC AVE	UST	Higher	1013, 0.192, SW
N115	COMMERCIAL RADIATOR	500 E WARDLOW RD	RCRA NonGen / NLR	Higher	1032, 0.195, WNW
N116	DON & HAROLDS AUTOMO	500 EAST WARDLOW RD	RCRA NonGen / NLR	Higher	1032, 0.195, WNW
N117	DON & HAROLD'S AUTOM	500 E WARDLOW RD	RCRA NonGen / NLR	Higher	1032, 0.195, WNW

MAPPED SITES SUMMARY

Target Property Address:
930 E 33RD STREET
SIGNAL HILL, CA 90807

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
N118	DON AND HAROLD'S AUT	500 E WARDLOW RD	CERS HAZ WASTE, CERS	Higher	1032, 0.195, WNW
L119	FUJITA INVESTORS OF	3449 ATLANTIC AVE	UST	Lower	1033, 0.196, NW
N120	GALLAGHER PROPERTY (	3426 LINDEN AVE	CPS-SLIC, CERS	Higher	1102, 0.209, NW
P121		3312 ELM AVE	RCRA NonGen / NLR	Higher	1113, 0.211, WNW
Q122	OLIVE COMMUNITY	640 EAST 35TH STREET	RCRA-LQG	Lower	1120, 0.212, NW
Q123	OLIVE COMMUNITY/SIGN	640 E 35TH ST	AST	Lower	1120, 0.212, NW
R124	MCKENZIE #34	3159 PASADENA AVE	AST	Lower	1178, 0.223, WSW
R125	MCKENZIE	3159 PASADENA AVENUE	RCRA-LQG	Lower	1178, 0.223, WSW
P126		3357 PASADENA AVE	RCRA NonGen / NLR	Higher	1184, 0.224, WNW
S127		1101 E WARDLOW RD	UST	Lower	1185, 0.224, NE
S128	BIXBY LAND CO.	1101 E. WARDLOW RD	CPS-SLIC, EMI, CERS	Lower	1185, 0.224, NE
Q129	D.B.M. OIL CO.	3508 ATLANTIC AVE	UST	Lower	1221, 0.231, NW
M130	JACK HERLEY OPERATIO	3085 ATLANTIC AVE	SWEEPS UST, CA FID UST	Higher	1234, 0.234, SW
M131	JACK HERLEY OPERATIO	3085 ATLANTIC AVE	HIST UST	Higher	1234, 0.234, SW
132	JACK HERLEY OPERATIO	3083 ATLANTIC AVE	HIST UST	Higher	1255, 0.238, SW
T133	M HARA LAWNMOWER CEN	3199 ORANGE AVE	CERS HAZ WASTE, CERS	Higher	1287, 0.244, ESE
T134		3199 ORANGE AVE	RCRA NonGen / NLR	Higher	1287, 0.244, ESE
U135	GALLAGHER	3241 ELM AVENUE	RCRA-LQG	Lower	1314, 0.249, West
U136	GALLAGHER #32	3241 ELM AVE	AST	Lower	1314, 0.249, West
137	TOWN CENTER CHEVRON	3101 LINDEN AVE	UST	Higher	1314, 0.249, SW
V138	HILL TOP SPORTS PARK	SPRING ST & CALIFORN	CPS-SLIC, CERS	Higher	1345, 0.255, South
V139	CALIFORNIA AVE. SITE	CALIFORNIA & SPRING	WMUDS/SWAT	Higher	1345, 0.255, South
W140	TOSCO S.S. #6117	3395 ORANGE AVE	LUST, CERS HAZ WASTE, SWEEPS UST, CERS TANKS, CERS	Lower	1419, 0.269, ENE
U141	MEDICAL OFFICE BUILD	3200-3220 LONG BEACH	CPS-SLIC, CERS	Lower	1478, 0.280, West
142	MAGNA CORP LONG BEAC	3311 OLIVE AVE	RCRA-SQG, LUST, FINDS, ECHO, HAZNET, HIST CORTESE,...	Higher	1487, 0.282, SSW
143	MANESS INDS	1101 E SPRING ST	LUST, CERS HAZ WASTE, HIST UST, CERS TANKS, RCRA...	Lower	1531, 0.290, SSE
W144	TOSCO S.S. #6117	3395 ORANGE AVE	LUST, HIST CORTESE	Lower	1540, 0.292, ENE
145	700 E SPRING STREET	700 E SPRING STREET	US BROWNFIELDS	Lower	1564, 0.296, SSW
146	MOBIL #17-1842	3391 LONG BEACH BLVD	LUST, HIST CORTESE, CERS	Lower	1715, 0.325, WNW
X147	WEISSKER HERMAN, INC	3050 ORANGE AVENUE	SWF/LF, CDL, CHMIRS, LOS ANGELES CO LF METHANE	Lower	1716, 0.325, SE
148	INDIAN WELL TANK FAR	2991 ATLANTIC AVE	LUST, CERS	Lower	1764, 0.334, SSW
X149	RUTHERFORD PACIFIC I	3020 ORANGE AVE	SEMS-ARCHIVE, RESPONSE, ENVIROSTOR, DEED, RCRA...	Lower	1809, 0.343, SE
X150	FACET ENERGY COMPANY	3020 ORANGE AVENUE	CA BOND EXP. PLAN	Lower	1809, 0.343, SE
151	SOUZA PROPERTIES	3200 WARDLOW ROAD, E	CPS-SLIC, CERS	Lower	1839, 0.348, ENE
152	SIGNAL HILL SOLID FI	900 E. 29TH ST.	SWF/LF, CERS	Lower	2091, 0.396, South
153	WEISSKER, HERMAN INC	ORANGE ST. & SPRING	SWF/LF, CERS	Lower	2097, 0.397, SE
Y154	SIGNAL HILL BUSINESS	29TH AND ORANGE STRE	ENVIROSTOR, VCP	Higher	2326, 0.441, SSE
155	PHILLIP MANN PROPERT	533 E 29TH ST	LUST, CERS	Lower	2361, 0.447, SSW
156	LEJEND EQUIPMENT REN	2901 ORANGE ST	SEMS-ARCHIVE, RCRA NonGen / NLR	Higher	2375, 0.450, SE

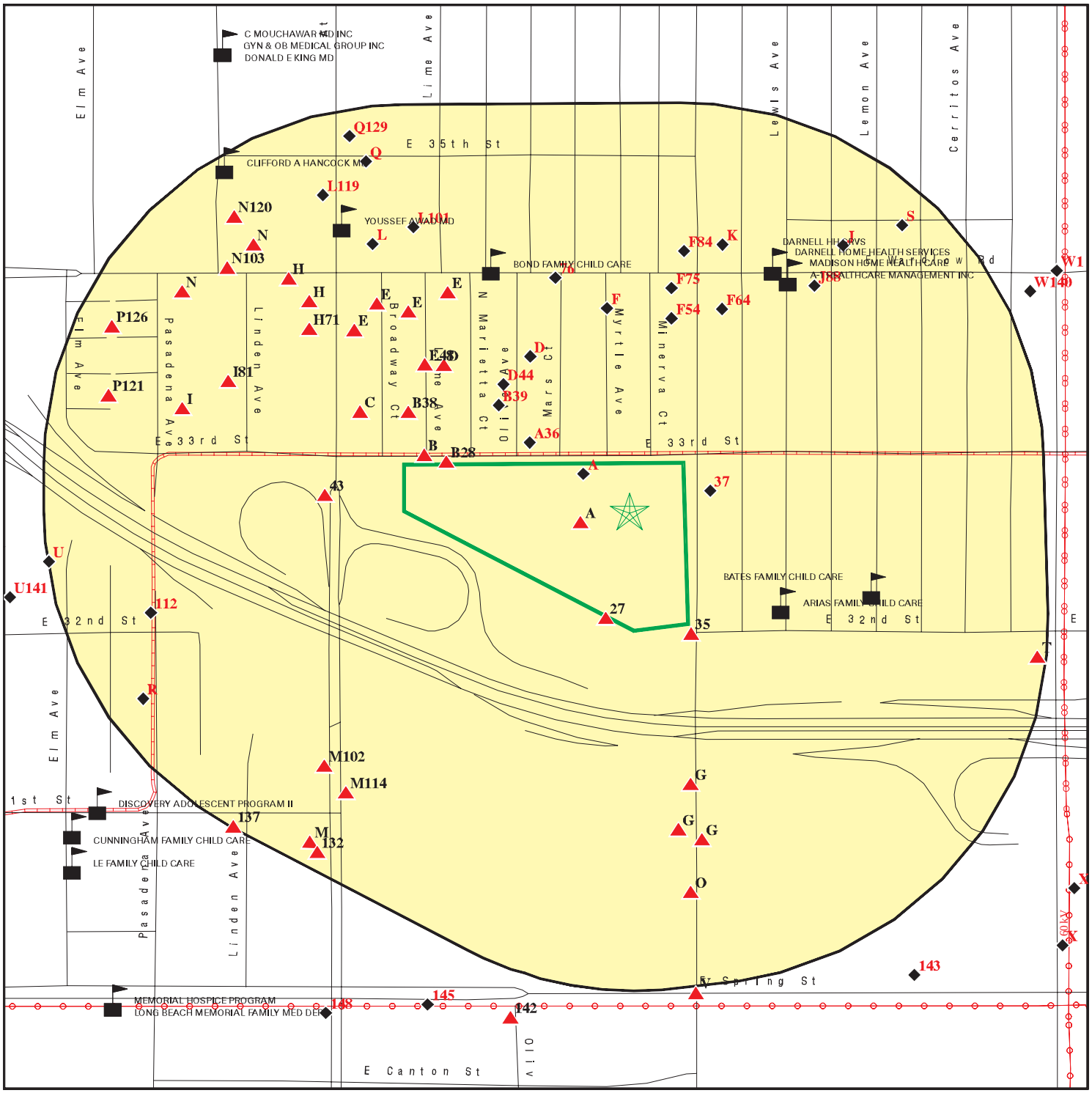
MAPPED SITES SUMMARY

Target Property Address:
930 E 33RD STREET
SIGNAL HILL, CA 90807

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
Z157	SHELL #204-4482-0508	3009 LONG BEACH BLVD	LUST	Lower	2390, 0.453, SW
Z158	SHELL #204-4482-0508	3009 LONG BEACH	LUST, Cortese, HIST CORTESE, CERS	Lower	2390, 0.453, SW
159	SIGNAL HILL PETROLEU	2900 CALIFORNIA	CPS-SLIC, CERS	Lower	2421, 0.459, South
Y160	SIGNAL HILL BUSINESS	2896 ORANGE AVE	LUST, SWEEPS UST, Cortese, HIST CORTESE, CERS	Higher	2441, 0.462, SSE
Y161	SIGNAL HILL PETROLEU	1215 029TH ST E	LUST, EMI, HIST CORTESE, NPDES, CIWQS, CERS	Higher	2466, 0.467, SE
Z162	EXXON #7-3131	2995 LONG BEACH BLVD	LUST, HIST CORTESE, CERS	Lower	2533, 0.480, SW
163	LONG BEACH MEMORIAL	2801 ATLANTIC AVE	ENVIROSTOR, SWF/LF, LUST, VCP, DEED, RCRA NonGen /...	Lower	2851, 0.540, SSW
164	MEMORIAL MAGNETIC RE	403 E. COLUMBIA STRE	ENVIROSTOR	Lower	2901, 0.549, SW
165	MANEY AIRCRAFT PARTS	101 WEST SPRING STRE	ENVIROSTOR	Lower	3095, 0.586, WSW
AA166	SIGNAL HILL TERMINAL	1725 E. SPRING STREE	ENVIROSTOR	Lower	3525, 0.668, ESE
167	CONTINENTAL EMSCO CO	2850 WALNUT AVENUE	ENVIROSTOR, EMI, CERS	Higher	3555, 0.673, SE
AA168	MARLEX OIL & REFININ	1825 E SPRING ST	SEMS-ARCHIVE, RCRA-SQG, RESPONSE, ENVIROSTOR,...	Lower	3636, 0.689, ESE
169	CERTIFIED ALLOY PROD	3245 CHERRY AV	EMI, Notify 65	Lower	3657, 0.693, East
AB170	URBAN PACIFIC BUILDE	1835-1899 ORIZABA AV	ENVIROSTOR	Higher	4013, 0.760, ESE
AB171	ENVIROPUR WEST CORP	1835 E 29TH ST	SEMS-ARCHIVE, CORRACTS, RCRA-TSDF, RCRA-SQG, UST,...	Higher	4029, 0.763, ESE
AB172	MCAULEY OIL COMPANY-	1835 E 29TH STREET	ENVIROSTOR, HIST UST, HWP	Higher	4029, 0.763, ESE
173	W-H TANK LINES INC	2202 E SPRING ST	CPS-SLIC, RCRA NonGen / NLR, HAZNET, ICE, HWP,...	Lower	4956, 0.939, ESE

DETAIL MAP - 5947181.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Power transmission lines
- Pipelines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 930 E 33rd St ADDRESS: 930 E 33rd Street Signal Hill CA 90755 LAT/LONG: 33.816505 / 118.18148	CLIENT: Mearns Consulting LLC. CONTACT: Susan L Mearns Phd INQUIRY #: 5947181.2s DATE: January 24, 2020 1:47 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	2	NR	NR	2
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	1	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		1	3	NR	NR	NR	4
RCRA-SQG	0.250		5	2	NR	NR	NR	7
RCRA-VSQG	0.250		1	0	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	1	1	NR	2
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	2	8	NR	10
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	3	NR	NR	3
State and tribal leaking storage tank lists								
LUST	0.500		3	6	12	NR	NR	21

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		2	2	4	NR	NR	8
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		11	16	NR	NR	NR	27
AST	0.250		1	5	NR	NR	NR	6
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	1	NR	NR	1
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	1	1	NR	NR	2
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	1	NR	NR	1
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
AOCONCERN	1.000		0	0	0	0	NR	0
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		9	7	NR	NR	NR	16
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		8	6	NR	NR	NR	14
HIST UST	0.250		4	9	NR	NR	NR	13
CERS TANKS	0.250		2	1	NR	NR	NR	3
CA FID UST	0.250		5	5	NR	NR	NR	10
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	1	NR	NR	1
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		2	NR	NR	NR	NR	2
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		10	14	NR	NR	NR	24
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		3	NR	NR	NR	NR	3
ECHO	0.001		3	NR	NR	NR	NR	3
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	1	0	NR	1
Cortese	0.500		2	2	2	NR	NR	6
CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		3	1	NR	NR	NR	4
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		16	NR	NR	NR	NR	16
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		3	3	7	NR	NR	13
LOS ANGELES CO. HMS	0.001		0	NR	NR	NR	NR	0
HWP	1.000		0	0	0	2	NR	2
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	1	0	1	NR	2
LA Co. Site Mitigation	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		1	NR	NR	NR	NR	1
CERS	0.001		2	NR	NR	NR	NR	2
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0
LOS ANGELES CO LF METHANE	0.500		0	0	1	NR	NR	1
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		6	NR	NR	NR	NR	6
EDR Hist Cleaner	0.125		2	NR	NR	NR	NR	2
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	105	84	39	13	0	241

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **TARGET STORE T2319** **RCRA-LQG** **1014465382**
950 E 33RD ST **CAR000218487**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 1 of 27 in cluster A

Relative: **Lower**

Actual: **88 ft.**

RCRA-LQG:

Date form received by agency:	2018-02-01 00:00:00.0
Facility name:	TARGET STORE T2319
Facility address:	950 E 33RD ST SIGNAL HILL, CA 90755-0000
EPA ID:	CAR000218487
Mailing address:	PO BOX 111 MINNEAPOLIS, MN 55440
Contact:	STEVE MUSSER
Contact address:	PO BOX 111 MINNEAPOLIS, MN 55440
Contact country:	US
Contact telephone:	800-587-2228
Contact email:	POC@TARGET.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	TARGET CORPRATION
Owner/operator address:	PO BOX 111 MINNEAPOLIS, MN 55440
Owner/operator country:	US
Owner/operator telephone:	800-587-2228
Owner/operator email:	POC@TARGET.COM
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	2007-07-25 00:00:00.
Owner/Op end date:	Not reported

Owner/operator name:	TARGET CORPORATION
Owner/operator address:	PO BOX 111 MINNEAPOLIS, MN 55440
Owner/operator country:	US
Owner/operator telephone:	800-587-2228
Owner/operator email:	POC@TARGET.COM
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner

TARGET STORE T2319 (Continued) **1014465382**

Owner/Op start date: 2007-07-25 00:00:00.
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 2016-02-24 00:00:00.0
Site name: TARGET STORE T2319
Classification: Not a generator, verified

Date form received by agency: 2014-03-01 00:00:00.0
Site name: TARGET STORE T2319
Classification: Small Quantity Generator

Date form received by agency: 2011-04-11 00:00:00.0
Site name: TARGET STORE NO 2319
Classification: Small Quantity Generator

Hazardous Waste Summary:

. Waste code: 121
. Waste name: Alkaline solution (pH >12.5) with metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc)

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: 792

TARGET STORE T2319 (Continued) **1014465382**

. Waste name: Liquids with pH < 2 with metals

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

. Waste code: D004
. Waste name: ARSENIC

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: D026
. Waste name: CRESOL

. Waste code: D027
. Waste name: 1,4-DICHLOROBENZENE

. Waste code: D028
. Waste name: 1,2-DICHLOROETHANE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: D039

TARGET STORE T2319 (Continued) **1014465382**

. Waste name: TETRACHLOROETHYLENE

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P042
. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR) EPINEPHRINE

. Waste code: P046
. Waste name: ALPHA,ALPHA-DIMETHYLPHENETHYLAMINE (OR) BENZENEETHANAMINE, ALPHA, ALPHA-DIMETHYL-

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: P081
. Waste name: 1,2,3-PROPANETRIOL, TRINITRATE (R) (OR) NITROGLYCERINE (R)

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U034
. Waste name: ACETALDEHYDE, TRICHLORO- (OR) CHLORAL

. Waste code: U035
. Waste name: BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) CHLORAMBUCIL

. Waste code: U044
. Waste name: CHLOROFORM (OR) METHANE, TRICHLORO-

. Waste code: U058
. Waste name: 2H-1,3,2-OXAZAPHOSPHORIN-2-AMINE, N,N-BIS(2-CHLOROETHYL)TETRAHYDRO-, 2-OXIDE (OR) CYCLOPHOSPHAMIDE

. Waste code: U072
. Waste name: BENZENE, 1,4-DICHLORO- (OR) P-DICHLOROBENZENE

. Waste code: U122
. Waste name: FORMALDEHYDE

. Waste code: U129
. Waste name: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

. Waste code: U150
. Waste name: L-PHENYLALANINE, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) MELPHALAN

. Waste code: U154
. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U188
. Waste name: PHENOL

TARGET STORE T2319 (Continued) **1014465382**

. Waste code: U200
. Waste name: RESERPINE (OR) YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY-18-[(3,4,5-TRIMETHOXYBENZOYL)OXY]-, METHYL ESTER, (3BETA, 16BETA, 17ALPHA, 18BETA, 20ALPHA)-

. Waste code: U201
. Waste name: 1,3-BENZENEDIOL (OR) RESORCINOL

. Waste code: U220
. Waste name: BENZENE, METHYL- (OR) TOLUENE

. Waste code: U221
. Waste name: BENZENEDIAMINE, AR-METHYL- (OR) TOLUENEDIAMINE

. Waste code: U279
. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Biennial Reports:

Last Biennial Reporting Year: 2017

Annual Waste Handled:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 3644

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs): 1477

Waste code: D004
Waste name: ARSENIC
Amount (Lbs): 1974

Waste code: D005
Waste name: BARIUM
Amount (Lbs): 2314

Waste code: D007
Waste name: CHROMIUM
Amount (Lbs): 2314

Waste code: D008
Waste name: LEAD
Amount (Lbs): 69

TARGET STORE T2319 (Continued) **1014465382**

Waste code: D010
Waste name: SELENIUM
Amount (Lbs): 1974

Waste code: D011
Waste name: SILVER
Amount (Lbs): 2314

Waste code: D016
Waste name: 2,4-D
Amount (Lbs): 1974

Waste code: D018
Waste name: BENZENE
Amount (Lbs): 340

Waste code: D024
Waste name: M-CRESOL
Amount (Lbs): 1974

Waste code: D026
Waste name: CRESOL
Amount (Lbs): 1974

Waste code: D035
Waste name: METHYL ETHYL KETONE
Amount (Lbs): 1142

Waste code: P001
Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%
Amount (Lbs): 39

Waste code: P075
Waste name: NICOTINE, & SALTS
Amount (Lbs): 39

Waste code: U002
Waste name: ACETONE (I)
Amount (Lbs): 340

Waste code: U035
Waste name: BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]-
Amount (Lbs): 1974

Waste code: U044
Waste name: CHLOROFORM
Amount (Lbs): 1974

Waste code: U058
Waste name: CYCLOPHOSPHAMIDE
Amount (Lbs): 1974

Waste code: U072
Waste name: BENZENE, 1,4-DICHLORO-
Amount (Lbs): 1974

TARGET STORE T2319 (Continued) **1014465382**

Waste code: U129
Waste name: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA,2ALPHA,3BETA,4ALPHA,5ALPHA,6BETA)-
Amount (Lbs): 1974

Waste code: U154
Waste name: METHANOL (I)
Amount (Lbs): 340

Violation Status: No violations found

A2 **TESORO-TARGET STORE-SIGNAL HILL** **HAZNET** **S123611343**
950 EAST 33RD STREET **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 2 of 27 in cluster A

Relative: HAZNET:
Lower
Actual: Name: TESORO-TARGET STORE-SIGNAL HILL
88 ft. Address: 950 EAST 33RD STREET
City,State,Zip: SIGNAL HILL, CA 90755
Year: 2017
GEPAID: CAC002921987
Contact: DANNY MONSON
Telephone: 5624956877
Mailing Name: Not reported
Mailing Address: PO BOX 80730
Mailing City,St,Zip: RANCHO SANTA MARGARI, CA 92688
Gen County: Los Angeles
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Tons: 0.0042
CA Waste Code: 134-Aqueous solution with total organic residues less than 10 percent
Method: H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: Los Angeles

A3 **TARGET** **HAZNET** **S112910033**
950 E 33RD ST **N/A**
< 1/8 **LONG BEACH, CA 90807**
1 ft.

Site 3 of 27 in cluster A

Relative: HAZNET:
Higher
Actual: Name: TARGET
90 ft. Address: 950 E 33RD ST
City,State,Zip: LONG BEACH, CA 908070000
Year: 2000
GEPAID: CAC002291657
Contact: PAUL WRAITH
Telephone: 8003603220
Mailing Name: Not reported
Mailing Address: 1905 ASTON AVESTE 100
Mailing City,St,Zip: CARLSBAD, CA 920090000
Gen County: Los Angeles
TSD EPA ID: CAD008302903

TARGET (Continued) **S112910033**

TSD County: Los Angeles
Tons: 0.1
CA Waste Code: 331-Off-specification, aged or surplus organics
Method: H01-Transfer Station
Facility County: Los Angeles

A4 **TARGET** **HAZNET** **S112842981**
950 E 33RD ST **N/A**
< 1/8 **LONG BEACH, CA 90807**
1 ft.

Site 4 of 27 in cluster A

Relative: Higher
Actual: 90 ft.

HAZNET:
Name: TARGET
Address: 950 E 33RD ST
City,State,Zip: LONG BEACH, CA 908070000
Year: 1996
GEPAID: CAC000757056
Contact: JODI KAUTZ/CONSULT
Telephone: 8004518346
Mailing Name: Not reported
Mailing Address: 4920 CARROLL CANYON RD
Mailing City,St,Zip: SAN DIEGO, CA 921210000
Gen County: Los Angeles
TSD EPA ID: CAT080022148
TSD County: San Bernardino
Tons: 0.9
CA Waste Code: 352-Other organic solids
Method: H01-Transfer Station
Facility County: Los Angeles

Name: TARGET
Address: 950 E 33RD ST
City,State,Zip: LONG BEACH, CA 908070000
Year: 1996
GEPAID: CAC000757056
Contact: JODI KAUTZ/CONSULT
Telephone: 8004518346
Mailing Name: Not reported
Mailing Address: 4920 CARROLL CANYON RD
Mailing City,St,Zip: SAN DIEGO, CA 921210000
Gen County: Los Angeles
TSD EPA ID: CAT080022148
TSD County: San Bernardino
Tons: 0.025
CA Waste Code: 122-Alkaline solution without metals pH >= 12.5
Method: H01-Transfer Station
Facility County: Los Angeles

A5 **CVS PHARMACY #17385** **HAZNET** **S123639101**
950 E 33RD ST STE B **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 5 of 27 in cluster A

Relative: HAZNET:
Lower

Actual: Name: CVS PHARMACY #17385
88 ft. Address: 950 E 33RD ST STE B
City,State,Zip: SIGNAL HILL, CA 907555114
Year: 2017
GEPAID: CAR000259549
Contact: NICOLE WILKINSON
Telephone: 4017651500
Mailing Name: Not reported
Mailing Address: 1 CVS DR - MC 1160
Mailing City,St,Zip: WOONSOCKET, RI 02895
Gen County: Los Angeles
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.012
CA Waste Code: 311-Pharmaceutical waste
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

Name: CVS PHARMACY #17385
Address: 950 E 33RD ST STE B
City,State,Zip: SIGNAL HILL, CA 907555114
Year: 2017
GEPAID: CAR000259549
Contact: NICOLE WILKINSON
Telephone: 4017651500
Mailing Name: Not reported
Mailing Address: 1 CVS DR - MC 1160
Mailing City,St,Zip: WOONSOCKET, RI 02895
Gen County: Los Angeles
TSD EPA ID: INR000110197
TSD County: Not reported
Tons: 0.0025
CA Waste Code: 311-Pharmaceutical waste
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

Name: CVS PHARMACY #17385
Address: 950 E 33RD ST STE B
City,State,Zip: SIGNAL HILL, CA 907555114
Year: 2016
GEPAID: CAR000259549
Contact: NICOLE WILKINSON
Telephone: 4017707132
Mailing Name: Not reported
Mailing Address: 1 CVS DR
Mailing City,St,Zip: WOONSOCKET, RI 028956146
Gen County: Los Angeles
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.006

CVS PHARMACY #17385 (Continued) **S123639101**

CA Waste Code: 311-Pharmaceutical waste
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

Name: CVS PHARMACY #17385
Address: 950 E 33RD ST STE B
City,State,Zip: SIGNAL HILL, CA 907555114
Year: 2016
GEPAID: CAR000259549
Contact: NICOLE WILKINSON
Telephone: 4017707132
Mailing Name: Not reported
Mailing Address: 1 CVS DR
Mailing City,St,Zip: WOONSOCKET, RI 028956146
Gen County: Los Angeles
TSD EPA ID: INR000110197
TSD County: Not reported
Tons: 0.001
CA Waste Code: 311-Pharmaceutical waste
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

A6 **TESORO** **FINDS 1024619125**
950 EAST 33RD STREET **ECHO N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 6 of 27 in cluster A

Relative: Lower
Actual: 88 ft.

FINDS:

Registry ID: 110070407512

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1024619125
Registry ID: 110070407512
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110070407512

A7 **TESORO** **HAZNET** **S123605555**
950 E 33RD ST **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 7 of 27 in cluster A

Relative: HAZNET:
Lower

Actual: Name:	TESORO
88 ft. Address:	950 E 33RD ST
City,State,Zip:	SIGNAL HILL, CA 907555114
Year:	2016
GEPAID:	CAC002873384
Contact:	DANNY MONSON
Telephone:	5624956877
Mailing Name:	Not reported
Mailing Address:	PO BOX 80730
Mailing City,St,Zip:	RANCHO SANTA MARGARI, CA 926880730
Gen County:	Los Angeles
TSD EPA ID:	NVT330010000
TSD County:	99
Tons:	0.0125
CA Waste Code:	352-Other organic solids
Method:	H132-Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Facility County:	Los Angeles

Name:	TESORO
Address:	950 E 33RD ST
City,State,Zip:	SIGNAL HILL, CA 907555114
Year:	2016
GEPAID:	CAC002873384
Contact:	DANNY MONSON
Telephone:	5624956877
Mailing Name:	Not reported
Mailing Address:	PO BOX 80730
Mailing City,St,Zip:	RANCHO SANTA MARGARI, CA 926880730
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Tons:	0.063
CA Waste Code:	134-Aqueous solution with total organic residues less than 10 percent
Method:	H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Los Angeles

A8 **CVS PHARMACY #17385** **CERS HAZ WASTE** **S112983399**
950 E 33RD ST STE B **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 8 of 27 in cluster A

Relative: CERS HAZ WASTE:
Lower

Actual: Name:	CVS PHARMACY #17385
88 ft. Address:	950 E 33RD ST STE B
City,State,Zip:	SIGNAL HILL, CA 90755
Site ID:	368403
CERS ID:	10668757
CERS Description:	Hazardous Waste Generator

Affiliation:

CVS PHARMACY #17385 (Continued) **S112983399**

Affiliation Type Desc:	Legal Owner
Entity Name:	Garfield Beach CVS, L.L.C.
Entity Title:	Not reported
Affiliation Address:	One CVS Drive
Affiliation City:	Woonsocket
Affiliation State:	RI
Affiliation Country:	United States
Affiliation Zip:	02895
Affiliation Phone:	(401) 765-1500

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	CVS Health, Attn: Dianne E. Durand, Licensing, One CVS Dr. - MC 1160
Affiliation City:	Woonsocket
Affiliation State:	RI
Affiliation Country:	Not reported
Affiliation Zip:	02895
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Stephen Horn, Agent for Garfield Beach CVS, L.L.C.
Entity Title:	Regulatory Compliance Specialist, Verisk 3E
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	CVS Health
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	Los Angeles County Fire
Entity Title:	Not reported
Affiliation Address:	5825 Rickenbacker Road
Affiliation City:	Commerce
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90040-3027
Affiliation Phone:	(323) 890-4045

Affiliation Type Desc:	Document Preparer
Entity Name:	Stephen Horn, Agent for Garfield Beach CVS, L.L.C.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

CVS PHARMACY #17385 (Continued) **S112983399**

Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Verisk 3E, Regulatory Services/CVS
Entity Title:	Not reported
Affiliation Address:	3207 Grey Hawk Ct., Ste. 200
Affiliation City:	Carlsbad
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92010
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Garfield Beach CVS, L.L.C.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(401) 765-1500

A9 **TARGET T2319** **CERS HAZ WASTE** **S123502748**
950 E 033RD ST **CERS** **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 9 of 27 in cluster A

Relative: Higher
Actual: 90 ft.

CERS HAZ WASTE:

Name:	TARGET T2319
Address:	950 E 033RD ST
City,State,Zip:	SIGNAL HILL, CA 90755
Site ID:	159781
CERS ID:	10290991
CERS Description:	Hazardous Waste Generator

CERS:

Name:	TARGET T2319
Address:	950 E 033RD ST
City,State,Zip:	SIGNAL HILL, CA 90755
Site ID:	159781
CERS ID:	10290991
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	159781
Site Name:	TARGET T2319
Violation Date:	10-13-2016
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 11/30/2016. OBSERVATION: Update the facility Hazardous Materials Inventory List to reflect all reportable hazardous materials on site. Observed unreported 52 gallon Carbon Dioxide tank

TARGET T2319 (Continued) **S123502748**

at cafe area. CORRECTIVE ACTION: Complete and submit the Hazardous Materials Inventory Chemical Description page for all materials listed above electronically in the California Environmental Reporting System (CERS).

Violation Division: Los Angeles County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-13-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Brandon Ross, ETL
Eval Division: Los Angeles County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-30-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Los Angeles County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-06-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Los Angeles County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-06-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Los Angeles County Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-13-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Brandon Ross, ETL
Eval Division: Los Angeles County Fire Department
Eval Program: HW
Eval Source: CERS

Affiliation:

Affiliation Type Desc: Facility Mailing Address

TARGET T2319 (Continued) **S123502748**

Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	PO Box 111
Affiliation City:	Minneapolis
Affiliation State:	MN
Affiliation Country:	Not reported
Affiliation Zip:	55440
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Target Corporation
Entity Title:	Not reported
Affiliation Address:	PO Box 111
Affiliation City:	Minneapolis
Affiliation State:	MN
Affiliation Country:	United States
Affiliation Zip:	55440
Affiliation Phone:	(800) 587-2228
Affiliation Type Desc:	Operator
Entity Name:	Target Corporation
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(800) 587-2228
Affiliation Type Desc:	CUPA District
Entity Name:	Los Angeles County Fire
Entity Title:	Not reported
Affiliation Address:	5825 Rickenbacker Road
Affiliation City:	Commerce
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90040-3027
Affiliation Phone:	(323) 890-4045
Affiliation Type Desc:	Parent Corporation
Entity Name:	Target Corporate Office Headquarters
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	Nathan White
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported

TARGET T2319 (Continued) **S123502748**

Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Mitchel Rasmussen
Entity Title:	Director of Compliance
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Permits, Operations & Compliance
Entity Title:	Not reported
Affiliation Address:	PO Box 111
Affiliation City:	Minneapolis
Affiliation State:	MN
Affiliation Country:	Not reported
Affiliation Zip:	55440
Affiliation Phone:	Not reported

A10 **TESORO PETROLEUM CO INC** **HAZNET** **S123584853**
950 E 33RD ST **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 10 of 27 in cluster A

Relative: HAZNET:
Lower

Actual: Name:	TESORO PETROLEUM CO INC
88 ft. Address:	950 E 33RD ST
City,State,Zip:	SIGNAL HILL, CA 907555114
Year:	2009
GEPAID:	CAC002647948
Contact:	JEFFERY M BAKER
Telephone:	2538968708
Mailing Name:	Not reported
Mailing Address:	3450 S 344TH WAY STE 100
Mailing City,St,Zip:	AUBURN, WA 98001
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Tons:	0.231
CA Waste Code:	134-Aqueous solution with total organic residues less than 10 percent
Method:	H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Los Angeles

A11 **TESORO** **HAZNET** **S123599267**
950 E 33RD ST **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 11 of 27 in cluster A

Relative: HAZNET:
Lower

Name:	TESORO
Address:	950 E 33RD ST
City,State,Zip:	SIGNAL HILL, CA 907555114
Year:	2015
GEPAID:	CAC002826273
Contact:	DANNY MONSON
Telephone:	5624956877
Mailing Name:	Not reported
Mailing Address:	PO BOX 80730
Mailing City,St,Zip:	RANCHO SANTA MARGARI, CA 926880730
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Tons:	0.252
CA Waste Code:	134-Aqueous solution with total organic residues less than 10 percent
Method:	H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Los Angeles

Actual:
88 ft.

A12 **TARGET 292A** **HAZNET** **S112910980**
950 E 33RD ST **N/A**
< 1/8 **LONG BEACH, CA 90807**
1 ft.

Site 12 of 27 in cluster A

Relative: HAZNET:
Higher

Name:	TARGET 292A
Address:	950 E 33RD ST
City,State,Zip:	LONG BEACH, CA 908070000
Year:	2001
GEPAID:	CAC002302641
Contact:	CINDY RADOVICH/STORE MGR
Telephone:	5624277751
Mailing Name:	Not reported
Mailing Address:	1905 ASTON AVE STE 100
Mailing City,St,Zip:	CARLSBAD, CA 920080000
Gen County:	Los Angeles
TSD EPA ID:	TND000772186
TSD County:	99
Tons:	0.2
CA Waste Code:	141-Off-specification, aged or surplus inorganics
Method:	***-Invalid Code
Facility County:	Los Angeles

Actual:
90 ft.

A13 **TESORO ENVIRONMENTAL RESOURCES COMPANY** **HAZNET** **S123592698**
950 E 33RD ST **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 13 of 27 in cluster A

Relative: HAZNET:
Lower

Name:	TESORO ENVIRONMENTAL RESOURCES COMPANY
Address:	950 E 33RD ST
City,State,Zip:	SIGNAL HILL, CA 907555114
Year:	2013
GEPAID:	CAC002741991
Contact:	JEFFREY BAKER
Telephone:	2538968708
Mailing Name:	Not reported
Mailing Address:	2955 REDONDO AVE
Mailing City,St,Zip:	LONG BEACH, CA 90806
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Tons:	0.189
CA Waste Code:	134-Aqueous solution with total organic residues less than 10 percent
Method:	H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Los Angeles

Actual:
88 ft.

A14 **TARGET T 2319 - SIGNAL HILL** **CIWQS** **S121678875**
950 33RD **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 14 of 27 in cluster A

Relative: CIWQS:
Lower

Name:	TARGET T 2319 - SIGNAL HILL
Address:	950 33RD
City,State,Zip:	SIGNAL HILL, CA 90755
Agency:	Target Corporation
Agency Address:	PO Box 111, Minneapolis, CA 55440
Place/Project Type:	Construction - Commercial
SIC/NAICS:	Not reported
Region:	4
Program:	CONSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water construction
Order Number:	99-08DW
WDID:	4 19C343441
NPDES Number:	CAS000002
Adoption Date:	Not reported
Effective Date:	09/06/2006
Termination Date:	07/05/2007
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	Not reported
Longitude:	Not reported

Actual:
88 ft.

A15 **TARGET STORE #T-292** **LUST** **S102438434**
950 033RD ST E **Cortese** **N/A**
< 1/8 **SIGNAL HILL, CA 90807** **HIST CORTESE**
1 ft. **CERS**

Site 15 of 27 in cluster A

Relative:
Lower

Actual:
88 ft.

LUST:

Name:	TARGET STORE #T-292
Address:	950 033RD ST E
City,State,Zip:	SIGNAL HILL, CA 90807
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603701871
Global Id:	T0603701871
Latitude:	33.8169749
Longitude:	-118.1812139
Status:	Open - Remediation
Status Date:	06/09/2010
Case Worker:	NB
RB Case Number:	I-11132
Local Agency:	LOS ANGELES COUNTY
File Location:	Regional Board
Local Case Number:	UNK
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0603701871
Contact Type:	Regional Board Caseworker
Contact Name:	NHAN BAO
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 WEST 4TH STREET, SUITE 200
City:	LOS ANGELES
Email:	nbao@waterboards.ca.gov
Phone Number:	2135766703

LUST:

Global Id:	T0603701871
Action Type:	ENFORCEMENT
Date:	12/05/2016
Action:	Staff Letter
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	04/12/2005
Action:	Soil and Water Investigation Workplan
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	01/15/2016
Action:	Remedial Progress Report
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	04/15/2016
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603701871

TARGET STORE #T-292 (Continued) **S102438434**

Action Type: RESPONSE
Date: 10/15/2015
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 10/15/2018
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 01/15/2019
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/15/2017
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 10/15/2016
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 01/15/2018
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: Other
Date: 11/01/1991
Action: Leak Stopped

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701871
Action Type: RESPONSE
Date: 07/31/2002
Action: Other Report / Document

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701871
Action Type: RESPONSE
Date: 10/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701871
Action Type: RESPONSE
Date: 07/15/2004

TARGET STORE #T-292 (Continued) **S102438434**

Action:	Monitoring Report - Quarterly
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	10/15/2004
Action:	Monitoring Report - Quarterly
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	04/15/2005
Action:	Monitoring Report - Quarterly
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	01/15/2005
Action:	Monitoring Report - Quarterly
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	10/15/2011
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	04/15/2012
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	07/15/2017
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	10/11/2013
Action:	Well Installation Workplan - Regulator Responded
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	05/23/2014
Action:	Pilot Study / Treatability Workplan - Regulator Responded
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	10/15/2014
Action:	Soil and Water Investigation Workplan - Regulator Responded
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	07/15/2018
Action:	Remedial Progress Report - Regulator Responded
Global Id:	T0603701871
Action Type:	RESPONSE
Date:	01/31/2017
Action:	Corrective Action Plan / Remedial Action Plan - Regulator Responded

TARGET STORE #T-292 (Continued) **S102438434**

Global Id: T0603701871
Action Type: REMEDIATION
Date: 07/01/2007
Action: Soil Vapor Extraction (SVE)

Global Id: T0603701871
Action Type: REMEDIATION
Date: 08/11/2005
Action: Free Product Removal

Global Id: T0603701871
Action Type: ENFORCEMENT
Date: 05/24/2017
Action: Health and Safety Code Section 25296.10(c)

Global Id: T0603701871
Action Type: RESPONSE
Date: 10/18/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701871
Action Type: RESPONSE
Date: 07/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/18/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701871
Action Type: Other
Date: 11/01/1991
Action: Leak Reported

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/16/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701871
Action Type: RESPONSE
Date: 10/15/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 09/04/2007
Action: Interim Remedial Action Plan

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/15/2013
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE

TARGET STORE #T-292 (Continued) **S102438434**

Date: 10/11/2013
Action: Well Installation Report

Global Id: T0603701871
Action Type: ENFORCEMENT
Date: 11/25/2013
Action: Staff Letter

Global Id: T0603701871
Action Type: ENFORCEMENT
Date: 11/14/2018
Action: Staff Letter

Global Id: T0603701871
Action Type: RESPONSE
Date: 07/15/2009
Action: Pilot Study / Treatability Workplan

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701871
Action Type: RESPONSE
Date: 10/15/2013
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/15/2014
Action: Well Installation Report

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/15/2014
Action: Other Workplan

Global Id: T0603701871
Action Type: ENFORCEMENT
Date: 06/15/2009
Action: Staff Letter

Global Id: T0603701871
Action Type: RESPONSE
Date: 10/15/2008
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 10/15/2007
Action: Monitoring Report - Quarterly

TARGET STORE #T-292 (Continued) **S102438434**

Global Id: T0603701871
Action Type: RESPONSE
Date: 01/15/2007
Action: Other Workplan

Global Id: T0603701871
Action Type: RESPONSE
Date: 10/15/2014
Action: Other Report / Document

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/15/2015
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/15/1992
Action: Tank Removal Report / UST Sampling Report

Global Id: T0603701871
Action Type: RESPONSE
Date: 04/15/2009
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 07/15/2009
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 07/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 01/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 07/15/2010
Action: Soil and Water Investigation Report

Global Id: T0603701871
Action Type: RESPONSE
Date: 01/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 10/15/2014
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: ENFORCEMENT

TARGET STORE #T-292 (Continued) **S102438434**

Date: 06/09/2010
Action: Staff Letter

Global Id: T0603701871
Action Type: ENFORCEMENT
Date: 06/28/2002
Action: Staff Letter

Global Id: T0603701871
Action Type: ENFORCEMENT
Date: 07/28/2014
Action: Staff Letter

Global Id: T0603701871
Action Type: Other
Date: 11/01/1991
Action: Leak Discovery

Global Id: T0603701871
Action Type: RESPONSE
Date: 10/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603701871
Action Type: RESPONSE
Date: 10/15/2010
Action: Remedial Progress Report

Global Id: T0603701871
Action Type: RESPONSE
Date: 12/06/2010
Action: Pilot Study/ Treatability Report

LUST:
Global Id: T0603701871
Status: Open - Case Begin Date
Status Date: 11/01/1991

Global Id: T0603701871
Status: Open - Site Assessment
Status Date: 11/20/1991

Global Id: T0603701871
Status: Open - Site Assessment
Status Date: 02/20/1993

Global Id: T0603701871
Status: Open - Site Assessment
Status Date: 11/20/1997

Global Id: T0603701871
Status: Open - Site Assessment
Status Date: 04/12/2005

Global Id: T0603701871
Status: Open - Remediation
Status Date: 06/09/2010

TARGET STORE #T-292 (Continued) **S102438434**

LUST REG 4:

Region:	4	
Regional Board:	04	
County:	Los Angeles	
Facility Id:	908070234	
Status:	Preliminary site assessment underway	
Substance:	Gasoline	
Substance Quantity:	Not reported	
Local Case No:	UNK	
Case Type:	Groundwater	
Abatement Method Used at the Site:		Not reported
Global ID:	T0603701871	
W Global ID:	Not reported	
Staff:	UNK	
Local Agency:	Not reported	
Cross Street:	ATLANTIC AVE	
Enforcement Type:	Not reported	
Date Leak Discovered:	11/1/1991	
Date Leak First Reported:		11/1/1991
Date Leak Record Entered:	9/23/1996	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	11/1/1991	
Date Case Last Changed on Database:		1/3/1997
Date the Case was Closed:		Not reported
How Leak Discovered:	Tank Closure	
How Leak Stopped:	Not reported	
Cause of Leak:	Not reported	
Leak Source:	Not reported	
Operator:	Not reported	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		3532.1067443702109482595975816
Source of Cleanup Funding:		Not reported
Preliminary Site Assessment Workplan Submitted:		Not reported
Preliminary Site Assessment Began:		8/22/1996
Pollution Characterization Began:		Not reported
Remediation Plan Submitted:		Not reported
Remedial Action Underway:		Not reported
Post Remedial Action Monitoring Began:		Not reported
Enforcement Action Date:		Not reported
Historical Max MTBE Date:		2/19/2002
Hist Max MTBE Conc in Groundwater:		2500
Hist Max MTBE Conc in Soil:		Not reported
Significant Interim Remedial Action Taken:		Not reported
GW Qualifier:	=	
Soil Qualifier:	Not reported	
Organization:	Not reported	
Owner Contact:	Not reported	
Responsible Party:	TESORO REFINING & MARKETING	
RP Address:	320 S.W. STARK ST., STE 511, PORTLAND OR 97204	
Program:	LUST	
Lat/Long:	33.8169749 / -1	
Local Agency Staff:	Not reported	
Beneficial Use:	Not reported	
Priority:	Not reported	
Cleanup Fund Id:	Not reported	
Suspended:	Not reported	

TARGET STORE #T-292 (Continued) **S102438434**

Assigned Name: Not reported
Summary: Not reported

CORTESE:
Name: TARGET STORE #T-292
Address: 950 033RD ST E
City,State,Zip: SIGNAL HILL, CA 90807
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0603701871
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: OPEN - REMEDIATION
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

HIST CORTESE:
edr_fname: TARGET STORE #T-292
edr_fadd1: 950 033RD
City,State,Zip: SIGNAL HILL, CA 90807
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: 908070234

CERS:
Name: TARGET STORE #T-292
Address: 950 033RD ST E
City,State,Zip: SIGNAL HILL, CA 90807
Site ID: 226843
CERS ID: T0603701871
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: NHAN BAO - LOS ANGELES RWQCB (REGION 4)
Entity Title: Not reported
Affiliation Address: 320 WEST 4TH STREET, SUITE 200
Affiliation City: LOS ANGELES
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 2135766703

A16 **TESORO** **HAZNET** **S123608321**
950 EAST 33RD STREET **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 16 of 27 in cluster A

Relative: HAZNET:
Lower

Actual: Name:	TESORO
88 ft. Address:	950 EAST 33RD STREET
City,State,Zip:	SIGNAL HILL, CA 90755
Year:	2017
GEPAID:	CAC002896243
Contact:	DANNY MONSON
Telephone:	5624952675
Mailing Name:	Not reported
Mailing Address:	PO BOX 80730
Mailing City,St,Zip:	RANCHOSANTAMARGARITA, CA 92688
Gen County:	Los Angeles
TSD EPA ID:	NVT330010000
TSD County:	99
Tons:	0.0225
CA Waste Code:	352-Other organic solids
Method:	H132-Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Facility County:	Los Angeles

Name:	TESORO
Address:	950 EAST 33RD STREET
City,State,Zip:	SIGNAL HILL, CA 90755
Year:	2017
GEPAID:	CAC002896243
Contact:	DANNY MONSON
Telephone:	5624952675
Mailing Name:	Not reported
Mailing Address:	PO BOX 80730
Mailing City,St,Zip:	RANCHOSANTAMARGARITA, CA 92688
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Tons:	0.21
CA Waste Code:	134-Aqueous solution with total organic residues less than 10 percent
Method:	H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Los Angeles

A17 **1X TARGET #292** **HAZNET** **S123741131**
950 E 33RD STREET **N/A**
< 1/8 **SIGNAL HILL, CA 90807**
1 ft.

Site 17 of 27 in cluster A

Relative: HAZNET:
Lower

Actual: Name:	1X TARGET #292
88 ft. Address:	950 E 33RD STREET
City,State,Zip:	SIGNAL HILL, CA 908070000
Year:	1991
GEPAID:	CAC000647600
Contact:	CARMEN RIVERA/OPERATION MGR
Telephone:	2134277751
Mailing Name:	Not reported

1X TARGET #292 (Continued) **S123741131**

Mailing Address:	950 E 33RD STREET
Mailing City,St,Zip:	SIGNAL HILL, CA 908070000
Gen County:	Los Angeles
TSD EPA ID:	CAT080011059
TSD County:	Los Angeles
Tons:	0.0625
CA Waste Code:	331-Off-specification, aged or surplus organics
Method:	H01-Transfer Station
Facility County:	Los Angeles

A18 **TESORO** **HAZNET** **S118225129**
950 E 33RD ST **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 18 of 27 in cluster A

Relative: **Lower**
Actual: **88 ft.**

HAZNET:

Name:	TESORO
Address:	950 E 33RD ST
City,State,Zip:	SIGNAL HILL, CA 907555114
Year:	2014
GEPAID:	CAC002790097
Contact:	DANNY MONSON
Telephone:	5624956877
Mailing Name:	Not reported
Mailing Address:	PO BOX 80730
Mailing City,St,Zip:	RANCHO SANTA MARGARI, CA 926880730
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Tons:	0.231
CA Waste Code:	134-Aqueous solution with total organic residues less than 10 percent
Method:	H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Los Angeles

A19 **CHMIRS** **S100278362**
950 EAST 33RD STREET **N/A**
< 1/8 **SIGNAL HILL, CA 90806**
1 ft.

Site 19 of 27 in cluster A

Relative: **Lower**
Actual: **88 ft.**

CHMIRS:

Name:	Not reported
Address:	950 EAST 33RD STREET
City,State,Zip:	SIGNAL HILL, CA 90806
OES Incident Number:	119917
OES notification:	Not reported
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**20-OCT-91**
Property Use:	500
Agency Id Number:	19620
Agency Incident Number:	H-049-91
Time Notified:	735
Time Completed:	900

(Continued) **S100278362**

Surrounding Area:	400
Estimated Temperature:	70
Property Management:	P
More Than Two Substances Involved?:	N
Resp Agncy Personel # Of Decontaminated:	0
Responding Agency Personel # Of Injuries:	0
Responding Agency Personel # Of Fatalities:	0
Others Number Of Decontaminated:	0
Others Number Of Injuries:	0
Others Number Of Fatalities:	0
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	J. PETERSON 48
Report Date:	12-NOV-91
Facility Telephone:	213 426-7311
Waterway Involved:	Not reported
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Not reported
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	88-92
Agency:	Not reported
Incident Date:	20-OCT-91
Admin Agency:	Not reported
Amount:	Not reported
Contained:	Not reported
Site Type:	Not reported
E Date:	06-AUG-92
Substance:	Not reported
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Y
Description:	Not reported

A20 **TESORO PETROLEUM CO INC** **HAZNET** **S123581838**
950 E 33RD ST **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 20 of 27 in cluster A

Relative: Lower
Actual: 88 ft.

HAZNET:

Name:	TESORO PETROLEUM CO INC
Address:	950 E 33RD ST
City,State,Zip:	SIGNAL HILL, CA 907555114
Year:	2004
GEPAID:	CAC002584744
Contact:	JEFFERY M BAKER
Telephone:	2538968708
Mailing Name:	Not reported
Mailing Address:	3450 S 344TH WAY STE 100
Mailing City,St,Zip:	AUBURN, WA 98001
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Tons:	0.231
CA Waste Code:	134-Aqueous solution with total organic residues less than 10 percent
Method:	R01-Recycler
Facility County:	Los Angeles

A21 **TARGET STORE T2319** **FINDS** **1014672004**
950 E 33RD ST **ECHO** **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 21 of 27 in cluster A

Relative: Lower
Actual: 88 ft.

FINDS:

Registry ID: 110043534672

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZARDOUS WASTE BIENNIAL REPORTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1014672004
Registry ID:	110043534672
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110043534672

A22 **TARGET STORE T2319** **HAZNET** **S113803694**
950 E 33RD ST **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 22 of 27 in cluster A

Relative: HAZNET:
Lower

Actual:
88 ft.

Name:	TARGET STORE T2319
Address:	950 E 33RD ST
City,State,Zip:	SIGNAL HILL, CA 907550000
Year:	2017
GEPAID:	CAR000218487
Contact:	STEVE MUSSER
Telephone:	8005872228
Mailing Name:	Not reported
Mailing Address:	PO BOX 111
Mailing City,St,Zip:	MINNEAPOLIS, MN 554400000
Gen County:	Los Angeles
TSD EPA ID:	CAD044429835
TSD County:	Los Angeles
Tons:	0.0045
CA Waste Code:	791-Liquids with pH <= 2
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Los Angeles

Name:	TARGET STORE T2319
Address:	950 E 33RD ST
City,State,Zip:	SIGNAL HILL, CA 907550000
Year:	2017
GEPAID:	CAR000218487
Contact:	STEVE MUSSER
Telephone:	8005872228
Mailing Name:	Not reported
Mailing Address:	PO BOX 111
Mailing City,St,Zip:	MINNEAPOLIS, MN 554400000
Gen County:	Los Angeles
TSD EPA ID:	CAD044429835
TSD County:	Los Angeles
Tons:	1.531
CA Waste Code:	331-Off-specification, aged or surplus organics
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Los Angeles

Name:	TARGET STORE T2319
Address:	950 E 33RD ST
City,State,Zip:	SIGNAL HILL, CA 907550000
Year:	2017
GEPAID:	CAR000218487
Contact:	STEVE MUSSER
Telephone:	8005872228
Mailing Name:	Not reported
Mailing Address:	PO BOX 111
Mailing City,St,Zip:	MINNEAPOLIS, MN 554400000
Gen County:	Los Angeles
TSD EPA ID:	CAD044429835
TSD County:	Los Angeles
Tons:	0.0535

TARGET STORE T2319 (Continued) **S113803694**

CA Waste Code: 141-Off-specification, aged or surplus inorganics
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

Name: TARGET STORE T2319
Address: 950 E 33RD ST
City,State,Zip: SIGNAL HILL, CA 907550000
Year: 2017
GEPAID: CAR000218487
Contact: STEVE MUSSER
Telephone: 8005872228
Mailing Name: Not reported
Mailing Address: PO BOX 111
Mailing City,St,Zip: MINNEAPOLIS, MN 554400000
Gen County: Los Angeles
TSD EPA ID: CAD044429835
TSD County: Los Angeles
Tons: 0.0225
CA Waste Code: 122-Alkaline solution without metals pH >= 12.5
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

Name: TARGET STORE T2319
Address: 950 E 33RD ST
City,State,Zip: SIGNAL HILL, CA 907550000
Year: 2017
GEPAID: CAR000218487
Contact: STEVE MUSSER
Telephone: 8005872228
Mailing Name: Not reported
Mailing Address: PO BOX 111
Mailing City,St,Zip: MINNEAPOLIS, MN 554400000
Gen County: Los Angeles
TSD EPA ID: TXD982290140
TSD County: 99
Tons: 0.001
CA Waste Code: 331-Off-specification, aged or surplus organics
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
31 additional CA_HAZNET: record(s) in the EDR Site Report.

A23 **TESORO ENVIRONMENTAL RESOURCE CO** **HAZNET** **S123586049**
950 E 33RD ST **N/A**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 23 of 27 in cluster A

Relative: HAZNET:
Lower
Name: TESORO ENVIRONMENTAL RESOURCE CO
Actual: Address: 950 E 33RD ST
88 ft. City,State,Zip: SIGNAL HILL, CA 90755
Year: 2011
GEPAID: CAC002662694

TESORO ENVIRONMENTAL RESOURCE CO (Continued) **S123586049**

Contact:	JEFFREY BAKER
Telephone:	2538968708
Mailing Name:	Not reported
Mailing Address:	3450 S 344TH WAY STE 201
Mailing City,St,Zip:	FEDERAL WAY, WA 98001
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Tons:	0.231
CA Waste Code:	134-Aqueous solution with total organic residues less than 10 percent
Method:	H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Los Angeles

A24 **TESORO** **RCRA NonGen / NLR** **1024764438**
950 EAST 33RD STREET **CAC002984306**
< 1/8 **SIGNAL HILL, CA 90755**
1 ft.

Site 24 of 27 in cluster A

Relative: **Lower**
Actual: **88 ft.**

RCRA NonGen / NLR:

Date form received by agency:	2018-10-10 00:00:00.0
Facility name:	TESORO
Facility address:	950 EAST 33RD STREET SIGNAL HILL, CA 90755
EPA ID:	CAC002984306
Mailing address:	O PO BOX 80730 RANCHO SANTA MARGARI, CA 92688
Contact:	DANNY MONSON
Contact address:	400 OCEANGATE SUITE 600 LONG BEACH, CA 90802-4692
Contact country:	Not reported
Contact telephone:	562-495-6877
Contact email:	DANIEL.M.MONSON@ANDEAVOR.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	TESORO ENVIRONMENTAL RESOURCES CO
Owner/operator address:	400 OCEANGATE SUITE 600 LONG BEACH, CA 90802
Owner/operator country:	Not reported
Owner/operator telephone:	562-495-6877
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	DANNY MONSON
Owner/operator address:	400 OCEANGATE SUITE 600 LONG BEACH, CA 90802
Owner/operator country:	Not reported
Owner/operator telephone:	562-495-6877

TESORO (Continued) **1024764438**

Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

A25 **TARGET STORE T-2319** **HAZNET** **S113097302**
950 E 33RD ST **N/A**
< 1/8 **LONG BEACH, CA 90807**
1 ft.

Site 25 of 27 in cluster A

Relative: Higher
Actual: 90 ft.

HAZNET:
Name: TARGET STORE T-2319
Address: 950 E 33RD ST
City,State,Zip: LONG BEACH, CA 908070000
Year: 2011
GEPAID: CAL000183395
Contact: USER
Telephone: 8005872228
Mailing Name: Not reported
Mailing Address: PO BOX 111
Mailing City,St,Zip: MINNEAPOLIS, MN 554400111
Gen County: Los Angeles
TSD EPA ID: AZD081705402
TSD County: 99
Tons: 0.162
CA Waste Code: 331-Off-specification, aged or surplus organics
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

Name: TARGET STORE T-2319
Address: 950 E 33RD ST
City,State,Zip: LONG BEACH, CA 908070000
Year: 2011
GEPAID: CAL000183395

TARGET STORE T-2319 (Continued) **S113097302**

Contact:	USER
Telephone:	8005872228
Mailing Name:	Not reported
Mailing Address:	PO BOX 111
Mailing City,St,Zip:	MINNEAPOLIS, MN 554400111
Gen County:	Los Angeles
TSD EPA ID:	MID980991566
TSD County:	Not reported
Tons:	0.0005
CA Waste Code:	311-Pharmaceutical waste
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Los Angeles

Name:	TARGET STORE T-2319
Address:	950 E 33RD ST
City,State,Zip:	LONG BEACH, CA 908070000
Year:	2010
GEPAID:	CAL000183395
Contact:	USER
Telephone:	8005872228
Mailing Name:	Not reported
Mailing Address:	PO BOX 111
Mailing City,St,Zip:	MINNEAPOLIS, MN 554400111
Gen County:	Los Angeles
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Tons:	0.05
CA Waste Code:	122-Alkaline solution without metals pH >= 12.5
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Los Angeles

Name:	TARGET STORE T-2319
Address:	950 E 33RD ST
City,State,Zip:	LONG BEACH, CA 908070000
Year:	2010
GEPAID:	CAL000183395
Contact:	USER
Telephone:	8005872228
Mailing Name:	Not reported
Mailing Address:	PO BOX 111
Mailing City,St,Zip:	MINNEAPOLIS, MN 554400111
Gen County:	Los Angeles
TSD EPA ID:	AZD081705402
TSD County:	99
Tons:	0.1225
CA Waste Code:	331-Off-specification, aged or surplus organics
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Los Angeles

Name:	TARGET STORE T-2319
Address:	950 E 33RD ST
City,State,Zip:	LONG BEACH, CA 908070000
Year:	2009
GEPAID:	CAL000183395

TARGET STORE T-2319 (Continued) **S113097302**

Contact:	USER
Telephone:	8005872228
Mailing Name:	Not reported
Mailing Address:	PO BOX 111
Mailing City,St,Zip:	MINNEAPOLIS, MN 554400111
Gen County:	Los Angeles
TSD EPA ID:	AZD081705402
TSD County:	99
Tons:	0.0075
CA Waste Code:	331-Off-specification, aged or surplus organics
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access
15 additional CA_HAZNET: record(s) in the EDR Site Report.

A26 **CVS PHARMACY #17385** **RCRA-VSQG 1018273763**
950 E 33RD ST STE B **FINDS CAR000259549**
< 1/8 **SIGNAL HILL, CA 90755** **ECHO**
1 ft.

Site 26 of 27 in cluster A

Relative: Lower
Actual: 88 ft.

RCRA-VSQG:

Date form received by agency:	2016-03-29 00:00:00.0
Facility name:	CVS PHARMACY #17385
Facility address:	950 E 33RD ST STE B SIGNAL HILL, CA 90755
EPA ID:	CAR000259549
Mailing address:	CVS DR WOONSOCKET, RI 02895
Contact:	NICOLE WILKINSON
Contact address:	CVS DR MAIL CODE 2340 WOONSOCKET, RI 02895
Contact country:	US
Contact telephone:	401-770-7132
Contact email:	NICOLE.WILKINSON@CVSHEALTH.COM
EPA Region:	09
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	GARFIELD BEACH CVS LLC
Owner/operator address:	Not reported

CVS PHARMACY #17385 (Continued) **1018273763**

Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 2015-12-16 00:00:00.
Owner/Op end date: Not reported

Owner/operator name: ALBERT A ZIMMERMAN TRUST
Owner/operator address: DASSIA WAY EAST
OCEANSIDE, CA 92056
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 1970-06-16 00:00:00.
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 123
. Waste name: Unspecified alkaline solution

. Waste code: 134
. Waste name: Aqueous solution with <10% total organic residues

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 181

CVS PHARMACY #17385 (Continued) **1018273763**

. Waste name: Other inorganic solid waste

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 541
. Waste name: Photochemicals / photo processing waste

. Waste code: 561
. Waste name: Detergent and soap

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: U034
. Waste name: ACETALDEHYDE, TRICHLORO- (OR) CHLORAL

. Waste code: U044
. Waste name: CHLOROFORM (OR) METHANE, TRICHLORO-

. Waste code: U122
. Waste name: FORMALDEHYDE

CVS PHARMACY #17385 (Continued) **1018273763**

. Waste code: U129
. Waste name: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

. Waste code: U188
. Waste name: PHENOL

. Waste code: U201
. Waste name: 1,3-BENZENEDIOL (OR) RESORCINOL

. Waste code: U205
. Waste name: SELENIUM SULFIDE (OR) SELENIUM SULFIDE SES2 (R,T)

Violation Status: No violations found

FINDS:

Registry ID: 110067553196

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1018273763
Registry ID: 110067553196
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110067553196

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27 **CHMIRS** **S100278410**
N/A

32ND AND CALIFORNIA
SIGNAL HILL, CA 92806

< 1/8
0.001 mi.
5 ft.

Relative:
Higher

Actual:
92 ft.

CHMIRS:
Name: Not reported
Address: 32ND AND CALIFORNIA
City,State,Zip: SIGNAL HILL, CA 90806
OES Incident Number: 121193
OES notification: Not reported
OES Date: Not reported
OES Time: Not reported
Date Completed: **31-DEC-91**
Property Use: 962
Agency Id Number: 19620
Agency Incident Number: H-064-91
Time Notified: 1900
Time Completed: 1600
Surrounding Area: 400
Estimated Temperature: 50

O113 **TEXACO PRODUCING INC.** **LUST** **S101298126**
South **3033 CALIFORNIA AVE** **SWEEPS UST** **N/A**
1/8-1/4 **SIGNAL HILL, CA 90807** **HIST CORTESE**
0.191 mi. **CERS**
1010 ft. **Site 2 of 2 in cluster O**

Relative:
Higher

Actual:
107 ft.

LUST:

Name:	TEXACO PRODUCING INC.
Address:	3033 CALIFORNIA AVE
City,State,Zip:	SIGNAL HILL, CA 90807
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603703964
Global Id:	T0603703964
Latitude:	33.8125714
Longitude:	-118.1806817
Status:	Completed - Case Closed
Status Date:	10/12/1995
Case Worker:	YR
RB Case Number:	I-12359
Local Agency:	LOS ANGELES COUNTY
File Location:	Not reported
Local Case Number:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0603703964
Contact Type:	Local Agency Caseworker
Contact Name:	JOHN AWUJO
Organization Name:	LOS ANGELES COUNTY
Address:	900 S FREMONT AVE
City:	ALHAMBRA
Email:	jawujo@dpw.lacounty.gov
Phone Number:	6264583507

Global Id:	T0603703964
Contact Type:	Regional Board Caseworker
Contact Name:	YUE RONG
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4TH ST., SUITE 200
City:	Los Angeles
Email:	yrong@waterboards.ca.gov
Phone Number:	Not reported

LUST:

Global Id:	T0603703964
Action Type:	Other
Date:	08/01/1989
Action:	Leak Stopped

Global Id:	T0603703964
Action Type:	Other
Date:	02/26/1990
Action:	Leak Reported

Global Id:	T0603703964
Action Type:	Other

TEXACO PRODUCING INC. (Continued) **S101298126**

Date: 08/01/1989
Action: Leak Discovery

LUST:
Global Id: T0603703964
Status: Open - Case Begin Date
Status Date: 08/01/1989

Global Id: T0603703964
Status: Open - Site Assessment
Status Date: 02/26/1990

Global Id: T0603703964
Status: Completed - Case Closed
Status Date: 10/12/1995

LUST REG 4:

Region:	4	
Regional Board:	04	
County:	Los Angeles	
Facility Id:	I-12359	
Status:	Case Closed	
Substance:	Gasoline	
Substance Quantity:	Not reported	
Local Case No:	Not reported	
Case Type:	Soil	
Abatement Method Used at the Site:		Not reported
Global ID:	T0603703964	
W Global ID:	Not reported	
Staff:	UNK	
Local Agency:	19000	
Cross Street:	SPRING ST	
Enforcement Type:	Not reported	
Date Leak Discovered:	8/1/1989	
Date Leak First Reported:		2/26/1990
Date Leak Record Entered:	4/19/1990	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	8/1/1989	
Date Case Last Changed on Database:		10/12/1995
Date the Case was Closed:		10/12/1995
How Leak Discovered:	Tank Closure	
How Leak Stopped:	Not reported	
Cause of Leak:	UNK	
Leak Source:	UNK	
Operator:	SKIBA, R.	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		4120.943337150961811148848353 9
Source of Cleanup Funding:		UNK
Preliminary Site Assessment Workplan Submitted:		Not reported
Preliminary Site Assessment Began:		2/26/1990
Pollution Characterization Began:		Not reported
Remediation Plan Submitted:		Not reported
Remedial Action Underway:		Not reported
Post Remedial Action Monitoring Began:		Not reported

TEXACO PRODUCING INC. (Continued) **S101298126**

Enforcement Action Date: Not reported
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Owner Contact: Not reported
Responsible Party: TEXACO PRODUCING INC.
RP Address: PO BOX 811, VENTURA, CA 93002
Program: LUST
Lat/Long: 33.812222 / -1
Local Agency Staff: Not reported
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: Not reported

SWEEPS UST:
Name: TEXACO PRODUCING INC
Address: 3033 CALIFORNIA AVE
City: SIGNAL HILL
Status: Active
Comp Number: 12359
Number: 9
Board Of Equalization: Not reported
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Owner Tank Id: Not reported
SWRCB Tank Id: Not reported
Tank Status: Not reported
Capacity: Not reported
Active Date: Not reported
Tank Use: Not reported
STG: Not reported
Content: Not reported
Number Of Tanks: Not reported

HIST CORTESE:
edr_fname: TEXACO PRODUCING INC.
edr_fadd1: 3033 CALIFORNIA
City,State,Zip: SIGNAL HILL, CA 90807
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: I-12359

CERS:
Name: TEXACO PRODUCING INC.
Address: 3033 CALIFORNIA AVE
City,State,Zip: SIGNAL HILL, CA 90807
Site ID: 239647

TEXACO PRODUCING INC. (Continued) **S101298126**

CERS ID: T0603703964
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: JOHN AWUJO - LOS ANGELES COUNTY
Entity Title: Not reported
Affiliation Address: 900 S FREMONT AVE
Affiliation City: ALHAMBRA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 6264583507

Affiliation Type Desc: Regional Board Caseworker
Entity Name: YUE RONG - LOS ANGELES RWQCB (REGION 4)
Entity Title: Not reported
Affiliation Address: 320 W. 4TH ST., SUITE 200
Affiliation City: Los Angeles
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

M114 **UST** **U003919818**
SW **3154 ATLANTIC AVE** **N/A**
1/8-1/4 **LONG BEACH, CA**
0.192 mi.
1013 ft. **Site 2 of 4 in cluster M**

Relative: LONG BEACH UST:
Higher

Actual: DATA AS OF 02/25/2014:
107 ft.
Name: Not reported
Address: 3154 ATLANTIC AVE
City,State,Zip: LONG BEACH, CA
Region: LONG BEACH
Tanks: 0F
Tank Test: Not reported
Leak Test: Not reported
Tank Status: Not reported

N115 **COMMERCIAL RADIATOR** **RCRA NonGen / NLR** **1024802471**
WNW **500 E WARDLOW RD** **CAL000244661**
1/8-1/4 **LONG BEACH, CA 90807**
0.195 mi.
1032 ft. **Site 6 of 10 in cluster N**

Relative: RCRA NonGen / NLR:
Higher
Date form received by agency: 2002-01-22 00:00:00.0
Actual: Facility name: COMMERCIAL RADIATOR
93 ft. Facility address: 500 E WARDLOW RD
LONG BEACH, CA 90807-0000
EPA ID: CAL000244661
Contact: JACK ROSE
Contact address: 500 E WARDLOW RD

6.0 CONCLUSIONS

Conclusions

The 9.067-acre site was an oil field since at least 1924; there are two previously abandoned oil wells onsite. Historically, the site had these two oil wells, aboveground storage tanks and oil field activities that visually impacted the land.

The Tesoro Service Station formerly located at the northwestern corner of the site has caused soil matrix, soil vapor and groundwater contamination.

Recognized Environmental Conditions onsite include: (1) the two previously abandoned oil wells; (2) the aboveground storage tanks and visible soil impacts in the 1928, 1947 and 1953 aerial photographs; and (3) the former Tesoro Service Station.

The adjacent contiguous property to the south is an oil field and historically had aboveground storage tanks.

7.0 RECOMMENDATIONS

Suspect building material samples should be collected and submitted for analysis of lead and asbestos. If lead-based paint and/or lead or asbestos containing building materials are present at concentrations that exceed threshold criteria, abatement of lead-based paint and lead or asbestos containing building materials by a licensed contractor and appropriate disposal of building materials should be performed prior to demolition of the buildings.

A Limited Phase II Environmental Site Assessment (Phase II ESA) should be performed on the approximately 9.067-acre site. The Phase II ESA should include soil matrix and soil vapor sampling adjacent to the former Tesoro Service Station at the planned location of a new drive-thru restaurant, adjacent to the previously abandoned oil wells, at the planned location of an additional 11,500 square feet of retail, and at the planned location of 5,000 square feet of shopping.

Soil should be collected from 5-feet below ground surface (bgs) and 10-feet bgs or the depth of anticipated construction activities and submitted to a State of California certified laboratory for analysis of TPH-gasoline range, (TPH-g), TPH-diesel range (TPH-d), TPH-oil range (TPH-o), speciated carbon chains, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs) and total threshold limit concentration (TTLC) metals. Nested soil vapor probes should be installed at 5-feet and 10-feet bgs and sampled for VOCs.

A methane assessment of the site should be conducted pursuant to the City of Signal Hill Oil and Gas Code §16.24.080 and Property Development Guidelines to determine if methane concentrations warrant mitigation, i.e., installation of a vapor barrier and modified active vapor collection/diffusion system, during construction of any buildings.

A baseline human health risk assessment should be performed with the data generated during the proposed soil matrix and soil vapor investigations to determine whether residual concentrations of constituents detected in onsite soils and in soil vapor underlying the site pose a risk or an adverse impact to human health or the environment.

As the site contains abandoned oil wells redevelopment of the site will require City oversight pursuant to the City of Signal Hill Oil and Gas Code §16.24 and Property Development Guidelines.

A soil management plan should be prepared prior to any grading activities to be conducted onsite. This soil management plan should provide instructions for the contractor to implement in the event discolored or odiferous soils are discovered during any grading operations.

8.0 LIMITATIONS

Mearns Consulting LLC performed a Phase I Environmental Site Assessment (Phase I ESA) of the 9.067-acre site located at 950 East 33rd Street, in Signal Hill, Los Angeles County, California 90755 (the site).

The site reconnaissance was conducted on February 6, 2020 by Susan L. Mearns, Ph.D. The Phase I ESA included public environmental agency and historical record reviews, site observations, and report preparation. The scope of the Phase I ESA was consistent with the ASTM Standard E 1527-13, ASTM Standard E 2600-15 and the AAI Standard (40CFR 312).

Mearns Consulting LLC prepared this Phase I ESA using reasonable efforts in each phase of work to identify recognized environmental conditions associated with hazardous substances, wastes and petroleum products at the site. "Reasonable efforts" are limited to information gained from visual observation of largely unobstructed areas, recorded database information held in public record and available information gathered from interviews. Such methods may not identify subsurface conditions or equipment that may have been hidden from view due to paving, construction or debris pile storage, or incorrect information from sources.

Findings within this report are based on information collected from observations made on the day of the site investigation and from reasonably ascertainable information obtained from governing public agencies and private sources.

The regulatory database report provided is based on an evaluation of the data collected and compiled by a contracted data research company. The report focuses on the site and neighboring properties which could impact the site. Neighboring properties listed in governmental environmental records are identified within specific search distances. The search distance varies depending upon the particular government record being checked. The regulatory research is designed to meet the requirements of ASTM Standard E 1527-13, ASTM Standard E 2600-15 and the AAI Standard (40CFR 312). The information provided in the regulatory database report is assumed to be correct and complete.

Past ownership of the site was reviewed in an attempt to determine past site usage. Mearns Consulting LLC is not a professional title insurance firm and makes no guarantee, explicit or implied, that the records which were reviewed represent a comprehensive or precise delineation of past site ownership or tenancy for legal purposes.

This report is not definitive and should not be assumed to be a complete or specific definition of the conditions above or below grade. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, or other construction purposes. Mearns Consulting LLC makes no representation or warranty that the past or current operations at the site are or have been in compliance with all applicable federal, state and local laws, regulations and codes.

This report is for the use and benefit of, and may be relied upon by, Messrs. Lee and Clement, and third parties authorized by this entity. Any third party agrees by accepting this report that any use or reliance on this report shall be limited by the terms and conditions of the project contract with Messrs. Lee and Clement and with the acknowledgment that actual site conditions may change with time, and that hidden conditions may exist at the site that were not discoverable within the authorized scope of the assessment.

Regardless of the findings stated in this report, Mearns Consulting LLC is not responsible for consequences or conditions arising from facts that were concealed, withheld, or not fully disclosed at the time the assessment was conducted. Mearns Consulting LLC makes no other representation to any third party except that it has used the degree of care and skill ordinarily exercised by environmental consultants in the preparation of the report and in the assembling of data and information related thereto. No other warranties are made to any third party, either express or implied.

9.0 REFERENCES

Aerial Photographs, 1928, 1947, 1953, 1963, 1977, 1979, 1983, 1989, 1994, 2002, 2005, 2009, 2012 and 2016. Source: EDR.

ASTM, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designation E 1527-13.

California Department of Conservation, Geologic Energy Management Division (CalGEM).

California Department of Water Resources, 1961. West Coast Basin Judgment.

California Department of Water Resources, 2004. California's Groundwater, Bulletin 118-2004 Update. City of Signal Hill, 1986. Safety Element of the Signal Hill General Plan.

Environmental Data Resources, Inc. (EDR). Phase I Environmental Site Assessment Report, 950 East 33rd Street, Signal Hill, CA. January 24, 2020.

McLaren/Hart Environmental Engineering Corporation, October 13, 1994. Site Assessment Report for Soil Investigation, Target Store T-292, 700 East 33rd Street, Signal Hill, California (LACDPW File #I011132).

Orion Environmental Inc., June 21, 1995. Results of Groundwater Monitoring for May 1995 at 700 East 33rd Street in Signal Hill, California, prepared for Tesoro Refining, Marketing & Supply Company, Portland, Oregon.

Orion Environmental Inc., August 22, 1996. Site Assessment Report, Target Store T-292, 950 East 33rd Street, Signal Hill, California, prepared for Tesoro Refining, Marketing & Supply Company, Portland, Oregon.

Orion Environmental Inc., May 30, 1997. Downgradient Well Installation Report, Target Store T-292, 950 East 33rd Street in Signal Hill, California, prepared for Tesoro Refining, Marketing & Supply Company, Portland, Oregon.

Orion Environmental Inc., June 7, 2000. Groundwater Monitoring Results, Fourth Quarter 1999 and First Quarter 2000 and Installation of Free Product Monitoring Well, 700 East 33rd Street, Signal Hill, California, prepared for Tesoro Petroleum Companies, Inc., Auburn, Washington.

Orion Environmental Inc., March 27, 2001a. Groundwater Monitoring Results and Well Installation Report, Fourth Quarter 2000 and First Quarter 2001, 950 East 33rd Street in Signal Hill California, Target Store T-292, prepared for Tesoro Petroleum Companies, Inc., Auburn, Washington.

Orion Environmental, Inc., July 18, 2001b. File Review Summary for Nearby Property and Summary of Local Geology and Hydrogeology, Target Store T-292, 700 East 33rd Street, Signal Hill, California.

Orion Environmental, Inc., October 28, 2005. Groundwater, Soil Vapor Extraction, and Vapor Monitoring Well Installation Work Plan, Target Store T-292, 700 East 33rd Street, Signal Hill, California.

Orion Environmental, Inc., August 2006. Remedial Action Plan for Impacted Soil, Target Store T-292, 950

East 33rd Street, Signal Hill, California.

Orion Environmental, Inc., January 31, 2017. Alternative Groundwater Remediation Work Plan, 950 East 33rd Street, Signal Hill, California, Target Store T-292, RWQCB File #I-11132.

Regional Water Quality Control Board.

South Coast Air Quality Management District (SCAQMD).

USEPA. All Appropriate Inquiries Standard (AAI Standard). 40CFR 312.

USEPA. January 11, 2017. Asbestos Containing Building Materials Information. https://www.epa.gov/large-scale-residential-demolition/asbestos-containing-materials-acm-and-demolition

USEPA. February 28, 2017. PCB Information https://www.epa.gov/pcbs/polychlorinated-biphenyl-pcb-containing-fluorescent-light-ballasts-flbs-school-buildings

USEPA. March 15, 2017. Lead Information https://www.epa.gov/lead

USGS Topographic Map, Azusa, CA Quadrangle Map, 7.5 Minute Series, dated 1896, 1899, 1902, 1925, 1942, 1943, 1947, 1949, 1964, 1972, 1981 and 2012. Source: EDR.

FIGURES



EXPLANATION

Previously abandoned oil wells

A12, A17, AW-2, and A22 are operating oil wells

N

0 500 feet

Base map: Google Earth Pro, 2019

Figure 1: Site Location Map
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



EXPLANATION

Previously abandoned oil wells

A12, A17, AW-2, and A22 are operating oil wells

N

0 200 feet

Base map: Google Earth Pro, 2019

Figure 2: Site Map
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC

APPENDIX A

SITE PHOTOGRAPHS



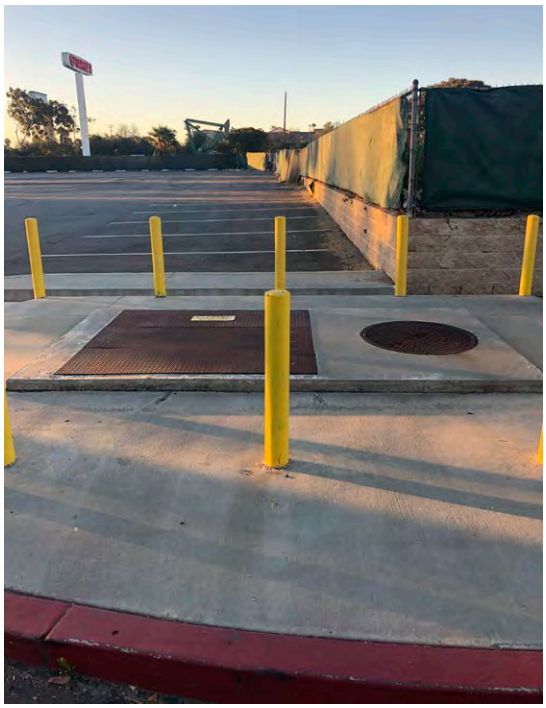
Site, Target, 950 E 33rd St., looking east



Site, Target and CVS Pharmacy, 950 E 33rd Street, looking east



Site, Target, looking north; note stormwater drain in asphalt and methane vent riser from well “Field” 24, API No. 037-11549, abandoned in 2007.



Below grade electrical panel located in parking lot south of building.

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

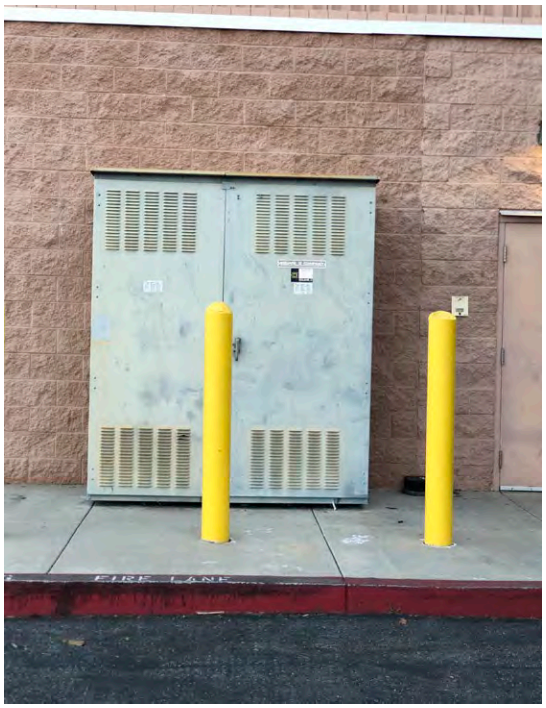
Mearns Consulting LLC



Above grade electrical panel, located in parking lot south of building.



Propane cylinders located in fenced enclosure, southside of building.



Panel located southside of building



Loading dock, southside of building

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



Backflow preventers in landscape islands located in parking lot south of building



South parking lot looking west, Signal Hill Petroleum property behind privacy screened fencing



View from California Avenue entrance, loading dock, parking lot, building and adjacent property



View from north parking lot, looking east

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



Site, 950 E 33rd Street, east side of Target building



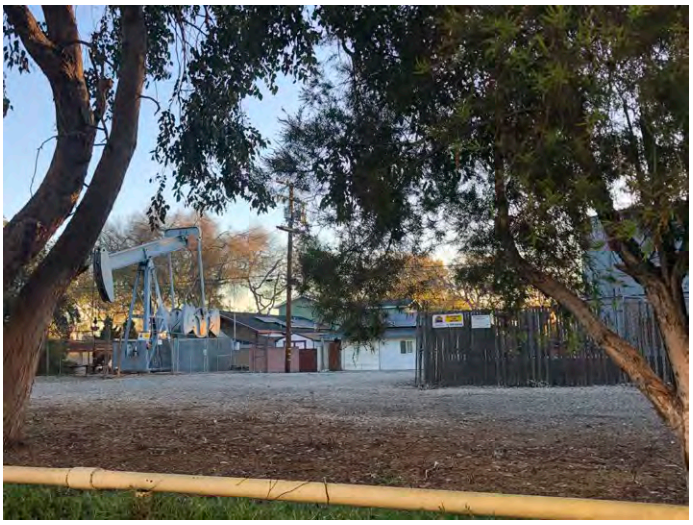
Site, 950 E 33rd Street, Target building, corner of California Avenue and E 33rd St., looking west; note residential neighborhood



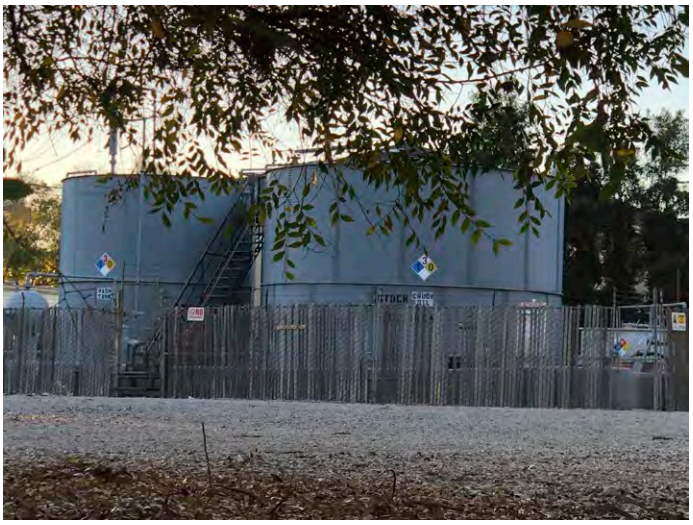
Adjacent property, residential neighborhood, east of California Avenue



Adjacent property, residential neighborhood, east of California Avenue



Adjacent property, southeast corner of California Avenue and E 33rd St., Signal Hill Petroleum operating unit and two aboveground storage tanks for crude



Adjacent property, southeast corner of California Avenue and E 33rd St., Signal Hill Petroleum aboveground storage tanks for crude oil



Adjacent property, southeast corner of California Avenue and E 33rd St., Signal Hill Petroleum, truck fill from aboveground storage tanks



Adjacent property, Memorial West Aluminum, north side of E. 33rd Street.

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



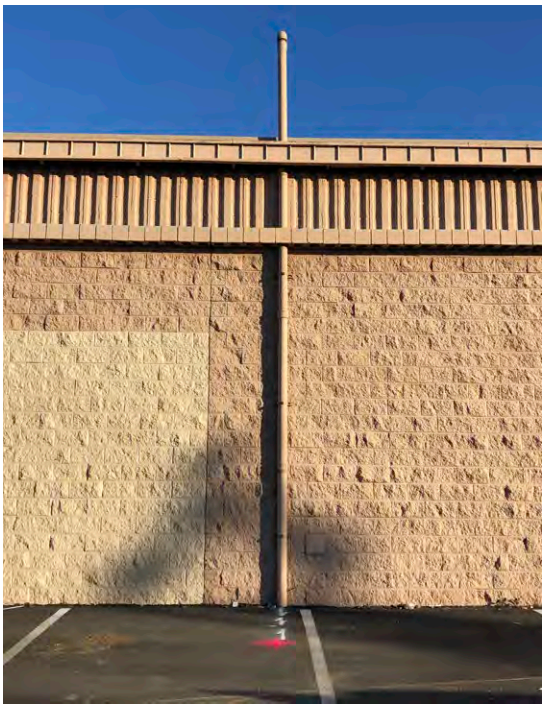
Adjacent property, north side E. 33rd Street.



Adjacent property, north side of E. 33rd St.



Oil well “Field” 18, API No. 037-11543 previously abandoned in 2007; note methane gas vent riser in landscape island



Oil well “Field” 24, API No. 037-11549, located approximately 5-feet from south side of building; note methane gas vent riser extending to roof top

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



Contiguous property, south of parking lot, Signal Hill Petroleum, 3177 California Avenue; operating unit A-22



Contiguous property, south of site, Signal Hill Petroleum, 3177 California Avenue; note settling basins



Contiguous property south of site, Signal Hill Petroleum, 3177 California Avenue; note settling basin, berm and swale directing surface flow to the north



Contiguous property, south of the site, Signal Hill Petroleum, 3177 California Avenue, operating unit AW-2

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



Contiguous property, south of site, Signal Hill Petroleum, 3177 California Avenue, operating unit A-17



Contiguous property, south of site, Signal Hill Petroleum, 3177 California Avenue, operating unit A-12



Contiguous property, south of site, Signal Hill Petroleum, 3177 California Avenue, transformer



Contiguous property, south of site, Signal Hill Petroleum, 3177 California Avenue, stormdrain and overpass to I-405

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



Contiguous property to the south, Signal Hill Petroleum, oil well SHWU A-19, API No. 037-11552, previously abandoned in 2004, to become part of site due to lot line adjustment.



Contiguous property to the south, Signal Hill Petroleum, oil well “Field” 36, API No. 037-00410, previously abandoned in 1971, to become part of site due to lot line adjustment.



Contiguous property to the south, Signal Hill Petroleum, oil well AW-1, API No. 037-00338, previously abandoned in 2004, to become part of site due to lot line adjustment.

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC

APPENDIX B

CITY OF SIGNAL HILL RECORDS

DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS,
AND GEOTHERMAL RESOURCES
5816 Corporate Avenue, Suite 200
CYPRESS, CA 90630-4731
(714) 816-6847
TELEFAX (714) 816-6853

May 6, 1998

Donn Showers
CITY OF SIGNAL HILL
Department of Building and Safety
2175 Cherry Avenue
Signal Hill, CA 90806

PROJECT NAME: Target Store Addition

PROJECT ADDRESS: 950 E. 33rd Street
Signal Hill, CA

DIVISION RERENCE NUMBER: SH-98-001

Enclosed are your copies of our Construction Project Site Plan Review. If you have any question, please call Edward Santiago at 714/816-6847.

ES:kj
Enclosure

COVERLETTER

THE RESOURCES AGENCY
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

ENVIRONMENTAL PLAN REVIEW AND RECOMMENDATIONS

Applicant: SLS Associates, Inc.

Project: TARGET Store Addition
950 E. 33rd Street
Signal Hill, CA

Division Ref. No. SH-98-001

The Environmental Unit of the Long Beach Division of Oil, Gas and Geothermal Resources has reviewed the site plan and submits the following comments for consideration.

Our records indicate two (2) abandoned oil wells within the project site. Although future problems from oil and gas wells that have been abandoned or reabandoned to the Division's current specifications are remote, we, nevertheless suggest that an effort be made to avoid building over or in close proximity to any abandoned well. If construction over an abandoned well is unavoidable, we recommend that an approved venting system be placed over the well.

If an unrecorded well is discovered during construction, please contact us immediately. The well may require additional plugging and abandonment work.

Division policy requires that soil contaminated by hydrocarbons should be remedied or disposed of in accordance with local, state or federal laws. If any saturated soil or seepage is detected during construction please contact us immediately.

Robert H. Samuelian
Reviewing Environmental Engineer

Robert H Samuelian
Signature

5/1/98
Date

RHS:rhs
file: SH-98-001

THE RESOURCES AGENCY
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES
PLAN REVIEW

Applicant: SLS Associates, Inc.

Project name and number: Target Store Addition

Project Address: 950 E. 33rd Street
Signal Hill, CA

Division reference number: SH-98-001

The staff of the Division of Oil, Gas, and Geothermal Resources has reviewed the attached project site plan and determined the following:

A. The subject well must be abandoned or reabandoned to current standards(or equivalent) of the Division of Oil, Gas, and Geothermal Resources.
B. The subject well has been abandoned or reabandoned to current standards (or equivalent)of the Division of Oil, Gas, and Geothermal Resources.
C. The subject well was not abandoned to current standards, but no additional well work is required.
D. The well is active, therefore, no abandonment is required at this time.
E. The required well work cannot be performed because the well could not be located.
F. A current Division-approved well vent must be properly installed on this well.
G. Other.

A	B	C	D	E	F	G	COMPANY/OPERATOR	WELL DESIGNATION/API NO.	FIELD/COUNTY
		X					Texaco Exploration & Production Inc.	"Field" 18 (037-11543)	Signal Hill/ Los Angeles
		X					Texaco Exploration & Production Inc.	"Field" 24 (037-11549):	Signal Hill/ Los Angeles

Total number of wells: 2

PROJECT REVIEW CERTIFICATION
CYPRESS OFFICE
MAY 12 1998
ENGINEER
DIVISION OF OIL AND GAS

May 6, 1998

Edward Santiago
Construction Site Engineer
Edward Santiago
Signature

Note: The approval expires one year from the date shown on the "Project Review Certification" stamp.

DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS,
AND GEOTHERMAL RESOURCES
5816 Corporate Avenue, Suite 200
CYPRESS, CA 90630-4731
(714) 816-6847
TELEFAX (714) 816-6853

April 21, 1998

Donn Showers
CITY OF SIGNAL HILL
Community Development Agency
2175 Cherry Avenue
Signal Hill, CA 90806

Subject: Target Store T-292 @ 950 East 33rd Street

Dear Donn:

This is to inform you that the Division of Oil, Gas, and Geothermal Resources is in receipt of the proposed submittal. Our records indicate the following information:

1. Oil well Texaco Exploration and Production, Inc. "Field" 24 is already abandoned and located under the existing structure. Therefore, no further review is required.
2. Oil well Texaco Exploration and Production, Inc. "Field" 18 is also abandoned and located approximately 170 feet from the proposed expansion area in the existing parking lot. Therefore, no further review is required.

Please accept this as our clearance for a building permit. A formal Division letter certifying the project will be sent to you and the applicant once it is completed. Your patience and understanding in this matter is appreciated.

If you have any questions regarding this information, please call me at 714/816-6847.

Sincerely,

Edward Santiago

Edward Santiago
Construction Site Plan Engineer

cc: Greg Friel, SLS Assoc.
Sh0000~01.wai

DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES

5816 Corporate Avenue • Suite 200 • CYPRESS, CALIFORNIA, 90630-4731

PHONE 714 / 816-6847 • **FAX** 714 / 816-6853 • **WEBSITE** conservation.ca.gov

February 7, 2007

Mr. David Henry
Target Corporation
1000 Nicollet Mall
Minneapolis, MN 55403

Applicant: TARGET CORPORATION
Project Name: TARGET T-2319
Project Address: 950 East 33rd Street, Signal Hill, CA 90755
Division Reference Number: SH 07-001

Dear Mr. Henry:

The Division of Oil, Gas and Geothermal Resources' Construction Site Review Program provides an assessment of the integrity of plugged and abandoned wells located on the property and reviews access to the wells for purposes of remedying future problems. This review does not preclude other permitting agencies from identifying high-risk areas of gas accumulation and establishing their own mitigation measures.

I have reviewed the above referenced project application and submit the following comments for your consideration.

The project is located in the Long Beach oil field. Our records show there are two oil wells located within the project's boundaries. Both wells have not been abandoned to the Division's current plugging and abandonment requirements. See Plan Review for well information and recommendations.

If during construction any abandoned or unrecorded wells are uncovered, please contact us immediately. Remedial plugging and reabandonment operations may be required. Also, oil saturated soil or oil seepage on the site must be remediated or disposed of in accordance with local, State, or Federal laws.

Enclosed is your copy of our Construction Site Plan Review. If you should have any questions, please call me at (714) 816-6847. Your cooperation is appreciated.

Sincerely,

Grace P. Brandt
Construction Site Plan Engineer
Division of Oil, Gas, and Geothermal Resources

PROJECT REVIEW CYPRESS OFFICE FEB 07 2007 ENGINEER DIVISION OF OIL AND GAS

SH07-001
Enclosure
cc: David Henry, Target Corp.

THE RESOURCES AGENCY
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES
PLAN REVIEW

Applicant: **TARGET CORPORATION**

Project name and number: TARGET T-2319

Project Address: 950 East 33rd Street, Signal Hill, CA 90755

Division Reference Number: **SH 07-001**

The staff of the Division of Oil, Gas, and Geothermal Resources has reviewed the and attached project site plan and determined the following:

A. The subject well must be abandoned or reabandoned to current standards (or equivalent) of the Division of Oil, Gas, and Geothermal Resources.
B. The subject well has been abandoned or reabandoned to current standards (or equivalent) of the Division of Oil, Gas, and Geothermal Resources.
C. The subject well is not abandoned to current standards, but a bond securing the required well work has been filed with this division.
D. The well is active, therefore, no abandonment is required at this time.
E. A gas vent approved by the city or county permitting agency is recommended.
F. Additional gas mitigation is recommended, prior to construction.
G. An approved Division gas test on the well needs to be done after reabandonment to current standards.

COMPANY/OPERATOR	WELL DESIGNATION/API NO.	FIELD/COUNTY	A	B	C	D	E	F	G
Chevron USA Inc.	"Fields" 18 / 037-11543	Long Beach / Los Angeles	X		X		X		X
Chevron USA Inc.	"Fields" 24 / 037-11549	Long Beach / Los Angeles	X		X		X		X

Number of Wells: **2**

PROJECT REVIEW
CYPRESS OFFICE
FEB 0 7 2007
ENGINEER
DIVISION OF OIL AND GAS

February 7, 2007

Grace P. Brandt
Construction Site Plan Engineer

Signature

Note: The approval expires one year from the date shown on the "Project Review" stamp.

DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES

5816 Corporate Avenue • Suite 200 • CYPRESS, CALIFORNIA, 90630-4731

PHONE 714 / 816-6847 • FAX 714 / 816-6853 • WEBSITE conservation.ca.gov

May 10, 2007

Donn Showers
City of Signal Hill
2175 Cherry Avenue
Signal Hill, CA 90755

Applicant: TARGET CORPORATION
Project Name: TARGET T-2319
Project Address: 950 East 33rd Street, Signal Hill, CA 90755
Division Reference Number: SH-07-004

Dear Mr. Showers:

The Department of Conservation's Division of Oil, Gas, and Geothermal Resources (Division) Construction Site Plan Review Program provides an assessment of the integrity of plugged and abandoned wells on the property and reviews access to the wells for purposes of remedying future problems. This review does not preclude other permitting agencies from identifying high-risk areas of gas accumulation and establishing their own mitigation measures.

If during construction, any additional wells are uncovered, please contact us immediately. Remedial plugging and re-abandonment may be required.

The Division of Oil, Gas and Geothermal Resources has no authority to review or comment on the design of oil and gas well vent systems, or their installation. Approval of well vent design is the purview of permitting agencies.

Division policy requires that soil contaminated by hydrocarbons shall be remediated or disposed of in accordance with local, state, or federal laws. If any saturated soil or seepage is detected during construction, please contact us immediately.

Enclosed are your copies of our Construction Site Plan Review. This letter serves as a replacement to the Division's Site Plan Review No. SH-07-001, dated February 07, 2007. If you should have any questions regarding this project, please call AB Gorashi Abdulrahman at (714) 816-6553. Your cooperation is appreciated.

PROJECT REVIEW CYPRESS OFFICE MAY 10 2007 ENGINEER DIVISION OF OIL AND GAS

Sincerely,

AB Gorashi Abdulrahman, PE
Site Plan Engineer

SH-07-004
Enclosures
cc: David Henry

The Department of Conservation's mission is to protect Californians and their environment by: Protecting lives and property from earthquakes and landslides; Ensuring safe mining and oil and gas drilling; Conserving California's farmland; and Saving energy and resources through recycling.

THE RESOURCES AGENCY
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES
PLAN REVIEW

Applicant: TARGET CORPORATION

Project Name: TARGET T-2319

Project Address: 950 East 33rd Street, Signal Hill, CA 90755

Division Reference Number: SF-07-004

The staff of the Division of Oil, Gas, and Geothermal Resources has reviewed the attached project site plan and determined the following:

A. The subject well must be abandoned or reabandoned to current standards (or equivalent) of the Division of Oil, Gas, and Geothermal Resources.
B. The subject well has been abandoned or reabandoned to current standards (or equivalent) of the Division of Oil, Gas, and Geothermal Resources.
C. The subject well was not abandoned to current standards, but no additional well work is required.
D. The well is active, therefore, no abandonment is required at this time.
E. The required well work cannot be performed because the well could not be located.
F. A well vent system approved by the city or county permitting agency is recommended.
G. An approved Division gas test was performed on April 5, 2007 on the two wells.

COMPANY/OPERATOR	WELL DESIGNATION/API NO.	FIELD/COUNTY	A	B	C	D	E	F	G
Chevron USA, Inc.	"Field "18 (API No. 037-11543)	Long Beach/LA			x			x	x
Chevron USA, Inc.	"Field" 24 (API No. 037-11549)	Long Beach /LA		x				x	x

Total number of wells: 2

May 10, 2007

PROJECT REVIEW
CYPRESS OFFICE
MAY 10 2007
ENGINEER
DIVISION OF OIL AND GAS

AB Gorashi Abdulrahman, PE
Site Plan Engineer

Signature

Note: The approval expires one year from the date shown on the "Project Review" stamp.

Orion Environmental Inc.
3450 E. Spring St., Suite 212 562 988-2755 PHONE
Long Beach, CA 90806 562 988-2759 FAX

DBA Arctos Environmental
411 Alcatraz Avenue 510 595-4040 PHONE
Oakland, CA 94609 510 595-4070 FAX

13 April 2005

Reina Schaetzl
Assistant Planner
City of Signal Hill
2175 Cherry Avenue
Signal Hill, California 90755

Subject: Proposal for Installation of a Fenced Compound
950 East 33rd Street, Signal Hill, California
Target Store T-292, RWQCB File #I-11132

Dear Ms. Schaetzl:

As per our phone conversation on 10 December 2004, Orion Environmental Inc. (Orion), on behalf of Tesoro Petroleum Companies, Inc. (Tesoro), is requesting authorization from the City of Signal Hill to install a fenced compound in the parking lot of Target Store T-292 at 950 East 33rd Street in Signal Hill, California (Figure 1, the site). The site is a former automobile service station originally located at 700 East 33rd Street in Signal Hill, California.

The fenced compound would be on site approximately 36 to 60 months and be used to store purge water generated during quarterly groundwater monitoring events. Clean-up and quarterly groundwater monitoring at the site is conducted under a directive from the RWQCB (RWQCB File #I-11132). The site currently includes a total of eight groundwater monitoring wells (MW-1 through MW-8) installed between 1996 and 2001.

Future remediation activities at the site are expected to include operation of a SVE system. Building and construction permits for operation of the SVE system will be procured at the appropriate time from both the City of Signal Hill and the South Coast Air Quality Management District (SCAQMD).

Orion is proposing the installation of a 20-foot wide by 30-foot long chain-link fence 40 feet south of the western corner of the Target parking lot between wells MW-2 and MW-3 (see the attached site plan). The fenced compound will be located on a private parking lot owned by the Target Store. Access to the parking lot and the exact location of

the fenced compound has been agreed upon by Orion and Target Store representatives. Attached to this proposal is an approval letter for construction of the fenced compound from Target Corporation.

Please review our proposal for the fenced compound and provide us with any additional requirements or comments. If you have any questions please feel free to contact either Miguel Tseng or Harry Takach at (562) 988-2755.

Very truly yours,

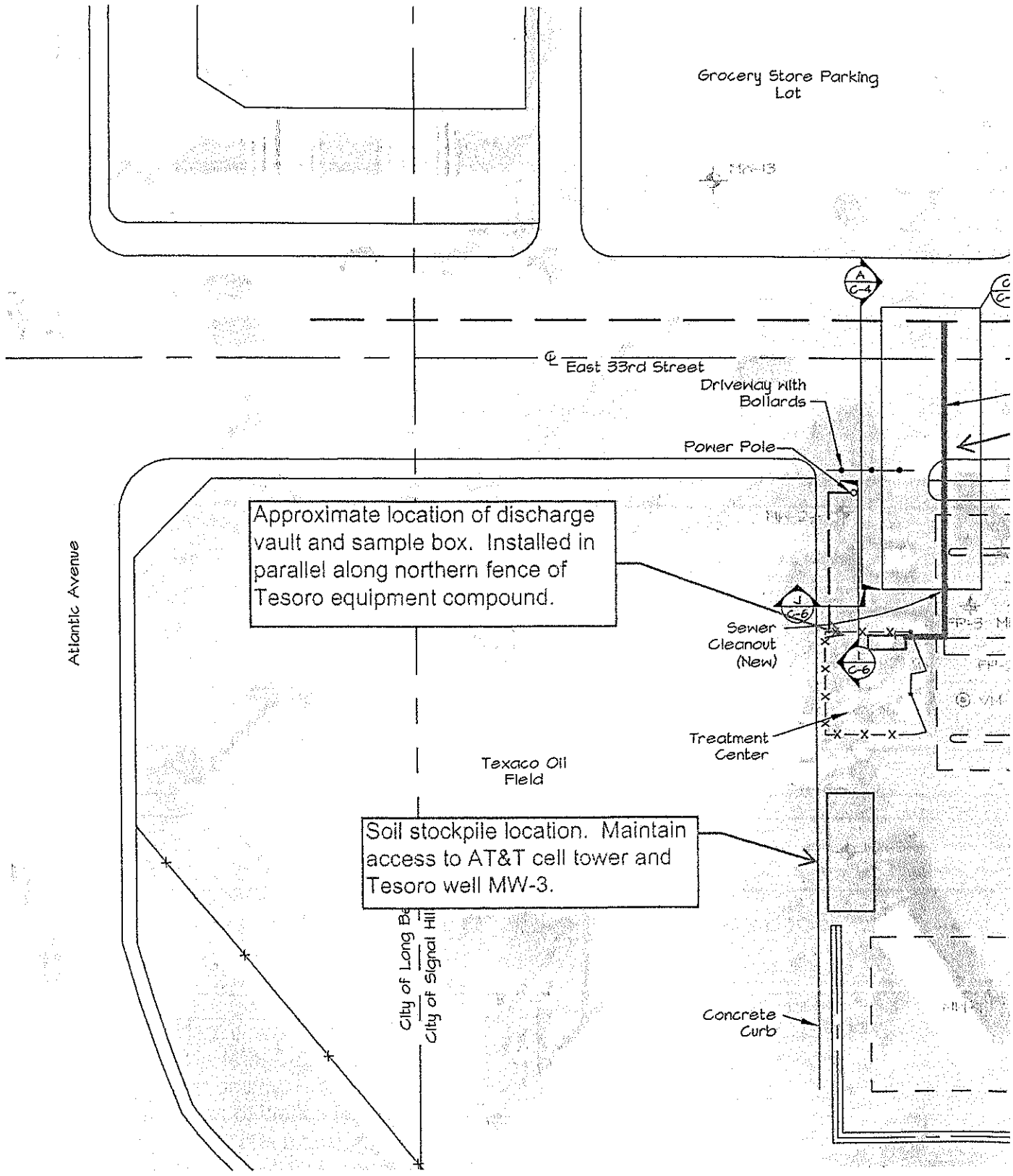
ORION ENVIRONMENTAL INC.

Miguel Tseng
Project Engineer

Jeffrey P. Gwinn
Vice President

Copy: Jeff Baker – Tesoro Petroleum Companies, Inc.
David Luick – Target Corporation

Attachments: Figure 1 - Site Location Map
Figure 2 – Site Plan
Construction Approval Letter from Property Owner



950 E 33rd

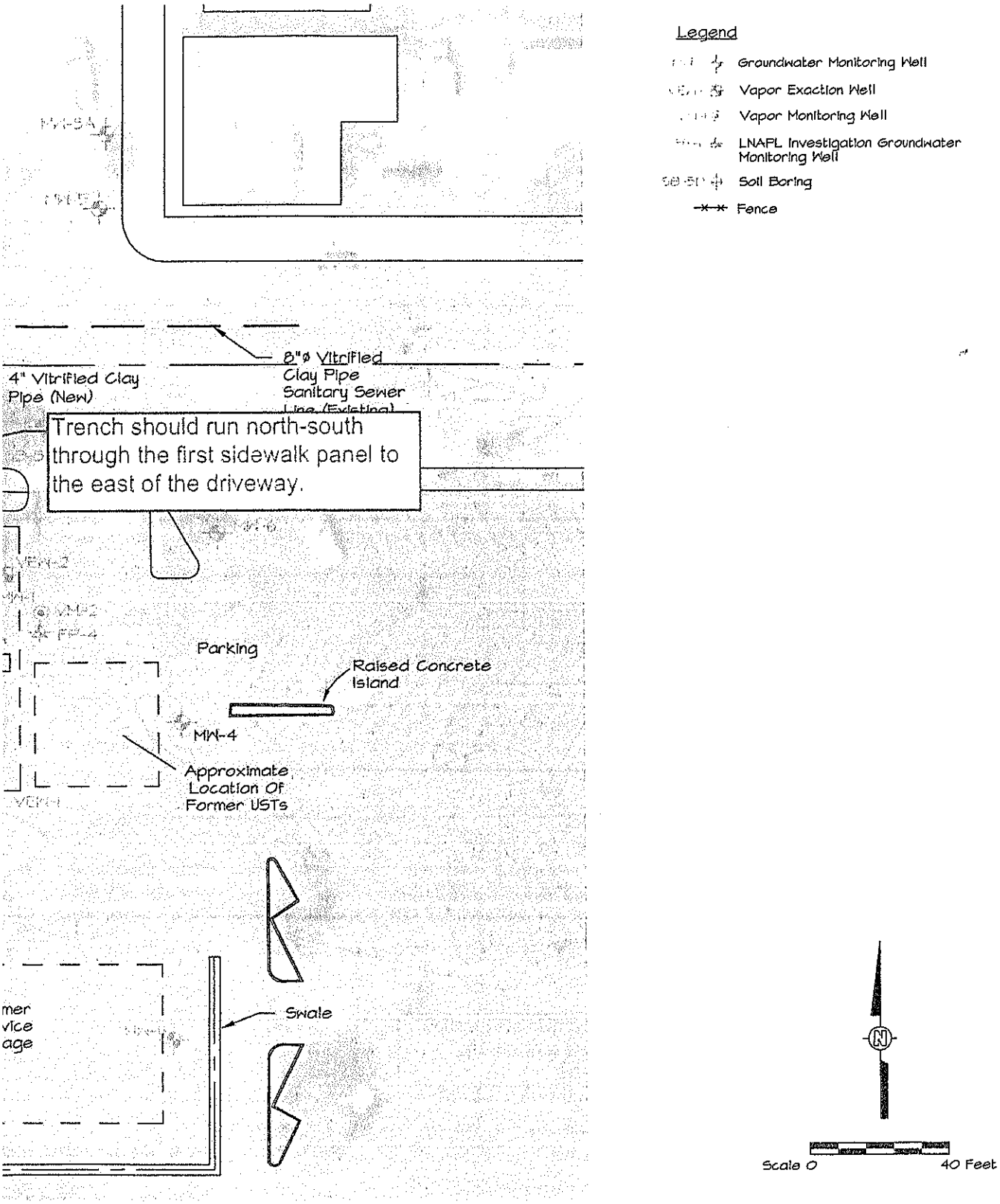
6/20/2014 9:00AM 01LB3A0201A.dwg

NOTE: IF THIS SCALE BAR IS NOT .5 INCH LONG, THIS DRAWING IS NOT TO SCALE.

CAD FILE 01LB3B0201A.DWG

REV	DESCRIPTION OF REVISION	BY	CHK	REV	DATE
1	RFP019	MY	BS	JPG	6/20/14
0	EXTENDED PUMP TEST	MY	BS	JPG	10/23/13

TESORO
Tesoro Companies



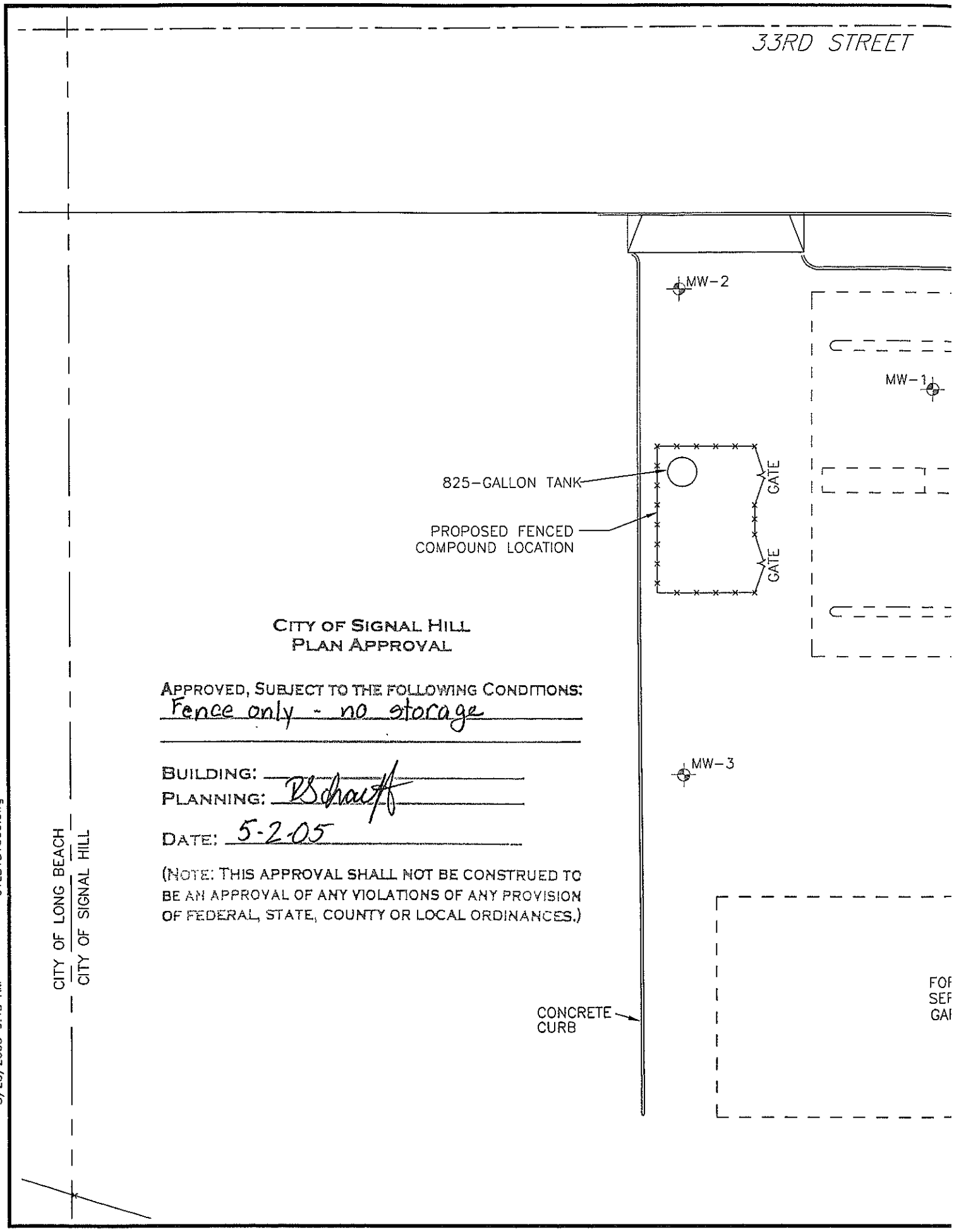
ORION
Orion Environmental Inc.
3450 E. Spring St., Suite 212
Long Beach, California 90806
(562) 988-2755

DESIGNED	AS
DRAWN	MY
CHECKED	SH
REVIEWED	JPG
SCALE	AS NOTED
DATE	3/1/14

TESORO LONG BEACH

SITE PLAN

REVISION	1
PROJECT	01LB11B
FIGURE	C-1



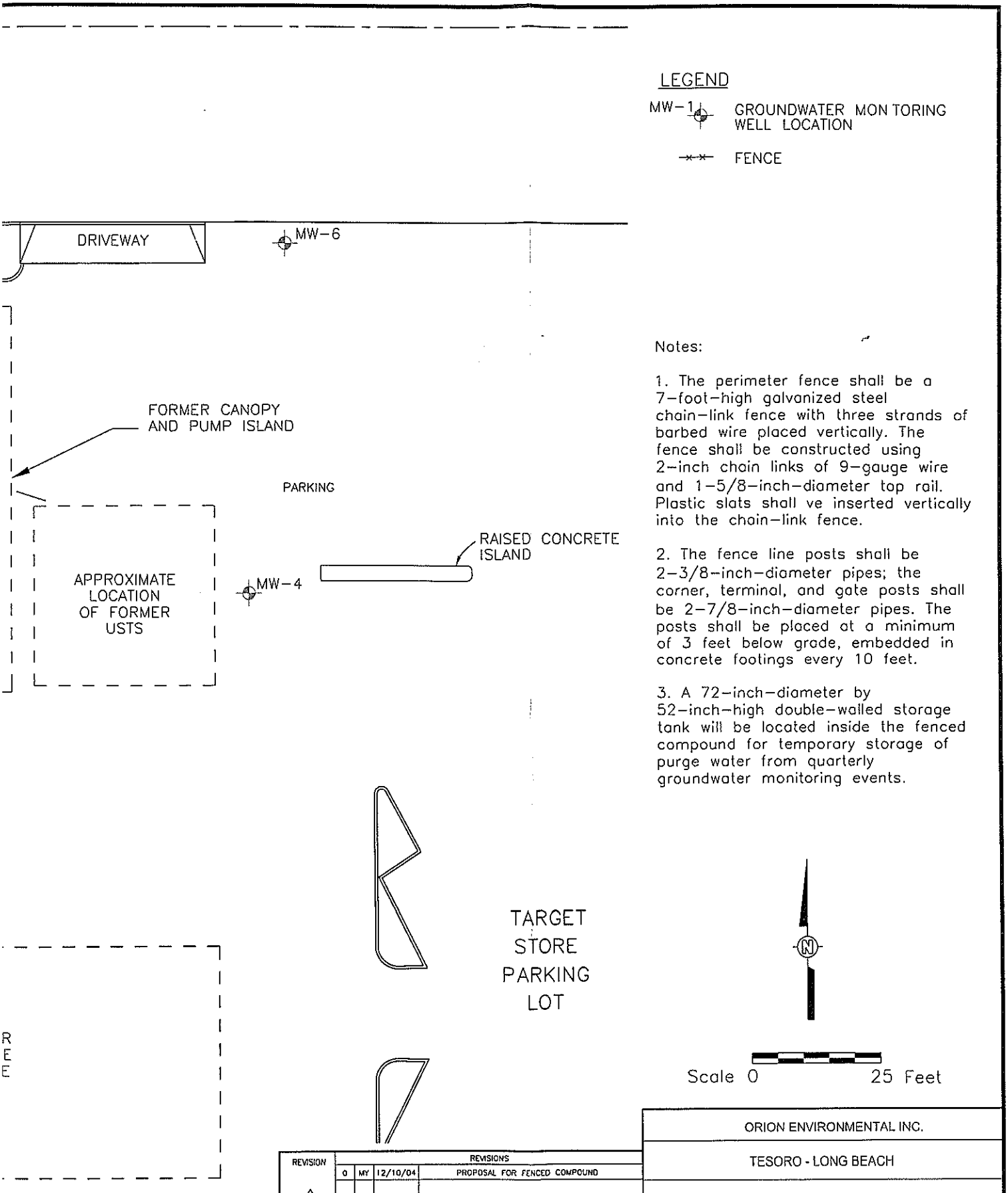
CITY OF SIGNAL HILL
PLAN APPROVAL

APPROVED, SUBJECT TO THE FOLLOWING CONDITIONS:
Fence only - no storage

BUILDING: _____
PLANNING: DS draft
DATE: 5-2-05

(NOTE: THIS APPROVAL SHALL NOT BE CONSTRUED TO BE AN APPROVAL OF ANY VIOLATIONS OF ANY PROVISION OF FEDERAL, STATE, COUNTY OR LOCAL ORDINANCES.)

3/28/2005 9:45 AM 01LB1B1000.dwg



Notes:

1. The perimeter fence shall be a 7-foot-high galvanized steel chain-link fence with three strands of barbed wire placed vertically. The fence shall be constructed using 2-inch chain links of 9-gauge wire and 1-5/8-inch-diameter top rail. Plastic slats shall ve inserted vertically into the chain-link fence.

2. The fence line posts shall be 2-3/8-inch-diameter pipes; the corner, terminal, and gate posts shall be 2-7/8-inch-diameter pipes. The posts shall be placed at a minimum of 3 feet below grade, embedded in concrete footings every 10 feet.

3. A 72-inch-diameter by 52-inch-high double-walled storage tank will be located inside the fenced compound for temporary storage of purge water from quarterly groundwater monitoring events.

REVISION	REVISIONS			
	0	MY	12/10/04	PROPOSAL FOR FENCED COMPOUND
0				

ORION ENVIRONMENTAL INC.

TESORO - LONG BEACH

SITE PLAN

PROJECT NO.	DRAWN BY	CHECKED BY	APPROVED BY
01LBCH	MY	MT	JPG

FILE NO. 01LB1B1000.DWG

FIGURE 2

FILE

TEMPORARY

Certificate of Occupancy

CITY OF SIGNAL HILL

2175 CHERRY AVENUE • SIGNAL HILL, CALIFORNIA 90806 • (213) 426-7333

This Certificate issued pursuant to the requirements of Section 306 of the Uniform Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the City regulating building construction or use. For the following:

Address where Business will be conducted: 950 E. 33rd — Building Address: Same

Name of Occupant/Owner: Target Stores — Business Phone:

Address of Home Office of Occupant if different than above: 33 S. 6th St. Minn. MN — Home Office Phone: Unknown

Permit No.: 6360 — Occupancy Group: B2 — No. of Units: 0 — Type of Construction: VN

Building Division — Date Approved: 6/26/87 — By: GARY JONES

Use Zone: CG — Signal Hill Municipal Code: 20.34.020

Planning Division — Date Approved: 6/26/87 — By: GARY JONES

LIMITATIONS: Temporary Certificate of Occupancy for stocking of the store only. NO retail sales permitted before issuance of a Final Certificate of Occupancy.

Date: 6/26/87

GARY JONES — Building Official

This Certificate shall be posted in a conspicuous place on the premises and shall not be removed except by the Building Official

White—Original; Yellow—Bldg. Records; Pink—Finance

Form 486 4/87

COUNTY OF LOS ANGELES FIRE DEPARTMENT

TO: DEPARTMENT OF COUNTY ENGINEER
BUILDING AND SAFETY DIVISION

SUBJECT: APPROVAL OF FIRE DEPARTMENT REQUIREMENTS

On June 26, 1987 an inspection was made at:

Name of Business Target Store #292

Address 950 E. 33rd Street, Signal Hill, California 90807

Tract - Parcel - Legal Description _____

Sufficient compliance with Fire Department requirements has been made to permit occupancy of premises upon your approval.
Temporary Permit to Occupy (Storage)

Captain -- Inspector

Certificate of Occupancy

CITY OF SIGNAL HILL

2175 CHERRY AVENUE • SIGNAL HILL, CALIFORNIA 90806 • (213) 426-7333

This Certificate issued pursuant to the requirements of Section 306 of the Uniform Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the City regulating building construction or use. For the following:

Address where Business will be conducted: 950 E. 33rd — Building Address: Same

Name of Occupant/Owner: Target Stores — Business Phone:

Address of Home Office of Occupant if different than above: 33 S. 6th St. Minn. MN — Home Office Phone: Unknown

Permit No. 6360 — Occupancy Group: B2 — No. of Units: (0) — Type of Construction: VN

Building Division — Date Approved: 7/14/87 — By: GARY JONES

Use Zone: CG — Signal Hill Municipal Code: 20.34.020

Planning Division — Date Approved: 7/14/87 — By: GARY JONES

LIMITATIONS:

Date: 7/14/87

Gary Jones
Building Official

This Certificate shall be posted in a conspicuous place on the premises and shall not be removed except by the Building Official

White—Original; Yellow—Bldg. Records; Pink—Finance

ORIGINAL—White
(Applicant's Copy)
FILE — Canary (Bldg. Folder)
OFFICE — Pink (Water Dept.
to Finance to City Clerk)

Certificate of Occupancy

CITY OF SIGNAL HILL

DEPARTMENT OF BUILDING & PLANNING

Certificate No. _____ Date _____

BUILDING ADDRESS _____

LEGAL DESCRIPTION _____

OWNER _____ ADDRESS _____ CITY _____

The issuance of this Occupancy Permit does not, in any way, waive or modify any of the prescribed codes or regulations of The City of Signal Hill.

This Occupancy Permit shall become void if said code provisions are not complied with.

This Certificate shall be posted in a conspicuous place on the premises and shall not be removed except by the Building Official.

The Building Official shall be notified of any change of occupancies or use of this building.

LIMITATIONS:

SIGNATURE OF APPLICANT _____

This Occupancy Permit issued pursuant to title 14 and 19 of the Signal Hill Municipal Code.

L. B. WYNN
Director of Building & Planning

Group _____ No. of Units _____ Type _____

by _____
BUILDING DEPT.

Fire Zone _____ Use Zone _____ Permit No. _____

by _____
FIRE DEPT.

ORIGINAL—White (Applicant's Copy)
FILE — Canary (Bldg. Folder)
OFFICE — Pink (Water Dept. to Finance to City Clerk)

Certificate of Occupancy

CITY OF SIGNAL HILL

DEPARTMENT OF BUILDING & SAFETY

Certificate No. 532 Date NOVEMBER 4, 1974

BUILDING ADDRESS 950 E. 33RD ST., SIGNAL HILL, CA 90806

LEGAL DESCRIPTION LOT 15, AMERICAN COLONY TRACT

OWNER C. A. DORMAN ADDRESS P.O. BOX 12379 CITY SAN DIEGO

The issuance of this Occupancy Permit does not, in any way, waive or modify any of the prescribed codes or regulations of The City of Signal Hill.

This Occupancy Permit shall become void if said code provisions are not complied with.

This Certificate shall be posted in a conspicuous place on the premises and shall not be removed except by the Building Official.

The Building Official shall be notified of any change of occupancies or use of this building.

LIMITATIONS:

THIS OCCUPANCY, TO BE INCLUDED AT DORMAN'S INC. DBA GEMCO AUTOMOTIVE CENTER #527, SHALL BE SUBJECT TO THE PROVISIONS OF CHAPTER 19.42 OF THE SIGNAL HILL MUNICIPAL CODE. NO OUTSIDE OF STORAGE SHALL BE PERMITTED.

SIGNATURE OF APPLICANT C. A. Dorman by K. Von Ohlen

C. A. DORMAN

This Occupancy Permit issued pursuant to title 14 and 19 of the Signal Hill Municipal Code.

W. L. WESTBY
Director of Building & Safety

by _____
BUILDING DEPT.

Group F-2 No. of Units 1 Type III

Fire Zone 3 Use Zone C-G Permit No. _____

ORIGINAL—White (Applicant's Copy)
FILE — Canary (Bldg. Folder)
OFFICE — Pink (Water Dept. to Finance to City Clerk)

Certificate of Occupancy

CITY OF SIGNAL HILL

DEPARTMENT OF BUILDING & SAFETY

Certificate No. [illegible] Date [illegible] JANUARY [illegible]

BUILDING ADDRESS [illegible] EAST 33[illegible] STREET, SIGNAL HILL, CAL[illegible]

LEGAL DESCRIPTION [illegible] AMERICAN COLONY TRACT

OWNER [illegible] ADDRESS P.O. [illegible] 67[illegible] CITY

The issuance of this Occupancy Permit does not, in any way, waive or modify any of the prescribed codes or regulations of The City of Signal Hill.

This Occupancy Permit shall become void if said code provisions are not complied with.

This Certificate shall be posted in a conspicuous place on the premises and shall not be removed except by the Building Official.

The Building Official shall be notified of any change of occupancies or use of this building.

LIMITATIONS:

THIS OCCUPANCY, TO BE KNOWN AS "GLOBAL AUTOMOTIVE ENTERPRISES DBA GEMCO AUTO CENTER #527", SHALL BE SUBJECT TO THE PROVISIONS OF CHAPTER 10.[illegible] OF THE SIGNAL HILL MUNICIPAL CODE.

SIGNATURE OF APPLICANT [signature]

A[illegible] STO[illegible]

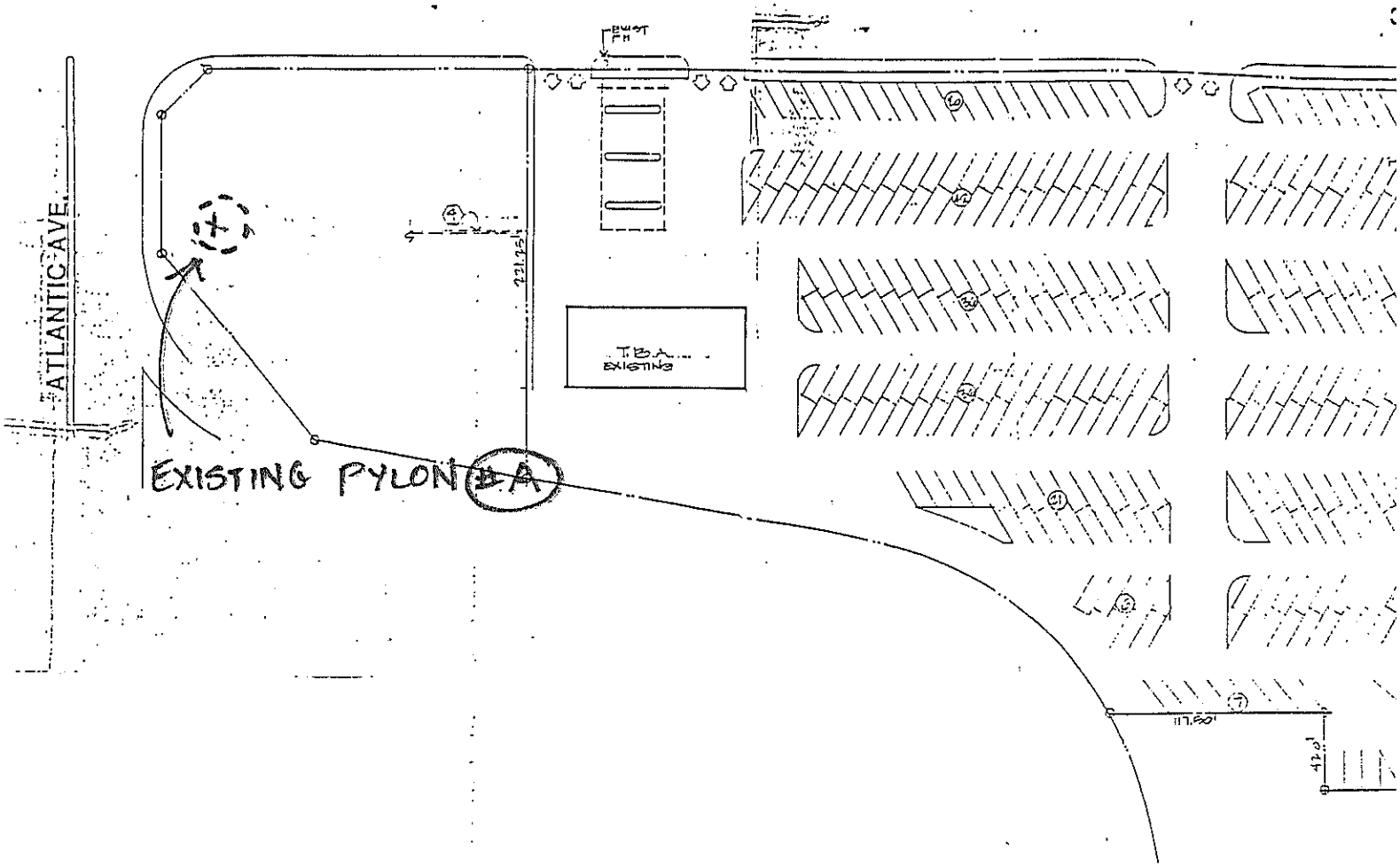
This Occupancy Permit issued pursuant to title 14 and 19 of the Signal Hill Municipal Code.

W. L. WESTBY
Director of Building & Safety

by [signature]
BUILDING DEPT.

Group [illegible] No. of Units _____ Type IV

Fire Zone _____ Use Zone _____ Permit No. _____



BUILDING APPROVAL

APPROVED, SUBJECT TO THE FOLLOWING CONDITIONS:

APPROVED BY: _____ DATE: 9/10/84

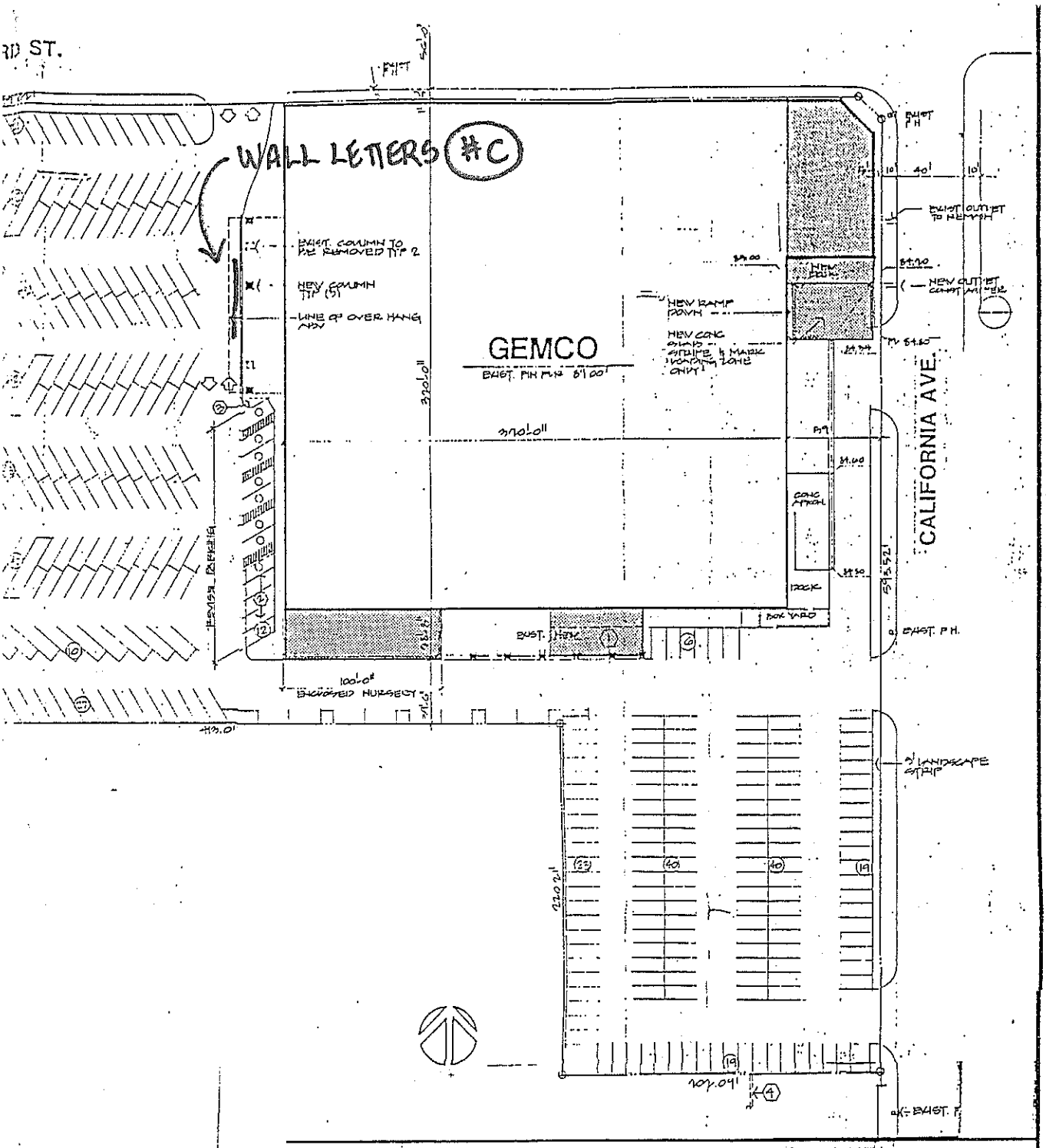
(NOTE: THIS APPROVAL SHALL NOT BE CONSTRUED TO BE AN APPROVAL OF ANY VIOLATIONS OF ANY PROVISION OF STATE OR LOCAL ORDINANCES.)

PLANNING APPROVAL

APPROVED, SUBJECT TO THE FOLLOWING CONDITIONS:

APPROVED BY: _____ DATE: 9/10/84

(NOTE: THIS APPROVAL SHALL NOT BE CONSTRUED TO BE AN APPROVAL OF ANY VIOLATIONS OF ANY PROVISION OF THE ZONING CODE OR OTHER APPLICABLE MUNICIPAL CODE REQUIREMENT.)



PARKING

	PARKING	
2,400 SF	1 EXISTING PARKING STALLS	600 STALLS
	2 ADDED STALLS	3 STALLS
5,300 SF	3 REMOVED STALLS	6 STALLS
2,800 SF	4 TOTAL EXISTING	597 STALLS
0,500 SF	5 REQUIRED PARKING (1 STALL PER 200) 110,500 ÷ 200	553 STALLS
	6 HANDICAPPED PROVIDED	8 STALLS
	7 EXCESS PARKING	44 STALLS

9,283 ACRES
748 SF — AREA TO BE STRIPPED, PROVIDE 4" WIDE STRIPS AT 12" O.C. WHITE TRAFFIC PAINT

58 SF — NEW CONC WORK

983 SF

201 SF

LEGEND

PROPOSED AREA OF ADDITION OR REMODEL WORK

EXISTING #B PYLON

GEMCO
LONG BEACH CALIF.

mmurray architects
sands lyons planners
1110 n. coast hwy. suite laguna beach, calif. 92651
714/494-1044

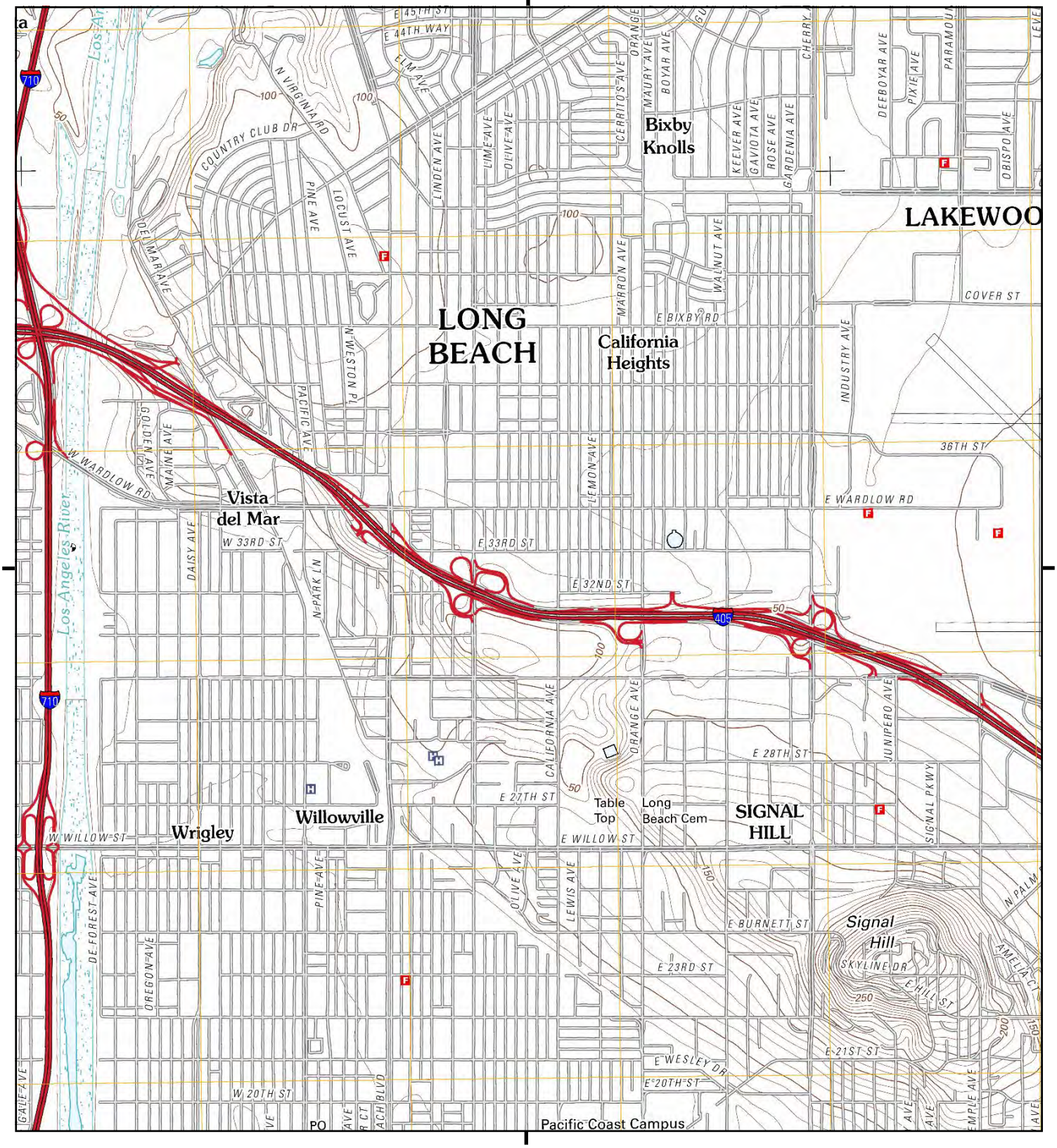
DRAWN LOUISE
CHECKED
DATE
SCALE
JOB NO. 994
SHEET
A-1

APPENDIX C

HISTORIC TOPOGRAPHIC MAPS

Historical Topo Map

2012



This report includes information from the following map sheet(s).

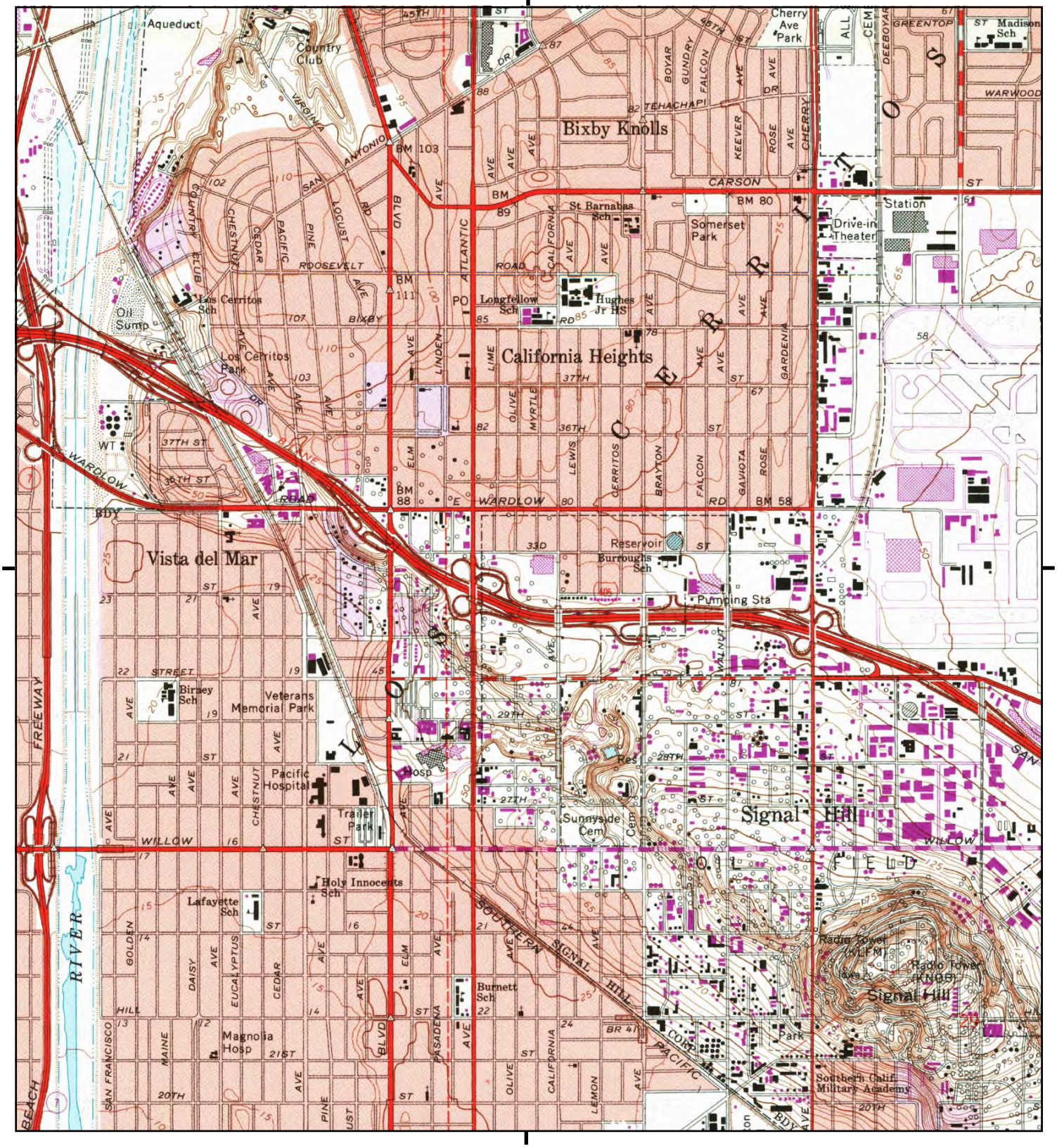
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Long Beach, 2012, 7.5-minute

SITE NAME: 930 E 33rd St
ADDRESS: 930 E 33rd Street
Signal Hill, CA 90755
CLIENT: Mearns Consulting LLC.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

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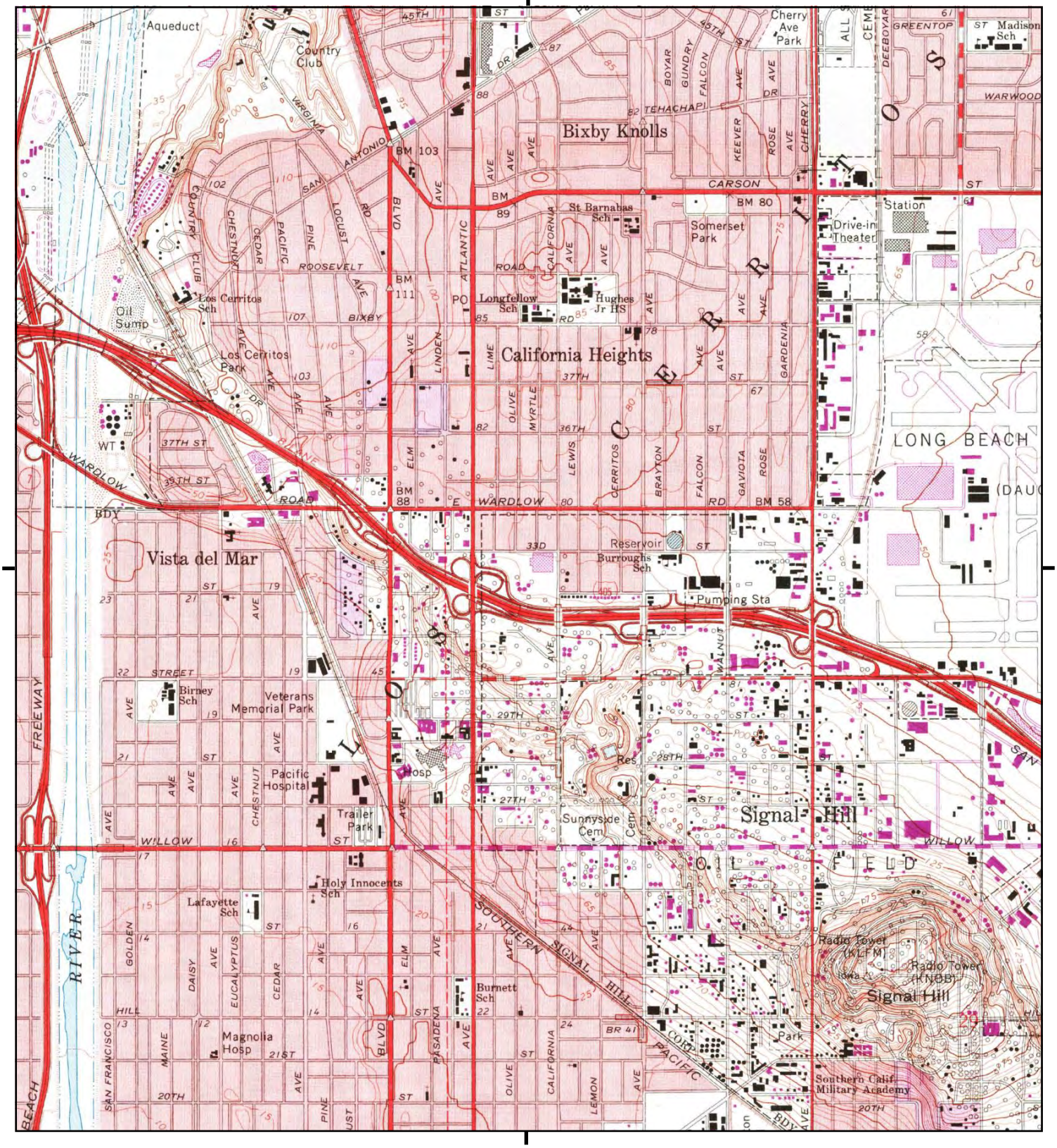
W E
SW S SE

TP, Long Beach, 1981, 7.5-minute

SITE NAME: 930 E 33rd St
ADDRESS: 930 E 33rd Street
Signal Hill, CA 90755
CLIENT: Mearns Consulting LLC.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

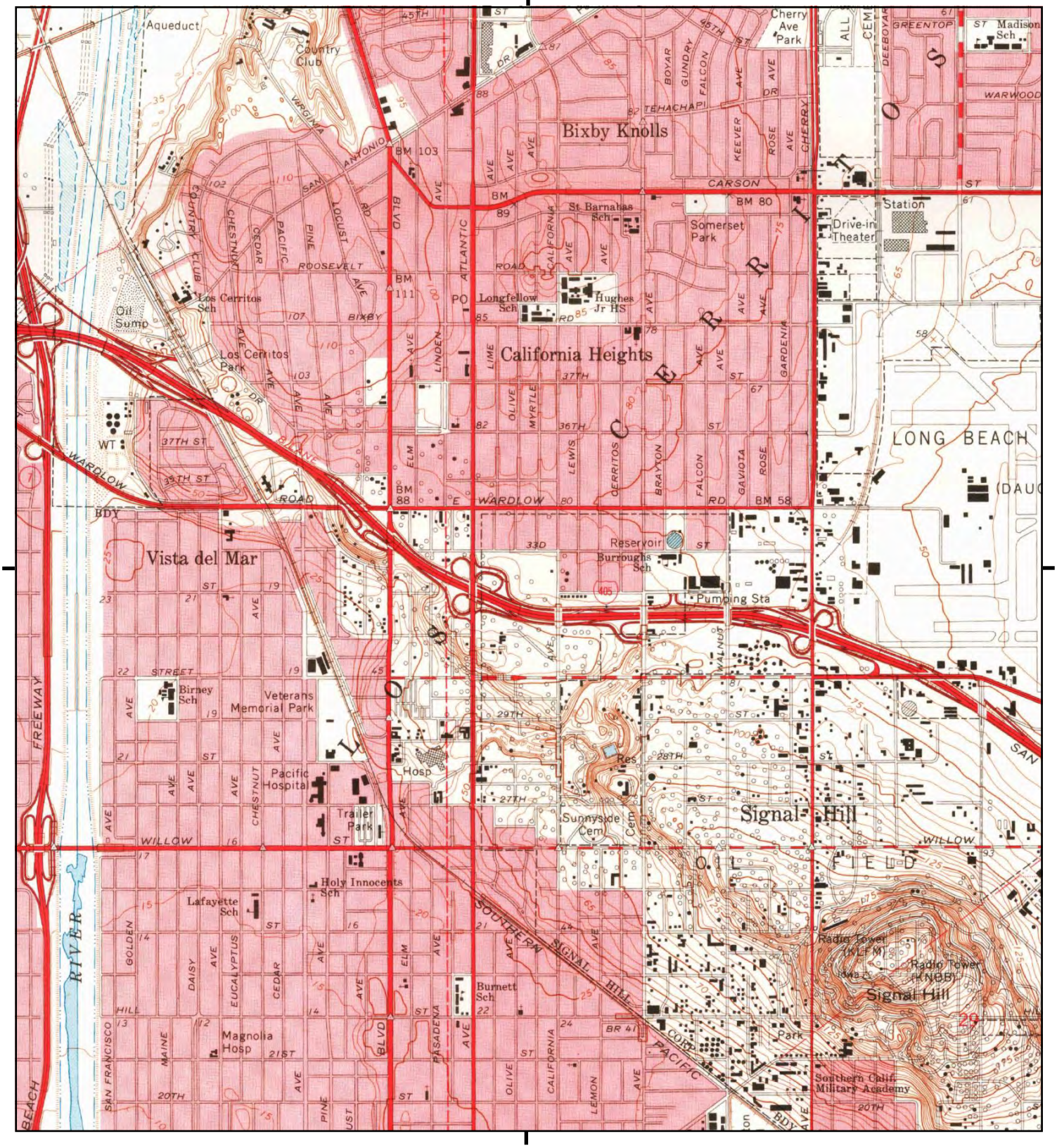
TP, Long Beach, 1972, 7.5-minute

SITE NAME: 930 E 33rd St
ADDRESS: 930 E 33rd Street
Signal Hill, CA 90755
CLIENT: Mearns Consulting LLC.

N

Historical Topo Map

1964



This report includes information from the following map sheet(s).

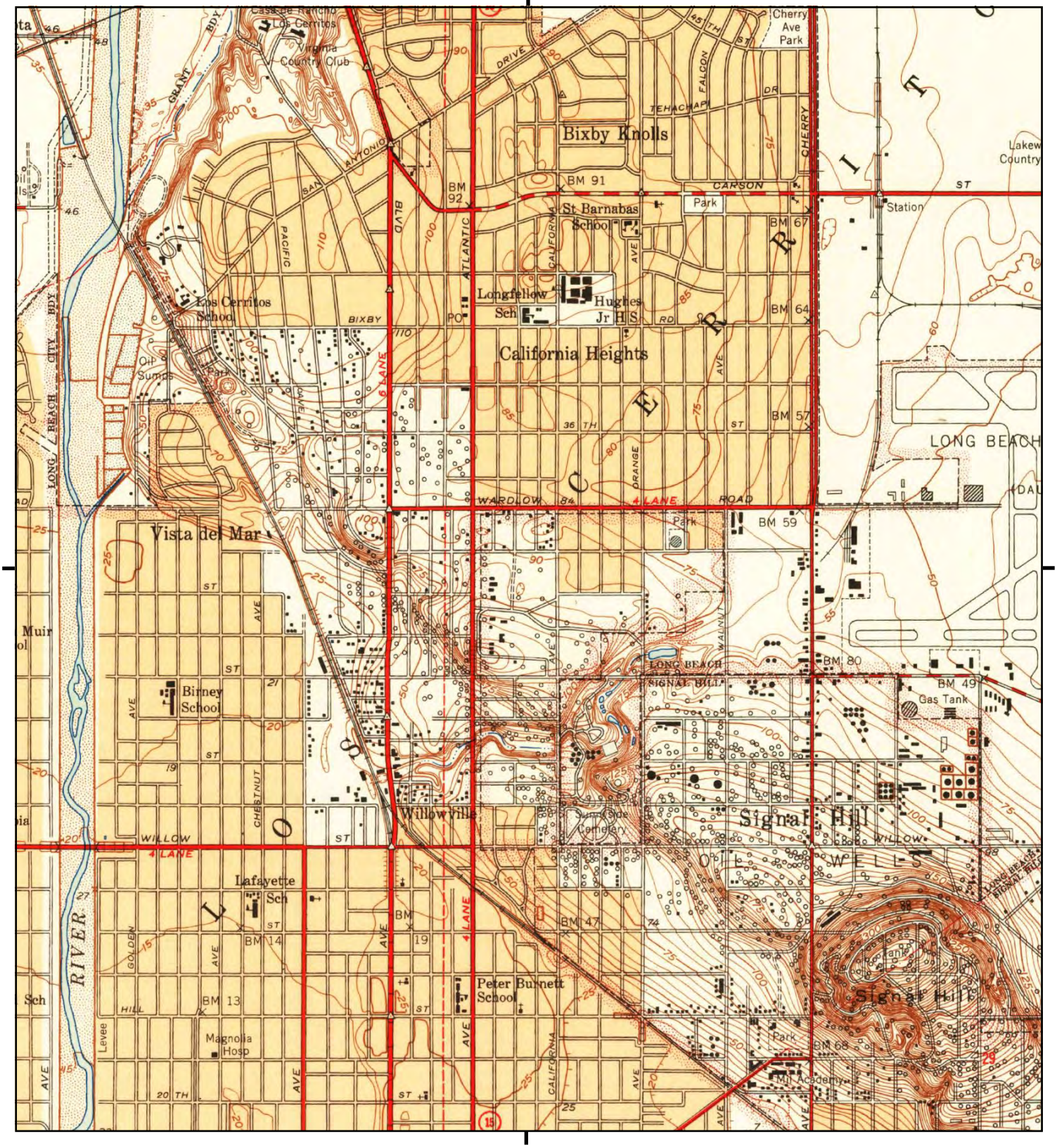
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Long Beach, 1964, 7.5-minute

SITE NAME: 930 E 33rd St
ADDRESS: 930 E 33rd Street
Signal Hill, CA 90755
CLIENT: Mearns Consulting LLC.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

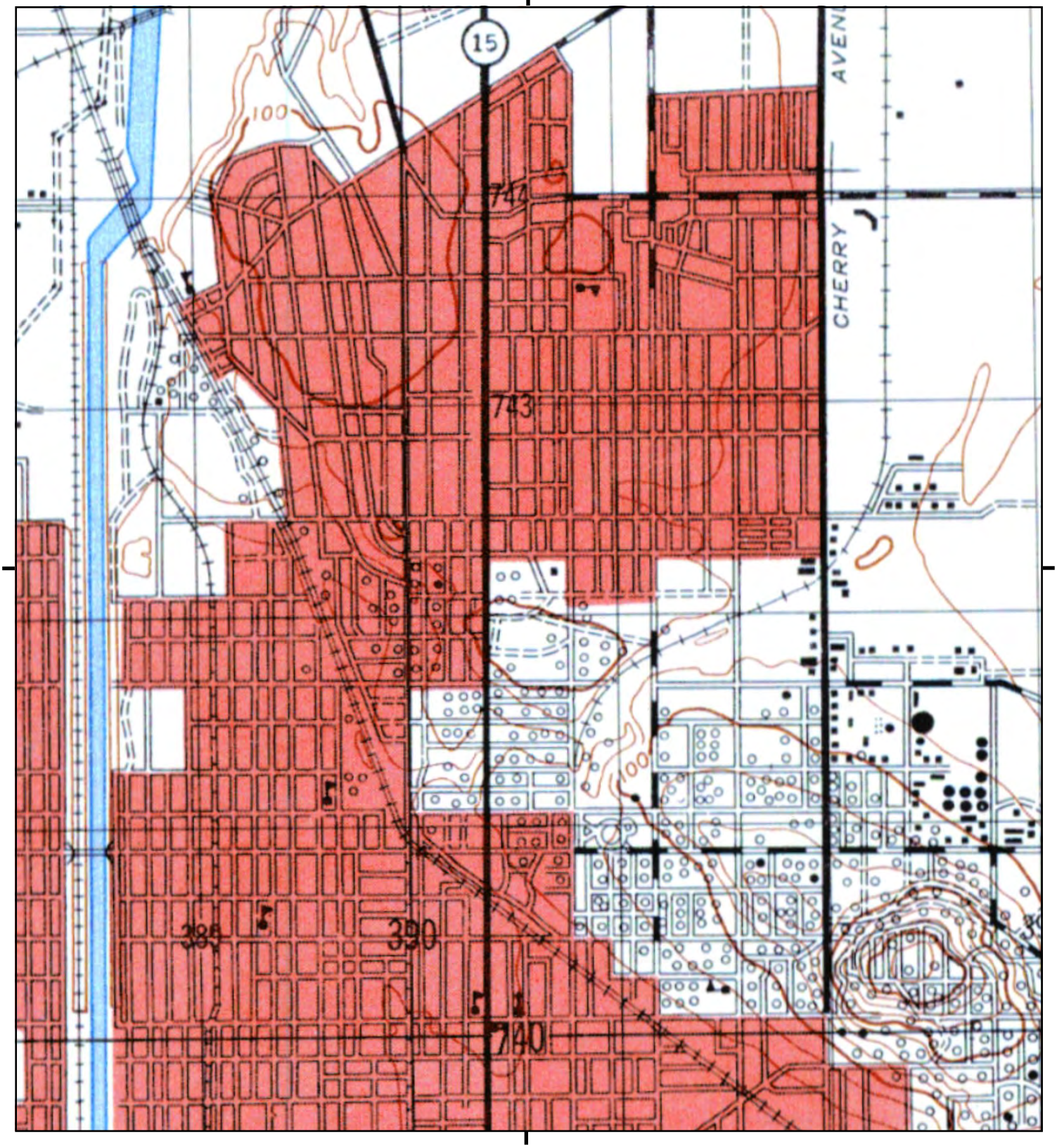
TP, Long Beach, 1949, 7.5-minute

SITE NAME: 930 E 33rd St
ADDRESS: 930 E 33rd Street
Signal Hill, CA 90755
CLIENT: Mearns Consulting LLC.

N

Historical Topo Map

1947



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

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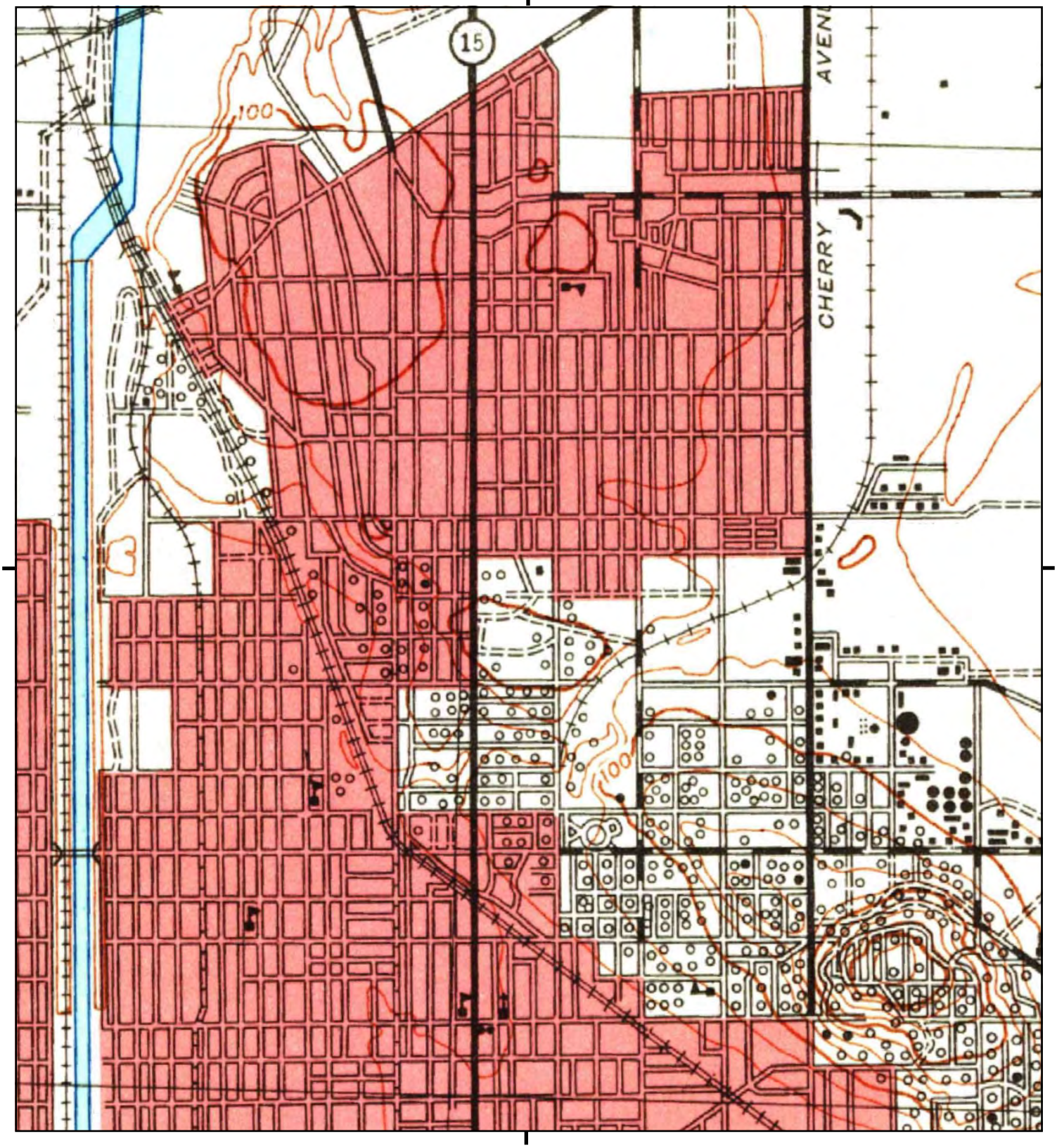
W E
SW S SE

TP, DOWNEY, 1947, 15-minute

SITE NAME: 930 E 33rd St
ADDRESS: 930 E 33rd Street
Signal Hill, CA 90755
CLIENT: Mearns Consulting LLC.

N



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0 Miles 0.25 0.5 1 1.5

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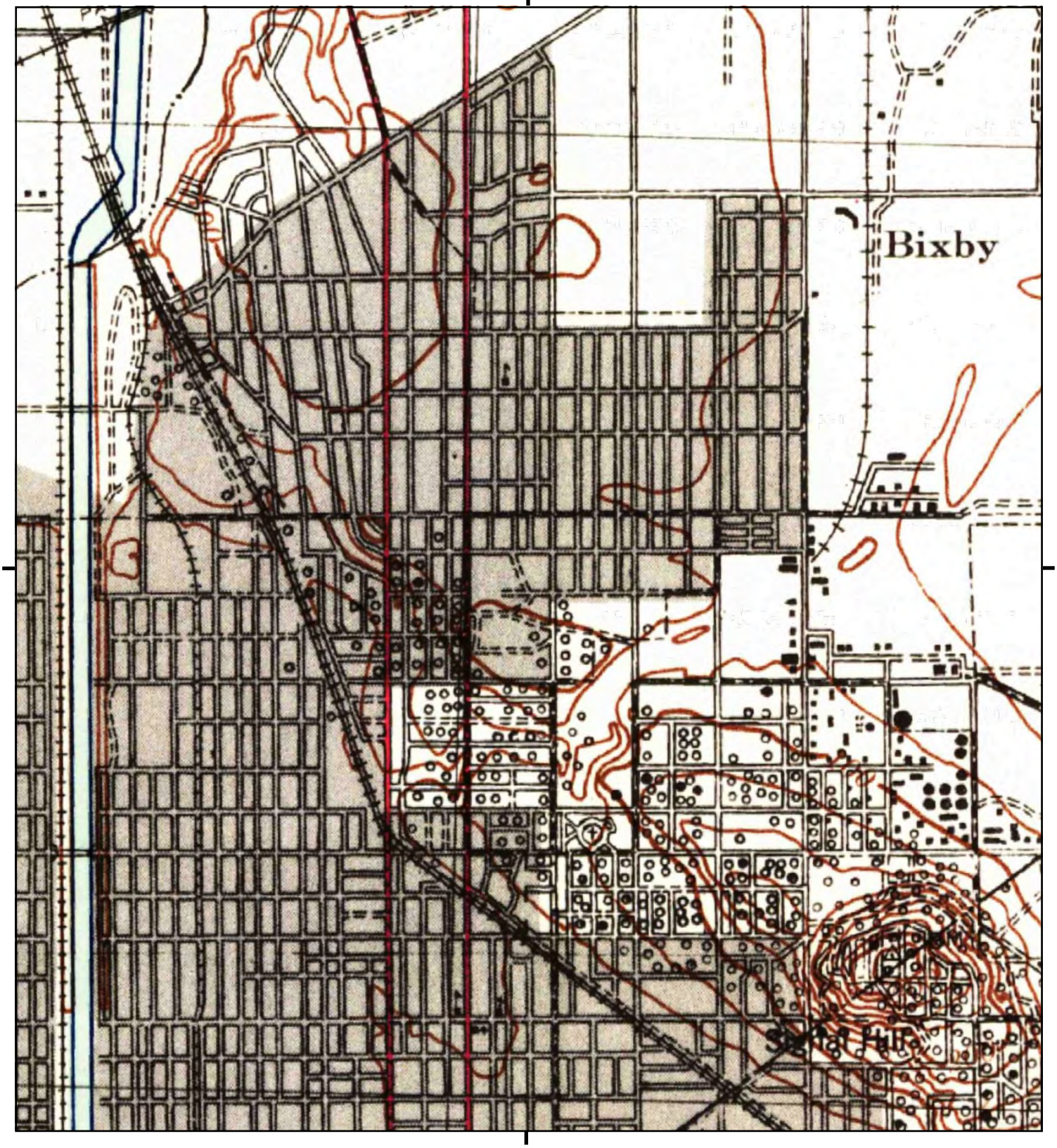
W E
SW S SE

TP, Downey, 1943, 15-minute

SITE NAME: 930 E 33rd St
ADDRESS: 930 E 33rd Street
Signal Hill, CA 90755
CLIENT: Mearns Consulting LLC.

N



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0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

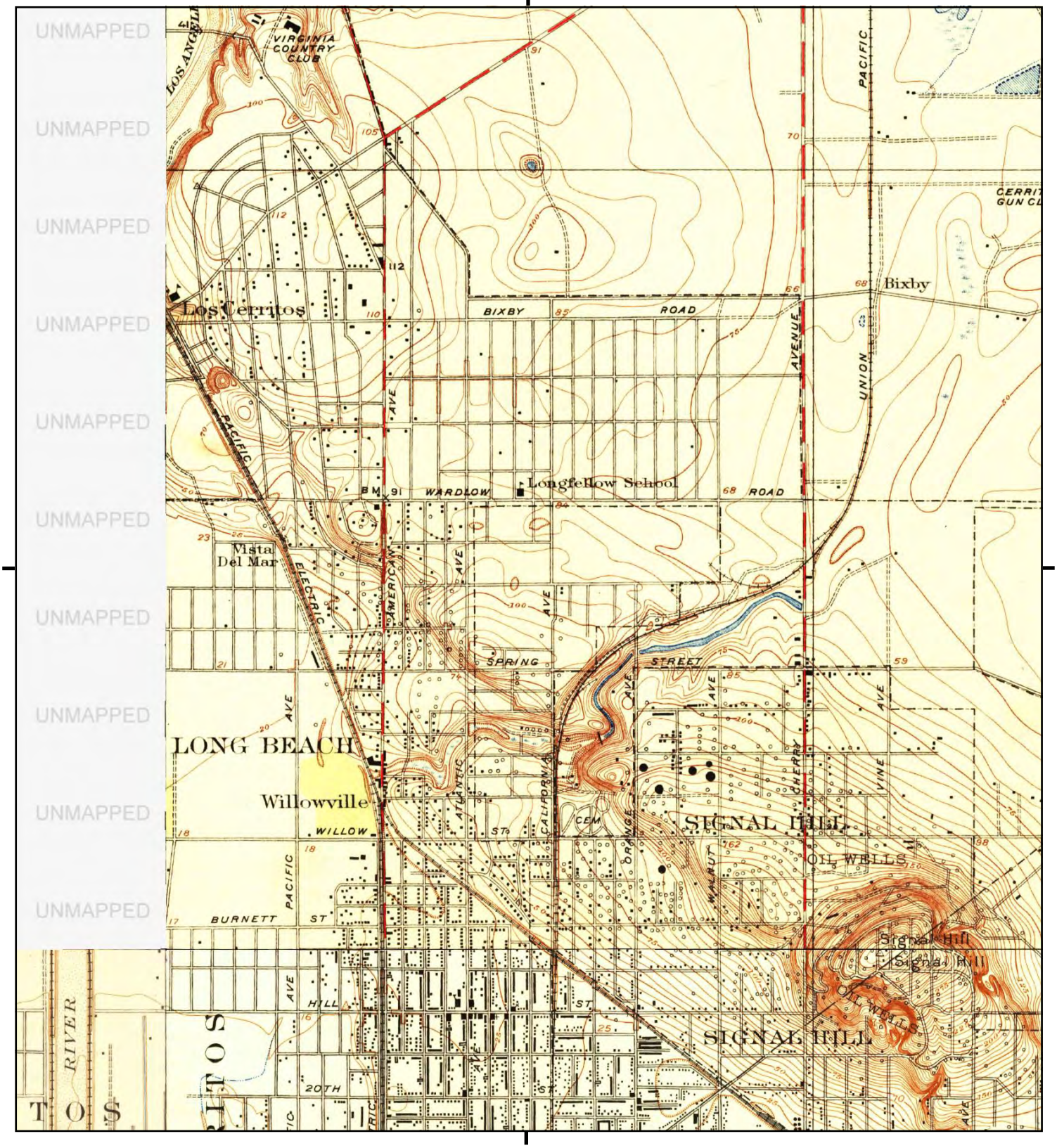
TP, Downey, 1942, 15-minute

SITE NAME: 930 E 33rd St
ADDRESS: 930 E 33rd Street
Signal Hill, CA 90755
CLIENT: Mearns Consulting LLC.

N

Historical Topo Map

1925



This report includes information from the following map sheet(s).

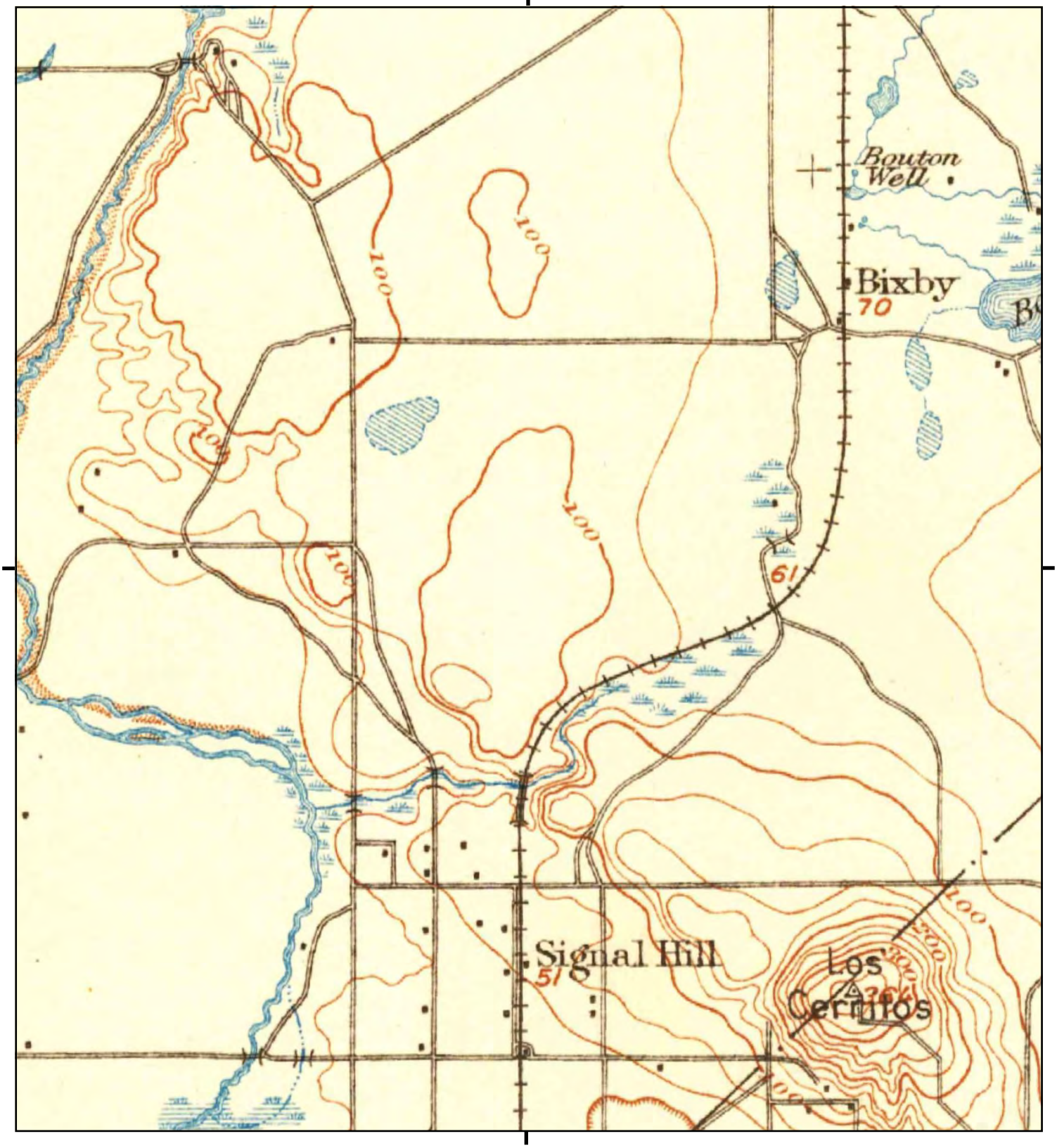
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Clearwater, 1925, 7.5-minute
SE, Long Beach, 1925, 7.5-minute
SW, Wilmington, 1925, 7.5-minute

SITE NAME: 930 E 33rd St
ADDRESS: 930 E 33rd Street
Signal Hill, CA 90755
CLIENT: Mearns Consulting LLC.

N



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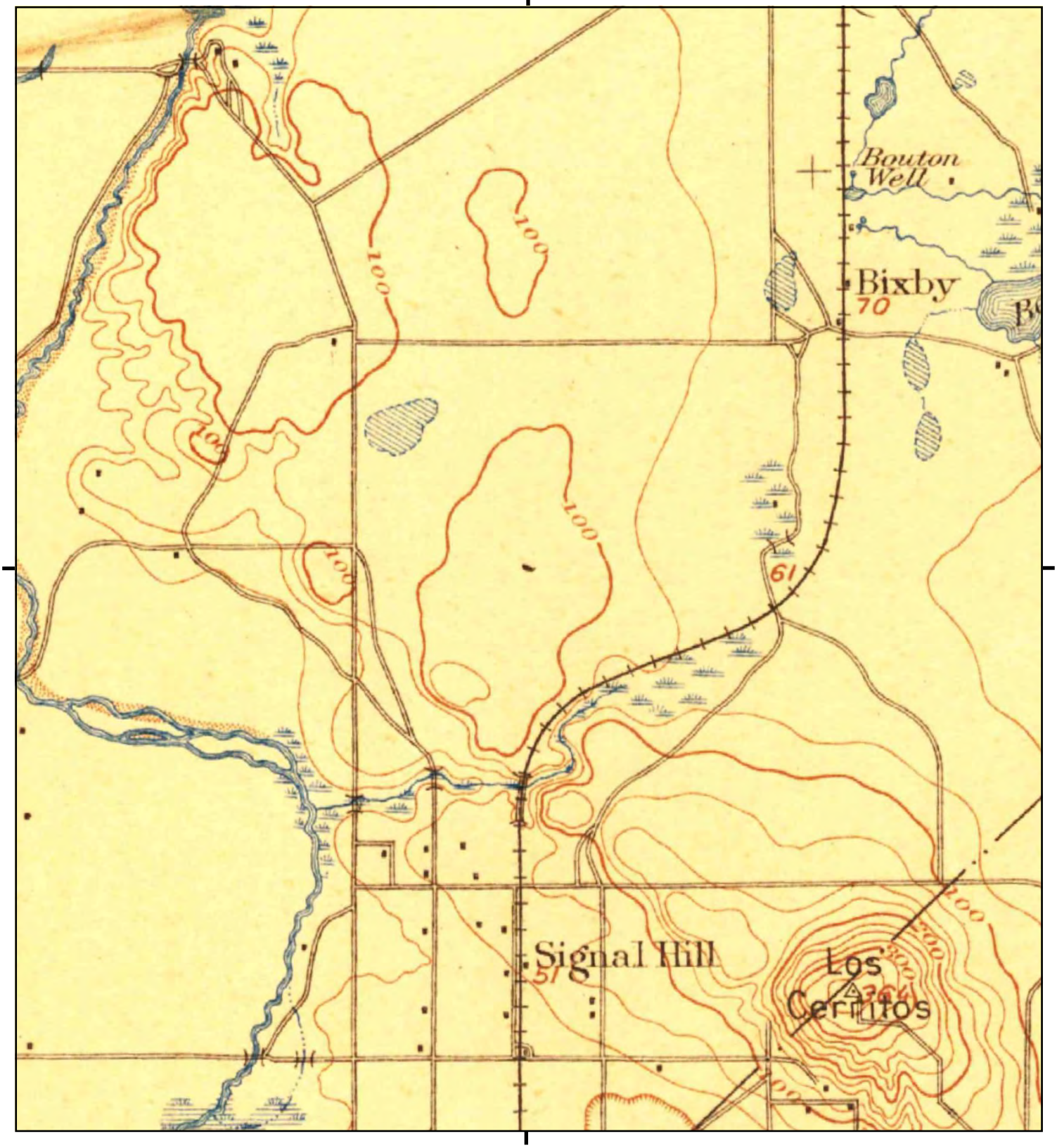
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Downey, 1902, 15-minute

SITE NAME: 930 E 33rd St
ADDRESS: 930 E 33rd Street
Signal Hill, CA 90755
CLIENT: Mearns Consulting LLC.

N



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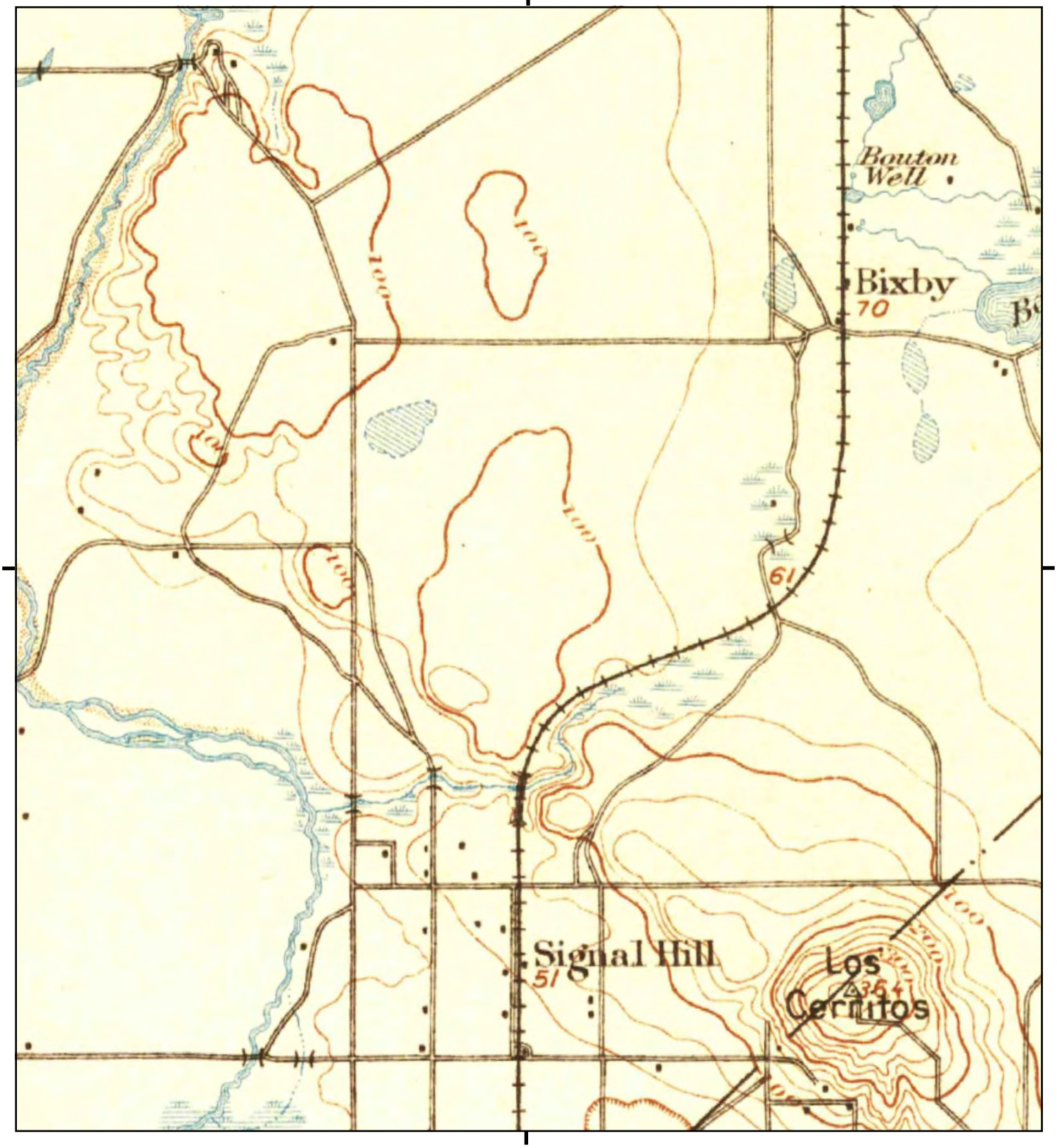
NW N NE
W E
SW S SE

TP, Downey, 1899, 15-minute

SITE NAME: 930 E 33rd St
ADDRESS: 930 E 33rd Street
Signal Hill, CA 90755
CLIENT: Mearns Consulting LLC.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Downey, 1896, 15-minute

SITE NAME: 930 E 33rd St
ADDRESS: 930 E 33rd Street
Signal Hill, CA 90755
CLIENT: Mearns Consulting LLC.

N

APPENDIX D

HISTORIC SANBORN FIRE INSUARANCE MAPS

Certified Sanborn® Map Report

01/24/20

Site Name:

930 E 33rd St
930 E 33rd Street
Signal Hill, CA 90755
EDR Inquiry # 5947181.3

Client Name:

Mearns Consulting LLC.
738 Ashland Avenue
Santa Monica, CA 90405
Contact: Susan L Mearns Phd

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Mearns Consulting LLC. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 7333-4E93-B247

PO # NA

Project 930 E 33rd Street, Signal Hill

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 7333-4E93-B247

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX E

AERIAL PHOTOGRAPHS



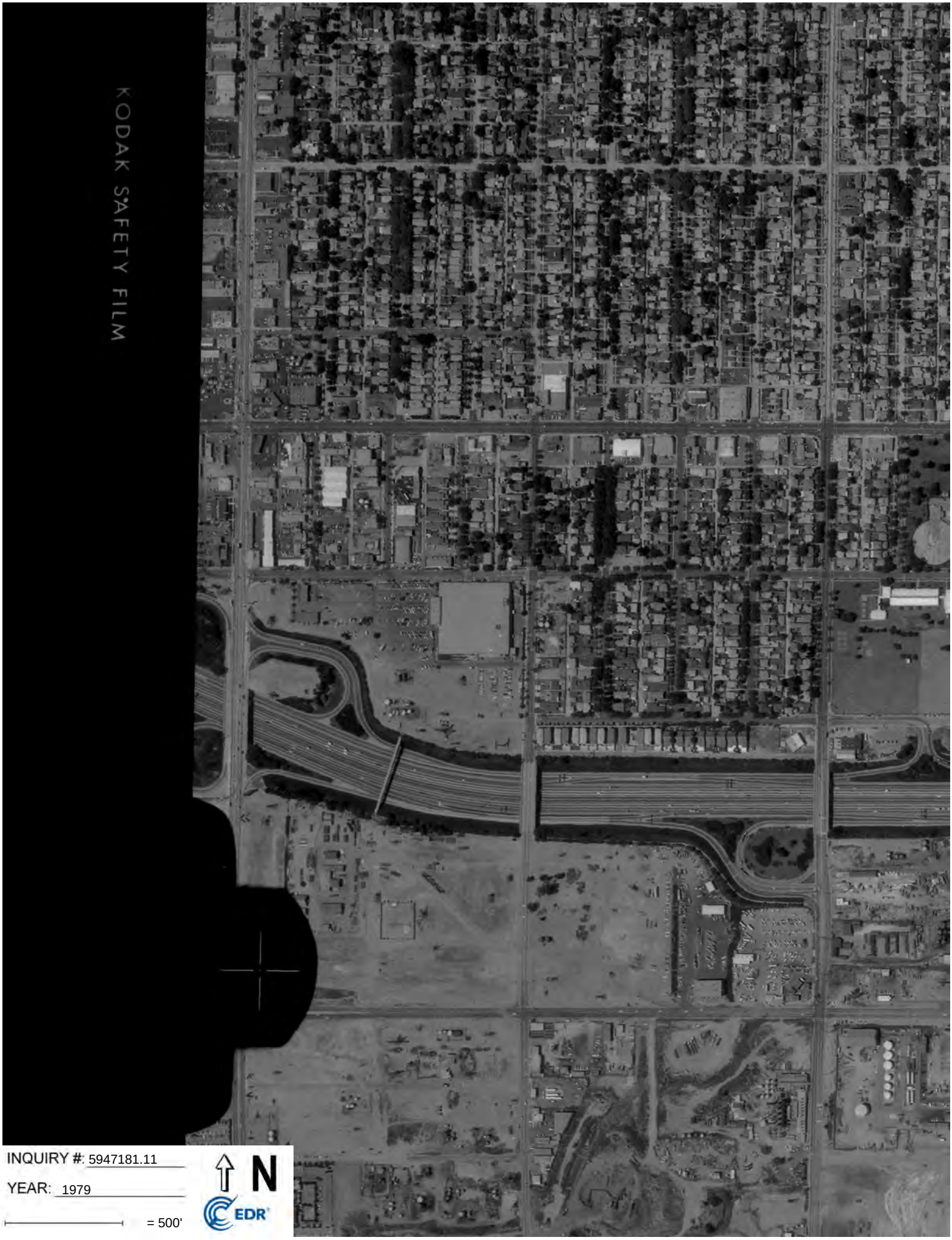
INQUIRY #: 5947181.11

YEAR: 1981

= 500'

N

EDR



INQUIRY #: 5947181.11

YEAR: 1979

= 500'

N

EDR


INQUIRY #: 5947181.11
YEAR: 1977
= 500'
N
EDR


INQUIRY #: 5947181.11
YEAR: 1963
= 500'
N
EDR


INQUIRY #: 5947181.11
YEAR: 1953
= 500'
N
EDR


INQUIRY #: 5947181.11
YEAR: 1947
= 500'
N
EDR



INQUIRY #: 5947181.11

YEAR: 1928

= 500'

N

EDR


INQUIRY #: 5947181.11
YEAR: 2016
= 500'
N
EDR


INQUIRY #: 5947181.11
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 5947181.11
YEAR: 2009
= 500'
N
EDR


INQUIRY #: 5947181.11
YEAR: 2005
= 500'
N
EDR


INQUIRY #: 5947181.11
YEAR: 2002
= 500'
N
EDR


INQUIRY #: 5947181.11
YEAR: 1994
= 500'
N
EDR


INQUIRY #: 5947181.11
YEAR: 1989
= 500'
N
EDR

APPENDIX F

CalGEM WELL RECORDS

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF WELL PLUGGING AND ABANDONMENT

Cypress, California
May 4, 2007

Target Dept. Stores
c/o M.E. WRIGHT
16531 Bolsa Chica Street #301
Huntington Beach, CA 92649

Your report of the plugging and **reabandonment** of well **Chevron U.S.A. Inc./"Field" 18**, A.P.I. No. **037-11543**, Section **19**, T. **4**S, R. **12**W, S.B. B & M., **Long Beach** Field, **Los Angeles** County, dated **02-18-07**, received **04-18-07**, has been examined in conjunction with operations witnessed and records filed in this office. We have determined that the requirements of this Division **COULD NOT** be fulfilled.

NOTE:

1. Surface plugging completed on **03-20-07**.
2. Surface inspection made and approved on **05-02-07**.
3. This well is NOT to be built over without further consideration.
4. Deficiencies:
   1. Plug from 4021'-3950' not placed.
   2. Unable to cavity shot @ 1850' or plug 1850'-1750'.
   3. Unable to place plug from 764'-660'.

Hal Bopp
State Oil and Gas Supervisor

By: _____
For: R. K. Baker, *Deputy Supervisor*

INDIVIDUAL BOND

cc: Update
Los Angeles County Assessor
Los Angeles County Fire Prevention Bureau
Long Beach Department of Building & Planning
Department of Oil Properties
Chevron U.S.A. Inc.

KMC:dw

DIVISI)F OIL, GAS, AND GEOTHERMAL RES RCES

CHECK LIST – RECORDS RECEIVED AND WELL STATUS

Company:	**Target Dept. Stores**	Well: **Chevron U.S.A. Inc./"Fields" 18**
API#:	**037-11543**	Sec. **19**, T. **4S**, R.**12W**. S. B. B. & M.
County:	**Los Angeles**	Field: **Long Beach**

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
History (Form OG103)	**4/18/07**
Core Record (Form OG101)	
Directional Survey	
Sidewall Samples	
Date final records received.	
Electric Logs:	
Other:	

STATUS

Producing	☐	Drilling	☐
Abandoned	☐	Idle	☐
Reabandoned	☒	Other	☐

WELL TYPE

Oil	☒	Waterflood	☐
Gas	☐	Water Disposal	☐
Water Source	☐	Cyclic Steam	☐
Observation	☐	Steam Flood	☐
Exploratory	☐	Fire Flood	☐
Dry Hole	☐	Other	☐

EFFECTIVE DATE: 3/20/07

REMARKS: Reabd

	ENGINEERS CHECK LIST	CLERICAL CHECK LIST
☒	Summary, History & Core Record (Dupl.)	Location change
☐	Electric Log	Elevation change
☒	Operator's Name	Form OGD121
☒	Signature	Form OGD150b (Release of Bond)
☒	Well Designation	Duplicate logs to archives
☐	Location	Notice of Records Due
☐	Elevation	EDP 5.15.07 vm
☒	Notices	District Date Base
☒	"T" Reports	Final Letter (OG159) 5/10/07 sr
☐	Casing Record	Update Center 5.15.07 vm
☒	Plugs	
☐	Directional Survey	
☐	Production/Injection (FAP Codes:)	
☐	E Well on Prod., enter EDP	**FIELD CHECK LIST**
☒	Surface Inspection Required	Date Surface Inspection Completed: 5/2/07 GBOK
☐	Surface inspection Waived (Island)	Other:
☐	Well site restoration deferred (common cellar)	
☒	Final Letter Required AB: ☐ REAB: ☒ 5-4-07 DW	
☐	Other:	

Note: Also to state "This well is not to be built over with out further consideration" JM 5/07

RECORDS NOT APPROVED	RECORDS APPROVED
(Reason:) Need Surf Insp	*(Signature)*
	RELEASE BOND
	Date Eligible
	(Use date last needed records received.)
	MAP AND MAP BOOK N/C

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

Operator Target Dept. Stores. Field LONG BEACH County LOS ANGELES

Well Chevron-Texaco E & P Co. "FIELDS" 18-Rd Sec. 19 T. 4S R. 12 S.B. B.&M.

A.P.I. No. 037-11543 Name M. E. WRIGHT Title CONSULTANT

(Person submitting report) (President, Secretary, or Agent)

Date 2-18-07
(Month, day, year)

Signature M. E. Wright

Address 3350 - 6th St, CC 3425, Minneapolis, MN 55402 Telephone Number 612-204-0214

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment, with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, and initial production data.

Date 2007	
3-5	Drove rig and equipment to location. Set drilling mat in place. Moved rig in, RU mast. Had backhoe dig holes through asphalt. Sank marsh anchors and put out guy lines. Had welder welding wellhead, flange and riser onto 8-5/8" csg stub. Unloaded equipment. Hooked up hoses on mud pump. Secured rig and well.
3-6	Drove to location. Serviced rig and equipment. Installed, nippled up and function tested BOPE. RU working platform, mud pump and circulating equipment, tbg equipment, and power swivel. Made up 6-1/4" bit on one 4-3/4" drill collar, unable to get bit deeper than 16' due to bend in surface csg. LD 4-3/4" drill collar. Made 6-1/4" bit up on 1 joint 2-7/8" tbg. Drilled wood from 16' to 33', circulating with mud. Started getting returns coming up through cellar floor from outside 9" surface pipe. Pulled out with bit. Secured rig and well until A.M.
3-7	Drove to location. Serviced rig and equipment. Ran back in hole with 6-1/4" bit on 2-7/8" tbg. Continued drilling up wooden plug and circulating out coarse sand from 33' to 246'. Pulled out with bit. Found bit plugged and balled up clay. Secured rig and well until A.M.
3-8	Drove to location. Serviced rig and equipment. Made up good, used 6 -1/4" bit and ran in hole. Bit stopped on fill at 40'. Drilled and cleaned out sand and gravel from 40' to 310'. Circulated hole clean at 310'. Pulled out with bit. Secured rig and well until A.M.
3-9	Drove to location. Serviced rig and equipment. Checked and re-ran same 6-1/4" bit and stopped on hard fill at 180'. Continued drilling and cleaning out wood, sand and gravel from 180' to 465'. Circulated hole clean at 465'. POOH with bit. Secured rig and well. *NOTE: Vacuum truck hauled in 2 loads (120 bbls) mud from Allenco yard.
3-12	Drove to location. Serviced rig and equipment. Made up good 6-1/4" bit and ran on 2-7/8" tbg. Bit stopped at 120' on hard fill. Drilled and cleaned out sand, gravel and wood from 120' to 559'. Circulated hole clean at 559'. POOH with bit. Secured rig and well until A.M. *NOTE: Vacuum truck hauled in 2 loads (120 bbls) of mud from Allenco yard.
3-13	Drove to location. Serviced rig and equipment. Picked up two 3-1/2" drill collars and made up good 6-1/4" bit on bottom. RIH to top of fill at 120'. Circulated and drilled out sand and gravel down to 624'. Circulated hole clean at 625'. *NOTE: Vacuum truck hauled in 2 loads (120 bbls) mud from Allenco yard.
3-14	Drove to location. Serviced rig and equipment. Replaced worn 6-1/4" bit with good 6-1/4" bit and ran in hole on two 3-1/2" drill collars and 1 joint 2-1/3" tbg to tag top of fill at 98'. Drilled and cleaned out sand and gravel from 98' to 565'. POOH with bit. Secured rig and well until A.M. *NOTE: Vacuum truck hauled in 1 load (60 bbls) mud from Allenco yard.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

3-15	Drove to location. Serviced rig and equipment. Checked and ran in with same 6-1/4" bit with two 3-1/2" drill collars and 2-7/8" tbg. Continued drilling and cleaning out sand and gravel from 65' to 565'. Circulated hole clean at 565'. POOH with tbg, drill collars and bit. RU Tiger Wireline Service. Ran 1 Gamma Ray log from surface down to 565', and 1 Casing Caliper Profile log on 8-5/8" from surface to bottom of 8-5/8" stub at 39'. Rigged down Tiger Wireline Service. Secured rig and well until A.M. *NOTE: Vacuum truck hauled in 1 load (60 bbls) mud.
3-16	Drove to location. Serviced rig and equipment. Ran same 6-1/4" bit on 3-1/2" drill collars and 2-7/8" tbg. Drilled and cleaned out sand from 192' to TOC plug at 625'. Circulated hole clean at 625'. POOH with tbg, drill collars and bit. Secured rig and well until A.M. DOGGR Mr. K. Carlson & Mr. M. Kratovil approved cmt plugging from 625' to surface. *NOTE: Vacuum truck hauled in 1 load (60 bbls) mud.
3-19	Drove to location. Serviced rig and equipment. Ran in with 2-7/8" saw-toothed collar. Drilled and cleaned out sand and gravel from 95' to top of cement plug at 625'. RU Ausburn Cementers, with bottom of tubing at 625', Ausburn mixed, pumped and displaced 195 sx (225 cu. ft.) Class "G" neat cement to leave calc TOC at 383'. Hole size unknown. Pulled out with tubing. Secured rig and well until A.M. DOGGR witnessed plug from 627'. By A. B. Gorashia
3-20	Drove to location. Serviced rig and equipment. Ran in with tbg and tagged TOC plug at 40'. Hung bottom of tbg at 38' and RU Ausburn Cementing. Ausburn mixed and pumped 11 sx (12 cu. ft) "G" neat cmt to bring cmt to surface. Rigged down cementers. LD tbg. RD work floor and BOPE. Loaded out tbg equipment, took down guy lines and rigged down mast. Started cleaning out solids from mud pump tank. Secured rig and well. DOGGR A. B. Gorashia witnessed surface plug (Phase 1 tag), 40' DOGGR A. B. Gorashia witnessed surface plug (up grade) 12 cf.
3-21	Drove to location. Serviced rig and equipment. Finished loading out tools and equipment and cleaning out mud pump. Helped stinger crane load out drilling mat and BOPE. Moved pipe trailer, mud pump and rig off location. Cleaned location. Set up fences, moved off.
4-3	Drove to location. Cut csg 5' below surface. Chipped away cmt, got ready for gas test. Steel I. D. plate. Gas test approved.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CONSTRUCTION SITE WELL INSPECTION

District Ref. No. _____

Field: Long Beach City/County Long Beach Sec. 19 T. 4S R. 12W S.BB.&M.

Location (major cross streets): Atlantic Ave and 33rd Street

Development representative: Mick Beyer Phone: (310) 505-9787

Describe the exact location of the excavation or well at the building site (from a reference point on a Division Map):

How the location was determined: Measured ☒ Surveyed ☐ Other ☐

Describe: _____

Well designation: "Field" 18 , API No. 03711543

Operator: Target Dept. Stores

SAFETY PRECAUTIONS AND UNSAFE EXCAVATIONS

CAUTION! Oil and gas wells may produce hydrogen sulfide gas, which is highly poisonous and will accumulate and concentrate in low areas such as excavations. Before entering an excavation area, test to ensure that there is sufficient oxygen and that the flammable/toxic gas readings are within safe limits.

INSPECTIONS	1	Initials Date	2	Initials Date	3	Initials Date	4	Initials Date
Excavation size	6'X6' 5' down	5/4/07 AB						
Picture No.								
Picture direction								
Metal detector (Y/N)	N							
Visible casing size(s) (or comment)	81/4"							
Fluid leaks (Y/N)*	N							
Amount (est.)								
Gas leaks (Y/N)*	N							
Amount (est.)								
Gas detector (N/Y)	Y							
Bubble test (Y/N)	Y							

*Leak location(s): N/A

Describe hazardous or damaged well condition(s): N/A

Report finalized by: AB Gorashi A., Division of Oil, Gas & Geothermal Res. Date: 5/4/07

OG190A (12/00/GSR1/1M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

4e

No. T 107-0380

REPORT ON OPERATIONS

Cypress, California
April 12, 2007

Target Department Stores
c/o M.E. WRIGHT
16531 Bolsa Chica Street #301
Huntington Beach, CA 92649

Your operations at well **Chevron U.S.A. Inc./"Field" 18,** A.P.I. No. **037-11543**, Sec. **19**, T. **4**S., R. **12**W, S.B. B. & M., **Long Beach** Field, **Los Angeles** County, were witnessed on **4/5/07**. **AB Gorashi**, representative of the supervisor, was present from **0800** to **1000**. There was also present **Mick Beyer**, **Allenco Supervisor**.

Present condition of well: **13" cem 788'; 8 1/4" cem 4230' WSO, shot & pulled fr 764'; 5 3/4" cem 6210' WSO, cp 4730' & 4870', perfs @ int 4230'-4830', shot 4051', 4100' & 4170', pulled fr 4051'; 4 3/4" ld 6120'-6366', perfs 6120'-6366'. Junk below 4051' & 4828'. TD (present hole) 7483'. Plugged w/ cem 7483'-6828', 6500'-6106', 4848'-4776', 4560'-4385', 4375'-4185', 4048'-4021' & 627'-5'.**

The operations were performed for the purpose of witnessing the plugging operations in the process of reabandonment.

DECISION: APPROVED.

NOTE: The required Class II2M blowout prevention equipment was inspected and approved on **3/14/07**.

DEFICIENCIES:
1. Plug from 4021'-3950' not placed.
2. Unable to cavity shot @ 1850' or plug 1850'-1750'.
3. Unable to place plug from 764'-660'.

CONTRACTOR: Allenco.

KMC:sjl

[redacted] Approved 5-2-07 GBA

cc: Update
Chevron U.S.A. Inc.

Hal Bopp
State Oil and Gas Supervisor

By:
For: R. K. Baker, *Deputy Supervisor*

OG109 3-16-99

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CEMENTING/PLUGGING MEMO

T107-0380

Operator Target Dept. Stores c/o M.E Wright Well No. Chevron USA. Inc. / "Field" 18

API No. 037-11543 Sec. 19 T. 4S R. 12W , SB B&M

Field Long Beach , County Los Angeles . On 4-5-2007 ,

Mr. / Ms. AB GORASHI A representative of the supervisor, was present from 800 to 1000 .

There were also present MICK BEYER, ALLENCO, SUPERVISOR

Casing record of well: 13" cem 788'; 8¼" cem 4230' WSO, Shot & pulled fr 764'; 5¾" cem 6210' WSO, cp 4730' & 4870', perfs @ int 4830'-4230', Shot 4170', 4100' & 4051', pulled fr 4051', Junk below 4828' & 4051'; 4¾" ld 6120'-6366', perfs 6120'-6366'. TD (Present Hole) 7483'. Plugged w/ cem 7483'-6828', 6500'-6106', 4848'-4776', 4560'-4385', 4375'-4185', 4048'-4021', 627'.

The operations were performed for the purpose of: (N) Reabandonment

☐ The plugging/cementing operations as witnessed and reported are approved.

☐ The location and hardness of the cement plug @ _____ ' are approved.

Hole size: _____ " fr. 0 ' to 788 ', 12 " to 4235 ' & _____ " to _____ '

Casing				Cemented			Top of Fill		Squeezed Away	Final Pressure	Perforations
Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			

Casing/tubing recovered: _____ " Shot/cut at _____ ', _____ ', _____ ', Pulled fr. _____ ';

_____ " Shot/cut at _____ ', _____ ', _____ ', Pulled fr. _____ '.

Junk (in hole): _____

Hole fluid (bailed to) at _____ '. Witnessed by _____

Mudding	Date	bbls	Displaced	Poured	Fill	Engineer

Note: (K) II2M 3/14/07 (Q) Gas Leak 4/5/07 AGA C/O = 627'

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engineer	Depth	Wt/Sample	Date & Time	Engineer
3/19/07	225 cf	TO 627'	1330	AB GORASHI	40'/285'	ATW	3/20/07 830	AB GORASHI A
3/20/07	12 cf	TO 38'	1000	AB GORASHI	5'/5'	VISUAL	4/05/07 900	AB GORASHI A

CONTRACTOR:

Allenco

UNCORRECTABLE DEFICIENCIES:

None

DEFICIENCIES NOTED AND TO BE CORRECTED:

None

DEFICIENCIES NOTED AND CORRECTED:

None.

API No. 037-11543 DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES T_____

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator Target Dept. Stores c/o M.E. Wright Well Chevron U.S.A, Inc. / "Field" 18 Sec. 19 T. 4S R. 12W

Field Long Beach County Los Angeles Spud Date_____

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	3-14-07	W. Chen	(1015 to 1045)		
2nd			(to)		

Contractor Allenco Rig# 5 Contractor's Rep. & Title Mike Russell, operation manager

Casing record of well: Memo

OPERATION: ~~Testing~~ (inspecting) the blowout prevention equipment and installation. Critical well? Y ✓ N___

DECISION: The blowout prevention equipment and its installation on the 8 5/8 " casing are approved.

Proposed Well Opns: Reabandon . MACP:_____psi

Hole size:_____" fr._____' to_____' ,_____" to_____' &_____" to_____'

REQUIRED BOPE CLASS:

CASING RECORD OF BOPE ANCHOR STRING					Cement Details	Top of Cement	
Size	Weight(s)	Grade(s)	Shoe at	CP at		Casing	Annulus

BOP STACK							TEST DATA						
API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul	Gal. to Close	Recovery Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
Rd	2 7/8"	WSI	Duke	9"	3000		0.72						
Rd	CSO	WSI	Duke	9"	3000		0.72						

TOTAL: 1.44

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure — psi

Total Rated Pump Output_____gpm Fluid Level

Distance From Well Bore 25 ft. OK

	Accum. Manufacturer	Capacity	Precharge
1	Hand pump	10 gal.	psi
2		gal.	psi

CONTROL STATIONS	Elec.	Hyd.	Pneu.
✓ Manifold at accumulator unit		✓	
Remote at Driller's station			
Other:			

EMERG. BACKUP SYSTEM			Press.	Wkg. Fluid
✓ N_2 Cylinders	1	L= 51"	2700	9.10 gal.
Other:	2	L= "		gal.
	3	L= "		gal.
	4	L= "		gal.
	5	L= "		gal.
	6	L= "		gal.
		TOTAL:		9.10 gal.

AUXILIARY EQUIPMENT

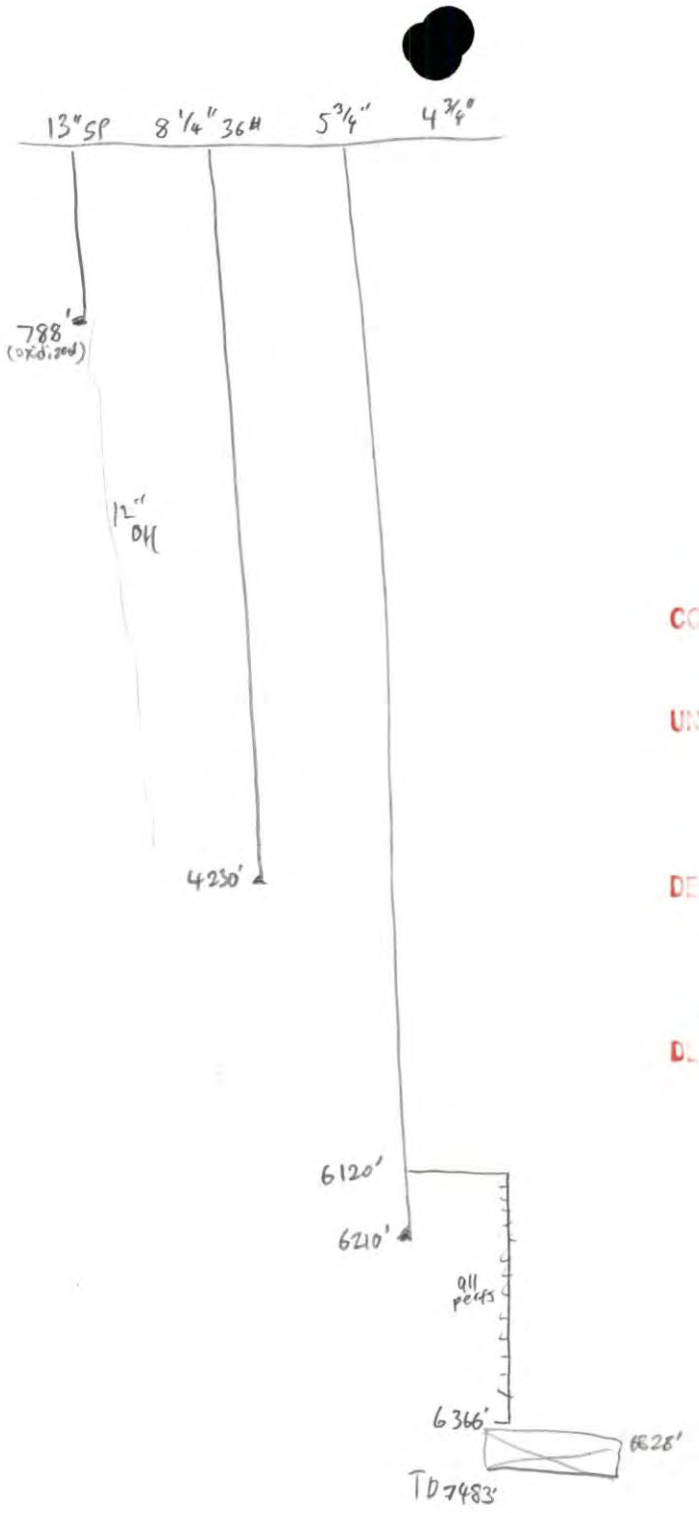
		No.	Size (in.)	Rated Press.	Connections: Weld	Flange	Thread	Test Press.
	Fill-up Line							
✓	Kill Line		2"	3000			✓	
✓	Control Valve(s)	3		3000			✓	
	Check Valve(s)							
	Aux. Pump Connect.							
	Choke Line							
	Control Valve(s)							
	Pressure Gauge							
	Adjustable Choke(s)							
	Bleed Line							
	Upper Kelly Cock							
	Lower Kelly Cock							
	Standpipe Valve							
	Standpipe Press. Gauge							
✓	Pipe Safety Valve		2 7/8"	3000				
	Internal Preventer							

HOLE FLUID MONITORING EQUIPMENT	Alarm Type: Audible	Visual	Class
Calibrated Mud Pit			A
Pit Level Indicator			B
Pump Stroke Counter			
Pit Level Recorder			C
Flow Sensor			
Mud Totalizer			
Calibrated Trip Tank			
Other:			

Hole Fluid Type	Weight	Storage Pits (Type & Size)
Drilling Mud	12 #	pump tanks 110 + 60 vac truck bbls

REMARKS AND DEFICIENCIES:

OGD8 (4/03/LICP/3M)



BOPE Insp

C/O Depth

Mud

PLH 4021'-3950'

Set 8 1/4" csg cmt shoe 1850'

PLH 1850'-1750' in + out 8 1/4" csg

PLH 764'-660'

PLH 100'-5' all csgs in out

Surf Insp

BFW 1850'±

CONTRACTOR:

Allenco

UNCORRECTABLE DEFICIENCIES:

None

DEFICIENCIES NOT CORRECTED:

None

DEFICIENCIES CORRECTED:

None.

M.E. Wright
16531 Bolsa Chica St
Suite 301
Huntington Beach, CA 92649

Chevron USA
Field 28
Long Beach

SANTA ANA
19 MAR 2007







DIVISION of OIL & GAS & G. R.
5816 CORPORATE AVE
CYPRESS CA 90630

037-11543

ATTN: K. CARLSON

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

No. P 107-0098

412
(Field Code)

PERMIT TO CONDUCT WELL OPERATIONS

06
(Area Code)

--
(New Pool Code)

--
(Old Pool Code)

Target Dept. Stores
C/O M.E. Wright
16531 Bolsa Chica St. #301
Huntington Beach CA 92649

Cypress, California
March 2, 2007

Your proposal to **reabandon** well **Chevron U.S.A. Inc./"Field" 18**, A.P.I. No. **037-11543**, Section **19**, T. **4S**, R. **12W**, **S.B.** B. & M., **Long Beach** Field, **Old** area, -- pool, **Los Angeles** County, dated **01/31/07**, received **02/02/07** has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment with hydraulic controls, equivalent to this Division's Class **II2M** requirements, or better, shall be installed and maintained in operating condition.
2. Well killing fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
3. At least **400′** of surface casing shall be cemented in the well, if the surface casing is not competent.
4. All portions of the well not plugged with cement shall be filled with clay base mud having a minimum density of 72 lb/cu ft and a minimum gel-shear strength of 25 lb/100 sq ft.
5. This Division shall be consulted and a Supplementary Notice may be required before making any changes in the proposed program.
6. **THIS DIVISION SHALL BE NOTIFIED TO:**
   a. Inspect the installed blowout prevention equipment prior to commencing downhole operations.
   b. Witness the clean-out depth.
   c. Witness the mudding of the hole.
   d. Witness the placing, location and hardness of the cement plug from **4021′** to **3950′**.
   e. Witness the squeeze cementing of the **8 1/4"** casing through the **cavity shot** at **1850′**.
   f. Witness the placing, location and hardness of the cement plug from **1850′** to **1750′**, inside and outside the **8 1/4"** casing.
   g. Witness the placing, location and hardness of the cement plug from **764′** to **660′**.
   h. Witness the placing, location and hardness of the cement plug from **100′** to **5′**, inside and outside **all** casings.
   i. Inspect and approve the cleanup of the well site within 60 days after placement of the surface plug.

NOTE:

1. A crew drill may be required at the time of the blowout prevention equipment inspection.
2. This Division does not pass upon your right to enter the property, but merely approves the proposal as conforming to our requirements.
3. Issuance of this report was delayed pending receipt of additional information.
4. The proposed surface plug shall not contain rock or gravel.
5. The base of the freshwater sands is at **1850′±**.

3/16/07 Carlson/Mel Wright (in office)
Need letter from target that they will never be able to build w/in proximity of well. Need all Caliper + E logs.

KMC:kc
cc: Update
Chevron U.S.A. Inc.
INDIVIDUAL BOND

Engineer: Kenneth Carlson

Phone: 714/816-6847

OK to cem 627'± to surface
DOG to wit cem. + Tag ops,
+ Bope insp.

Hal Bopp
State Oil and Gas Supervisor

By [signature]
For R. K. Baker, *Deputy Supervisor*

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended. OG 111

OG/KC

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Re-

Notice of Intention to Abandon Well

P# 1070098

FOR DIVISION USE ONLY			
CARDS	BOND	FORMS OGD114	OGD121
		2/3/07 KJ	2/2/07 KJ

DIVISION OF OIL AND GAS

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to abandon well Chevron USA, Inc / Chevron Texaco E&P Co "Fields" 18 Rd, API No. 037-11543, Sec. 19, T. 4S, R. 12W, SB B. & M., Long Beach Field, Los Angeles County.

commencing work on FEB. 18, 2007, 19

The present condition of the well is:

1. Total depth 7483 (Plugged to 6828) Pulled 5¾" @ 4051, 8¼" @ 764 (only 29 jts range 1)
2. Complete casing record, including plugs and perforations (present hole) 13" S.P. Cem. 788 (oxidized) 8¼" Cem 4230, 5¾" Cem. 6210, 4¾" liner 6120 to 6366 Perfs - 6120 to 6366; 4880 to 70, 4740 to 30, 4650 to 40, 4770 to 45, 4650 to 10, 4784 to 4830, 4550 to 25, 4435 to 04, 4350 to 4230, W/SO 6210 - Plugs below #9
3. Last produced Jan. 1938 - 14 (Date) (Oil, B/D) (Gas, Mcf/D) (Water, B/D)

or

4. Last injected (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure)

Additional data for dry hole (show depths):

5. Oil or gas shows
6. Stratigraphic markers
7. Formation and age at total depth
8. Base of fresh water sands 1800± (See "Fields" 24) LOG

9. Is this a critical well according to the definition on the reverse side of this form? ☐ Yes ☐ No

The proposed work is as follows: (Plugs continued from above) 7483 to 6828, 6500 to 6442, 6366 to 6190, 6120 to 6106, 4848 to 4776, 4550 to 4385, 4375 to 4185, 4048 to 4021 (good plug), 670 (Fill on 8') to 627, 75 sks @ surface on mud filled csg.

— See attached program —

1750
92
BFW 1842 1850'± OK

It is understood that if changes in this plan become necessary, we are to notify you immediately.

Address 3350 6th St. CC3425 (Street)
Minneapolis, MN 55402 (City) (State) (Zip)
Telephone Number (612) 304-0214 (Area Code) (Number)

Target Dept Stores (Name of Operator)
By B. Ullery - M.E. Wright (Print Name)
M.E. Wright (Signature) 1-31-07 (Date)

C/O M. Wright
16531 Bolsa Chica St. #301
Huntington Beach CA 92649
(714) 377-9234

OG108 (2/84/DWRR/5M)

ABANDONMENT PROGRAM
CHEVRON-TEXACO "FIELDS" 18 RD.

API 037-11543 LONG BEACH FIELD -Sec 19 - T4S - R12W -

Well is in a planned parking lot 200 feet from bldg. & 160' so. of intersection of Olive Ave and 33rd Sts. 13" stove pipe csg. is rusted away and unknown length of stuck, bent 8 5/8" is exposed 3.5' below ground surface.

PROGRAM

1. Remediate well head. MIRU - Install BOP equipment on the 8 5/8" csg. determine strength, length, and usefullness of the 8 5/8" csg. Cmt. if necessary. (90 to 180 feet may be in place)
2. Fill hole with DOG spec mud. Try to circulate. Cmt. csg if necessary.
3. Drill with, extreme care, 6 1/4" hole to top of highest plug at 627. Wood plug is below cement. 100' of fill is under the wood plug.
4. If able to drill and circulate drill out plug, be careful not to tear up 13" SP. Enter 8 5/8" cmt lap if running sand is a problem.
5. Clean out fill to 4021, cmt 4021 to 3950.
6. Condition mud to DOG spec. 72# mud.
7. Shoot cavity shot at 1850.
8. Squeeze cement 8 5/8" casing from 1850 to 1750 inside and out. Tag TOC.
9. Condition mud to DOG specs. Cmt 8 5/8" stub at 764 up to 660.
10. Condition mud to DOG specs. Cmt all csg, 100 feet to the surface.
11. Gas test and weld on a ID plate.

MEW 2/1/07

Department of Oil Properties

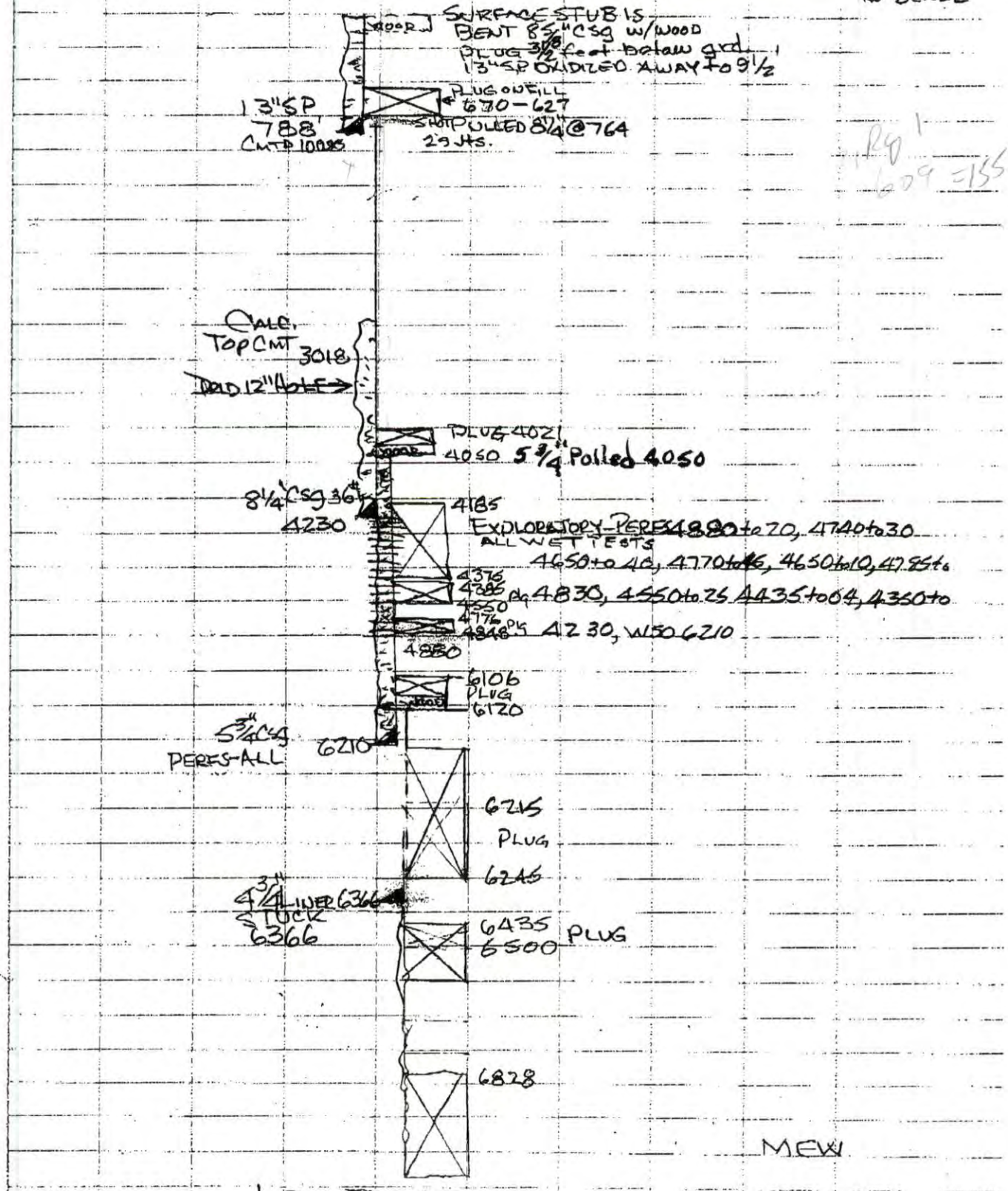
CHEVRON-TEXACO FIELDS #18 Rd.

API# 037_11543

1-1

1-25-0°

MEWright
NO SCALE



MEW

DPNG. & PERMIT I.D. 7483

TELECOPIER TRANSMISSION RECORD

DATE: 2-2-07 HUNTINGTON BEACH, CALIF TIME: 730 A.M. ~~P.M.~~

FOR: 3 PAGES FOLLOWING THIS PAGE.

TO

NAME: Ken Carlson

COMPANY NAME: DOGGR

ADDRESS: CYPRESS

Ken: Fields 18Rd the "Krataville-Target" well Program — well is in parking lot distant from any Buildings. See Bob's Plans.

NAME OF SENDER: Mel Wright

City of Long Beach

Department of Oil Properties

PAGE NO 1 - 1

DATE

TEXACO FIELD 18

Mel - 1-25-07

Surface Plug
NO FENCE
7 SXS
8 5/8 @ SURFACE

180'

670 CANNOT CLEAN OUT FILL

13 3/8 @ 788
Cmtd 100 SXS

670 PLUG

Shot 8 5/8 @ 764 PULL 29 JTS. (8 5/8 @ SURFACE)

CALCTO CMT. 3018'

12" DRLD. HOLE

MUDDED HOLE 45T

PLUG 4051-4021

WOOD

8 5/8 @ 4230
Cmtd. 400 SXS.
TESTED WSO

PERFS 4222-4529
LINER 6 1/4 @

1ST HOLE, Orig. TD 4529

5 3/4 CZ 10K

DEPTH BREAK

No 13" Csg. Get in hole with hose or Pipe & fill up with enough Cmt to make 200' plug at 670 & mud to 100' & Cmt to Surface.

REDRILL TO TD 7483

NOTE:
DRLD 1926
DPN - REDRILLED 1930
PLUGD 1938 to 6106
- 1938-39 WELL TEST
PERFD 4880-4876
4740-4730, 4650-4640
4770-4745, 4650-4610
4785-4830 CMTD 4848 to 4776 & 4560 to 4540 CMTD. out to 4550 PERF 4550 TO 4525, Cmt to 4466, PERF. 4435-4405, Cmtd 4466 to 4385, PERFD. 4350 to 4230,
1939 ABN. WELL; CO to 4375 Cmt to 4185, PULL 5 3/4 @ 4051
Cmt to 4021 on WOODEN PLUG; PULL 8 5/8 FILL @ 670 Cmt to 627, 5 SXS @ SURFACE)
SHOOT 5 3/4 @ 4170, 4100, 4051 PULL @ 4051
WSO 4230
1931 RD. PULLED 6 1/4" 4273
PLUGGED 4529 to 4280
40 SXS.
6106 PLUG GN 4 3/4" CO 20
6245-6215
3 3/4" 2465 TOC 4636 TOP 6120
6500-6435
SQUEEZE PLUGGED 7483-6828

Post-it® Fax Note 7671
Date 1-31 # of pages ▶ 1
To Ken Cantor
From Mel
Co./Dept.
Co.
Phone # Phone #
Fax # Fax #
Fred 18 Gve to Nuno Please

Mel Wright

"Field" 18

Need

Bot. Plug 4021-3921

combo plug 1942-1742' { UH2 Plug.

BFW Plug 1842-1742

Stub Plug 620' 570'

Surf. Plug 55' 5'

must have competent surface casing.

1750
92
1842

1050 AM

1/31/07

Carlson / Kratovil

Mel needs to (re)abd Field
18 he has "touched" it

Target is expecting him (mel) to
submit paperwork & use rig that
is on Carson property to abd this
well.

called Mel Wright left him
message on ans. machine ≈ 10:55 AM
Kr

Carlson / mel wright
11:10 AM
positively
not
leaking

oxidized 43"
S.P.

754
85/8

90' - 29 jts 180' 85/8"

43'
670



FIELD: LONG BEACH
SITE: CHEVRON U.S.A. INC. "FIELD" 18

API # 037-11543



FIELD: LONG BEACH
SITE: CHEVRON U.S.A. INC. "FIELD" 18
API # 037-11543

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF PROPERTY AND WELL TRANSFER

Field or County	District
Imperial Co., Wilmington, L.A. Co., W. Coyote, Montebello, Beverly Hills, Seal Beach, El Segundo, Inglewood, Rosecrans, Venice Beach, Las Cienegas, S. Salt Lake, Dominguez, Hyperion, Lawndale, Leffingwell, Long Beach, Los Angeles Downtown, Potrero, Salt Lake, Santa Fe Springs, Cheviot Hills, Sherman, Torrance, Whittier, Howard Townsite, Huntington Beach, Yorba Linda, Orange Co., Richfield, Kraemer, W. Newport, Sunset Beach, Belmont Offshore	District 1 (Cypress, California)
Former owner: ChevronTexaco Exploration & Production Co. | C5680	Date: 9/23/2005

Well Name	API Number	Section Township Range
See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA	See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA	See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA

Description of the land upon which the well (s) is (are) located.
Various

Date of transfer	New owner		Type of organization
7/11/2005		Chevron U.S.A. Inc. **C5640**	Corp.
	Address:	9525 Camino Media Bakersfield, CA 93311	Telephone: 661/654-7065
Reported by	OG30A received in Sacramento 9/2005		
Confirmed by	Same as above		
New operator new status: **PA**	Designation of Agent: Greg Leyendecker, Agent		
Old operator new status: **AB**	Remarks: For further information see Operator file (C5640) Chevron U.S.A. Inc.		

OPERATOR STATUS ABBREVIATIONS
PA – Producing Active
NPA- No potential, Active
PI- Potential Inactive
NPI-No potential, Inactive
AB-Abandoned or No More Wells

cc: Update; Envir Desk (2); File
Conservation Committee
Harold W. Bertholf, Inc.
L.A. & Orange County Assessors
WellStats – Cypress Dist. 1
WellStats – Sacrament HQS

Deputy Supervisor: R. K. Baker

Signature: Richard K. Baker, District Deputy

FORM AND RECORD CHECK LIST

Form or Record	Initials	Date	Form or Record	Initials	Date
Form OGD121	—	—	Map and Book		
Operator Card	(initials)	9-23-05	Notice cancellations	—	—
Well Records	(initials)	9/26/05 —	Bond Status BB	(initials)	9-23-05
Log Records	(initials)	9/26/05 —	EDP HQS	J.C	7-11-05
Production Reports	—	—	Data Base Poly DI	GM	9-26-05

WELL TRANSFER NOTICE

Effective August 22, 2002

Chevron USA Inc.
Texaco California Inc.
And
Texaco Exploration and Production, Inc.

Transferred ALL THEIR WELLS
To

ChevronTexaco Exploration & Production Company

See OGD156 dated October 18, 2002 in Operator File for ChevronTexaco Exploration & Production Company (C5680) for details

629 South Hill Street,
Los Angeles, California,
March 4, 1940

Mr. V. H. Wilhelm,
929 South Broadway,
Los Angeles, Calif.

Agent for The Texas Company

Dear Sir:

Your report of abandonment of well No. "Field" 18, Sec. 19, T. 4 S., R. 12 W., S. B. B. & M., Long Beach oil field, Los Angeles County, dated February 16, 1940, and submitted to this division on our form 102, has been examined in conjunction with records filed in this office.

A review of the reports and records shows that the requirements of this division, which are based on all information filed with it, have now been fulfilled.

Yours truly,

R. D. Bush
State Oil and Gas Supervisor

By E. Higginson

cc- Company
Mr. R. D. Bush
WJC:G
Long Beach

Reference to file of data

No.				Forms	
20					121
CS					✓

Book
3-5-40
CS

FORM 102.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR The Texas Company FIELD Long Beach

Well No. Field #18, Sec. 19, T. 4-S., R. 12-W., S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated 7/25/39, was filed.

SIGNED [signature]

Date February 16, 1940

Title Chief Petroleum Engineer
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

1940 Date	
12/1	Rigging up to abandon. Pumps all salt water at 50 B/D rate.
12/2	Cleaned out to 4375'. Dumped 20 sacks of cement in stages beginning at 4375'.
12/3	Your Division witnessed and approved plug at 4185'.
12/4	Shot 5-3/4" casing at 4170', 4100', and 4051'.
12/8	Pulled a total of 166 joints, 4051'. Dumped 6 sacks of cement on top of three foot wooden plug driven into stub of 5-3/4" casing. Your Division witnessed and approved plug at 4021'.
12/9	Shot 8-5/8" casing at 764' and pulled a total of 29 joints.
12/10	Could not clean out below 670'. Dumped 15 sacks of Riverside cement at 670'.
12/11	Your Division witnessed and approved plug at 627'. Filled to surface with heavy mud, capped casing with 7 sacks of cement. Abandonment complete.

DIVISION OF OIL AND GAS
RECEIVED
FEB 20 1940
LOS ANGELES, CALIFORNIA

M 109-D.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T1-37001

Los Angeles, Calif. December 27, 1939.

Mr. V. H. Wilhelm,
Los Angeles, Calif.

Agent for THE TEXAS COMPANY

DEAR SIR:

Operations at your well No. "FIELD" 18 Sec. 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by Frank J. Karmelich, Inspector, representative of the supervisor, on December 11, 1939. There was also present A. Nightingale, Driller, and L. Owens, Contractor.

Casing Record 13" cem. 788'; 8¼" cem. 4230', W.S.O., pulled from 764'; 5-3/4" cem. 6210', perf. 4880'-4870', 4830'-4785', 4770'-4745', 4740'-4730', 4650'-4610', 4525'-4485', 4435'-4405', 4350'-4230', pulled from 4051'. T. D. 7483', plugged with cement 7483'-6828', 6500'-6442', 6366'-6190', 6120'-6106', 4848'-4776', 4550'-4385' *

Junk (1st hole) 6¼", 4273'-4529'. T.D. 4529', plugged with cement 4529'-4280'.

The operations were performed for the purpose of testing the location and hardness of a cement plug placed from 670' to 627' in the process of abandonment,

and the data and conclusions are as follows:

*4375'-4185', 4048'-4021', and 670'-627'.

INSPECTOR CORWIN VISITED THE WELL AT 11:30 A. M., DECEMBER 9, 1939, AND NOTED THAT the 8¼" casing was shot loose at 764'.

ENGINEER PEIRCE VISITED THE WELL AT 11:00 A. M., DECEMBER 10, 1939, AND MR. NIGHTINGALE REPORTED THAT the 8¼" casing was pulled from 764'.
THE ENGINEER NOTED THE FOLLOWING:
1. Sand had filled to 624' and could not be cleaned out below 670'.
2. 15 sacks of Riverside cement was dumped at 670'.

INSPECTOR KARMELICH VISITED THE WELL AT 9:00 A. M., AND NOTED THAT the bailer could not be spudded below 627' and brought up a sample of set cement.

The test was completed at 9:30 a. m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 627' ARE APPROVED.

cc- Company
Long Beach
FJK:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Hagenbuch Deputy

FORM 109-D.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-36981

Los Angeles, Calif. December 21, 1939.

Mr. V. H. Wilhelm,
Los Angeles, Calif.
Agent for THE TEXAS COMPANY

DEAR SIR:

Operations at your well No. "FIELD" 18 Sec. 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by Chas. Corwin, Inspector, representative of the supervisor, on December 9, 1939. There was also present A. Nightengale, Driller, and R. Rooker, Helper.

Casing Record 13" cem. 788'; 8¼" cem. 4230', W.S.O.; 5-3/4" cem. 6210'; perf. 4880'-4870', 4830'-4785', 4770'-4745', 4740'-4730', 4650'-4610', 4525'-4485', 4435'-4405', 4350'-4230', pulled from 4051'; 4-3/4" perf. liner 6120'-6366'. T.D. 7483', plugged with cement 7483'-6828', 6500'-6442', 6366'-6190', 6120'-6106', *

Junk (1st hole) 6¼", 4273'-4529'; T.D. 4529', plugged with cement 4529'-4280'.

The operations were performed for the purpose of testing the location and hardness of a cement plug placed from 4048' to 4021' in the process of abandonment,

and the data and conclusions are as follows:

*4848'-4776', 4550'-4385', 4375'-4185' and 4048'-4021'.

INSPECTOR KARMELICH ARRIVED AT THE WELL AT 3:00 P. M., DECEMBER 8, 1939, AND MR. NIGHTENGALE REPORTED THAT the 5-3/4" casing was shot at 4170', 4100' and 4051' and pulled from 4051'.

THE INSPECTOR NOTED THAT 6 sacks of Victor cement was dumped on a wooden plug driven in the stub of the 5-3/4" casing at 4048'.

INSPECTOR CORWIN ARRIVED AT THE WELL AT 10:00 A. M., DECEMBER 9, 1939, AND NOTED THAT the bailer could not be spudded below 4021' and brought up a sample of set cement.

The test was completed at 10:45 a. m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 4021' ARE APPROVED.

cc- Company
Long Beach
CC:OH
CJB

R. D. BUSH
State Oil and Gas Supervisor

By E. Karmelich Deputy

FORM 109-D.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-36980

Los Angeles, Calif. December 21, 1939.

Mr. V. H. Wilhelm,
Los Angeles, Calif.
Agent for THE TEXAS COMPANY

DEAR SIR:

Operations at your well No. "FIELD" 18 Sec. 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by Frank J. Karmelich, Inspector, representative of the supervisor, on December 3, 1939. There was also present L. Owens, Contractor, and A. Nightengale, Driller.

Casing Record 13" cem. 788'; 8¼" cem. 4230', W.S.O.; 5-3/4" cem. 6210', perf. 4880'-4870', 4830'-4785', 4770'-4745', 4740'-4730', 4650'-4610', 4525'-4485', 4435'-4405' and 4350'-4230'; 4-3/4" perf. liner 6120'-6366'. T.D. 7483', plugged with cement 7483'-6828', 6500'-6442', 6366'-6190', 6120'-6106', 4848'-4776', 4550'-4385', and *	Junk (1st hole) 6¼", 4273'-4529'; T.D. 4529', plugged with cement 4529'-4280'.

The operations were performed for the purpose of testing the location and hardness of a cement plug proposed to be placed from 4385' to 4210' in the process of abandonment,

and the data and conclusions are as follows:

* 4375'-4185'.

THE INSPECTOR ARRIVED AT THE WELL AT 2:30 P. M., DECEMBER 1, 1939, AND NOTED THE FOLLOWING:
1. The hole was cleaned out to 4375'.
2. The cementing operations were started at 4375'.

THE INSPECTOR ARRIVED AT THE WELL AT 1:00 P. M., DECEMBER 3, 1939, AND MR. NIGHTENGALE REPORTED THAT on December 1 and 2, 1939, 20 sacks of Victor cement was dumped in stages beginning at 4375'.

THE INSPECTOR NOTED THAT the bailer could not be spudded below 4185' and brought up a sample of set cement.

The test was completed at 2:00 p. m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 4185' ARE APPROVED.

cc- Company
Long Beach
FJK:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Hagenbuch Deputy

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-34346

Los Angeles, Calif. October 23, 1939.

Mr. V. H. Wilhelm,
Los Angeles, Calif.
Agent for THE TEXAS COMPANY

121

Dear Sir:

Your proposal to abandon Well No. "FIELD" 18, Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, Los Angeles County, dated Oct. 17, 1939, received Oct. 19, 1939, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

Records in addition to, or at variance with those shown in the notice:
The hole is plugged with cement 7483'-6828', 6500'-6442', 6366'-6190', 6120'-6106', 4848'-4776', and 4550'-4385'.
T. D. (old hole) 4529'.

THE NOTICE STATES:
"The present condition of the well is as follows:
13" cemented at 788'.
8-1/4" cemented at 4230', W. S. O.
5-3/4" cemented at 6210', W.S.O., perf. in hole 4870-4880', 4785-4830', 4745-4770', 4730-4740', 4610-4650', 4485-4525', 4435-4405', 4350-4230'.
Total depth 7483'.
Plugged depth 4385'.
Well pumps all salt water at 50 B/D rate."

PROPOSAL:
"The proposed work is as follows:
Clean out to 4385' and plug solid with cement to 4210'.
Cut and pull 5-3/4" casing from 4210'.
Cut and pull 8-1/4" casing from 768' and cap stub with 20' of cement.
Fill all voids with heavy mud.
Cap 13" at surface and abandon."

DECISION:
THE PROPOSAL IS APPROVED PROVIDED THAT THIS DIVISION SHALL BE NOTIFIED TO WITNESS the location and hardness of cement plugs at 4210' and 748'.

NOTE: In the event the proposed work is done by a contractor, this division shall be consulted regarding additional requirements.

cc- Company
Long Beach
WJC:OH
CM

R. D. BUSH
State Oil and Gas Supervisor

By E. Hugenin Deputy

FORM 108. 61558 8-38 5M.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
OCT 19 1939
LOS ANGELES, CALIFORNIA

Notice of Intention to Abandon Well

This notice must be given at least five days before work is to begin

Los Angeles, Calif. October 17, 1939

DIVISION OF OIL AND GAS

Los Angeles, Calif.

In compliance with Section 16, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to abandon well No. Field #18

Sec. 19, T. 4-S., R. 12-W., S.B. B. & M. Long Beach Field,

Los Angeles County, commencing work on the 22nd day

of October, 1939.

The present condition of the well is as follows:

13" cemented at 788'.
8-1/4" cemented at 4230', W.S.O.
5-3/4" cemented at 6210', W.S.O., perf. in hole 4870-4880', 4785-4830', 4745-4770', 4730-4740', 4610-4650', 4485-4525', 4435-4405', 4350-4230'.
Total depth 7483'.
Plugged depth 4385'.
Well pumps all salt water at 50 B/D rate.

The proposed work is as follows:

Clean out to 4385' and plug solid with cement to 4210'.

Cut and pull 5-3/4" casing from 4210'.

Cut and pull 8-1/4" casing from 768' and cap stub with 20' of cement.

Fill all voids with heavy mud.

Cap 13" at surface and abandon.

aband

Name			Cards	Forms	
				✓	21

THE TEXAS COMPANY
(Name of Operator)

By [signature]
Chief Petroleum Engineer

ADDRESS NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

FORM 102.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
AUG 4 - 1939
LOS ANGELES, CALIFORNIA

Subsequent Work Report

OPERATOR The Texas Company FIELD Long Beach

Well No. Field #18, Sec. 19, T. 4-S., R. 12-W., S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated June 22,1931, was filed.

SIGNED [signature]

Date July 25, 1939 Title Chief Petroleum Engineer
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date	
1938	
2-16	Cleaned out to 6366'
2-17	Dumped in 12-1/2 sacks of cement at 6366', filling to 6191'.
2-18	Your Division witnessed and approved top of plug at 6190'.
2-19	Set wood bridging plug on top of the 4-3/4" liner at 6120'. Dumped in 2 sacks cement, filling to 6106'. Filled hole to 3075' with water and perforated 4870-4880' with twenty shots.
2-21	Pumped 36 barrels of water in six hours.
2-22 to 2-28	Averaged 150 to 200 B/D water.
3-4	Pumped in 50 sacks cement through retainer set at 4848', final pressure 1900#. Estimated forty sacks away.
3-10	Bailed fluid in casing down to 3500' - no rise. Filled hole with fluid to 2100'. Perforated 4640-4650', 4730-4740' with twenty 1/2" holes.
3-11 to 3-16	Pumping 75 to 175 B/D water.
3-18	Cemented through Baker retainer at 4715' with 45 sacks, final pressure 2800#. Estimated 43 sacks away.
3-24	No fluid entering hole.
3-31	Found top of cement at 4724'. Drilled out retainer.
4-2	Drilled out cement to 4746' and cleaned out to 4852'.
4-5	Pumped 101 barrels salt water.

FORM 102.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR The Texas Company FIELD Long Beach

Well No. Field #18, Sec. 19, T. 4-S., R. 12-W., S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated June 22, 1931, was filed.

SIGNED [signature]

Date July 25, 1939 Title Chief Petroleum Engineer

(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date	
1938	
4-6	Perforated with McCullough gun from 4745-4770' with fifty 1/2" holes.
4-7	Perforated 4610-4650' with eighty 1/2" holes; 4485-4550' with one hundred and thirty 1/2" holes. Bailing fluid at 3300'.
4-10 to 4-19	Pumping 85 to 124 B/D water.
4-21	Perforated 4785-4830' with ninety 1/2" holes.
4-23 to 4-29	Pumping 150 to 170 B/D water.
5-4	Cleaned out to 4848'. Dumped in eight sacks cement, filling to 4776'.
5-12 to 5-27	Pumping 180 B/D water.
5-28	Cleaned out to 4776'. Ran water witch and located entry at 4546-4550'.
6-19	Filled with sand to 4560'. Dumped in two sacks of cement at 4560'.
6-20	Dumped in 1/2 sack cement, filling to 4540'.
6-25 to 7-20	Intermittently pumping 80 to 180 B/D salt water.
1939	
2-27	Drilled out to 4550'.
2-28	Reperforated 4550-4525' with thirty 1/2" holes. Fluid level dropped from 3050 to 3350'.
3-14	Cleaned out to 4550' and dumped 3-1/2 sacks of cement, filling to 4531'.
3-19 to 4-3	Pumping 65 to 97 B/D, with 98% cut.
5-13	Cleaned out to 4531'.
5-14	Dumped in fifteen sacks cement, filling from 4531 to 4466'.

FORM 102.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR The Texas Company FIELD Long Beach

Well No. Field #18, Sec. 19, T. 4-S., R. 12-W., S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated June 22, 1931, was filed.

SIGNED [signature]

Date July 25, 1939 Title Chief Petroleum Engineer
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date	
1939	
5-23	Perforated with McCullough gun 4435-4405' with thirty 1/2" holes.
5-26 to 6-5	Pumped 60 to 90 B/D water.
6-8	Cleaned out to 4466' and dumped in 11 sacks cement, filling to 4385'. Perforated 4350-4230' with one hundred and twenty 5/8" holes. Fluid level dropped from 2560-3566'.
6-12 to 6-25	Pumping salt water - 40 to 60 B/D.

FORM 109-D. 47172 7-37 15M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-33890

Los Angeles, Calif. March 4 1938

Mr. V. H. Wilhelm,
Los Angeles, Calif.
Agent for THE TEXAS COMPANY

DEAR SIR:

Operations at your well No. "FIELD" 18 Sec. 19, T. 4S., R. 12W. S. B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by F.J. Karmelich, Inspector, representative of the supervisor, on February 18, 1938. There was also present H. O. Woodruff, Engineer, and I. N. Truesce, Driller.

Casing Record	Junk
13" cem. 788'; 8½" cem. 4230', W. S. O.; 5-3/4" cem. 6210' W. S. O.; 4-3/4" perf. liner 6120'-6366'. T. D. 7483', plugged with cement 7483'-6828', 6500'-6442' and 6366'-6190'.	(1st hole) 6½" 4273'-4529'. T. D. 4529', plugged with cement 4529'-4280'.

The operations were performed for the purpose of testing the location and hardness of a cement plug proposed to be placed from 6366' to 6190' in the process of plugging back,

and the data and conclusions are as follows:

THE INSPECTOR ARRIVED AT THE WELL AT 3:00 P. M. AND MR. WOODRUFF REPORTED THE FOLLOWING:

1. The 4-3/4" liner was cleaned out to 6366'.
2. On February 17, 1938, 12½ sacks of Colton's Portland cement was dumped at 6366'.

THE INSPECTOR NOTED THAT the bailer could not be spudded below 6190' and brought up a sample of set cement.

The test was completed at 4:00 p. m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 6190' ARE APPROVED.

cc- Company
Long Beach
FJK:G

R. D. BUSH
State Oil and Gas Supervisor

By E. Hugenin Deputy

FORM 111. 46011 6-37 20M.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-32056

Los Angeles, Calif. February 23, 1938.

Mr. V. H. Wilhelm,
Los Angeles, Calif.
Agent for THE TEXAS COMPANY

121

Dear Sir:

Your proposal to plug & alter casing Well No. "FIELD" 18, Section 19, T. 4 S., R 12 W., S.B. B. & M., Long Beach Field, Los Angeles County, dated Feb. 18, 1938, received Feb. 21, 1938, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS: The condition of the well is as stated in the notice.

THE NOTICE STATES:
"The present condition of the well is as follows:
13" cemented at 788'.
8-1/4" " " 4230', W. S. O.
5-3/4" " " 6210', W. S. O.
246' of 4-3/4" perf. liner froze at 6366'.
Total depth 7483'.
Plug depth 6366'.

Junk: 6-1/4" csg. s. t. 4273-4529'.

Average daily production for January, 1938, 14 barrels of oil and 1 barrel of water."

PROPOSAL:
"The proposed work is as follows:
Clean out to bottom and plug solid with cement to 6190'.
Set cement bridge 4900-4920'.
Gun perforate intervals 4485-4880'
Test for production."

DECISION:
THE PROPOSAL IS APPROVED PROVIDED THAT THIS DIVISION SHALL BE NOTIFIED TO WITNESS the location and hardness of cement plug at 6190'.

cc- Company
Long Beach
WJC:OH

J.P.

R. D. BUSH
State Oil and Gas Supervisor

By E. Higginbotham Deputy

FORM 107. 42649 3-37 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
FEB 21 1938
LOS ANGELES, CALIFORNIA

Notice of Intention to Deepen, Redrill, Plug or Alter Casing in Well

This notice must be given fifteen days before work begins when possible

Los Angeles, Calif. February 18, 1938

DIVISION OF OIL AND GAS

Los Angeles, Calif.

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of ~~deepening, redrilling~~, plugging or altering casing at well No. Field #18
(Cross out unnecessary words)

, Sec. 19, T. 4-S., R. 12-W., S. B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

13" cemented at 788'.
8-1/4" " " 4230', W.S.O.
5-3/4" " " 6210', W.S.O.
246' of 4-3/4" perf. liner froze at 6366'.
Total depth 7483'.
Plug depth 6366'.

Junk: 6-1/4" csg. s.t. 4273-4529'.

Average daily production for January, 1938, 14 barrels of oil and 1 barrel of water.

The proposed work is as follows:

Clean out to bottom and plug solid with cement to 6190'.

Set cement bridge 4900-4920'.

Gun perforate intervals 4485-4880'.

Test for production.

pl + alt csg

Reference to file of date

Name				Terms	
				✓	✓

The Texas Company
(Name of Operator)

By [signature]
Chief Petroleum Engineer

ADDRESS NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

MEMORANDUM FOR WELL RECORD.

Letter to R. D. Bush, dated July 27, 1932, making typographical corrections in the designations of a number of The Texas Company wells, is filed with record of well No. "Isaac" 1, Richfield field.

FORM 102. 80626 11-30 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
JUN 26 1931
LOS ANGELES, CALIFORNIA

LOG OF OIL OR GAS WELL

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M., Well No. FIELDS #18

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated 7-8-26, was filed.

SIGNED O. J. Wilkinson

Date June 22nd, 1931

Title Chief Petroleum Engr.
Reference to file of data
(President, Secretary or Agent)

Maps	Model	Cross Section	Cards	Forms 114	Forms 121

Rigged up to redrill and deepen 11-10-30.

Cleaned out to 4529' and pumped in 40 sax cement.
Cut and pulled 4274' of 6-1/4" casing.
Milled up 6-1/4" casing to 4278' and shot hole at this depth w/ 50# shell.
Sidetracked 6-1/4" casing to 4529'.
Drilled to 7483' and due to unfavorable showings we plugged the well to 6828' under pressure, with 170 sax Victor cement.
Your Division witnessed and approved plug at 6828'.

Filled hole w/ mud to 6500' and pumped in 35 sax Victor cmt. Top cmt. at 6435'.
Bridged hole 6245-10' w/ 15 sax Victor cmt.
Your Division witnessed and approved mudding operations.

Cemented 5-3/4" 22½# casing at 6210' w/ 75 sax cement.
Drilled out 35' of cement and cleaned out to 6215'.
Swabbed to 3,000' and fluid rose 40' in 19 hours.
Your Division witnessed and approved the shut-off.

Cleaned out to 6500' and pumped in 35 sax cement. Cement did not set, so cleaned out to 6486' and pumped in 35 sax cement under 250# pressure.
Your Division witnessed and approved plug at 6442'.

Ran 246' of 4-3/4" casing which stuck at 6366'.
A production test showed all salt water, and during the process of swabbing, about 800' of heavy rotary mud heaved up into the tubing, which suggested the failing of the plug at 6442'.
Cleaned out sand bridge 6271-6366' and milled out bull nose on bottom of liner. Cleaned out to 6442' and plug supported weight of drill pipe, indicating entry of water above the plug.
Four runs of the water witch indicated bottom water.
Plugged hole 6441-6366' w/ 7 sax cement.
Swabbed well, but it would not flow.
Put well on pump 5-12-31 and it pumped water until 5-22-31 when it produced 52 barrels gross, 50% cut.
5-23-31 Well produced 46 bbls., 27.0 grav., 11% cut.
5-28-31 Shut well in account curtailment.

M 101. 80629 11-30 30M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M. Well No. FIELD #18

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Name of Formation
4529	4577	48	Sandy Shale
	4611	34	Sand w/ stks. sh.
	4621	10	Shale and sand
	4622	1	Shell
	4630	8	Hard sand.
	4751	21	Sdy. sh. and shale
	4785	34	Sdy. sh. w/ stks. hd. sh.
	4797	12	Hard sand
	4800	3	Shell
	4809	9	Hard sand
	4848	39	Sdy. sh. and hd. sd.
	4861	13	Hard sand.
	4875	14	Sdy. sh. and shells
	4923	48	Sandy shale
	4925	2	Hard shell
	4989	64	Sdy. sh. and shells
	5058	69	Sand and shale
	5078	20	Sh., w/ thin stks. hd. sd.
	5086	8	Hard sand
	5106	20	Sand and shale
	5109	3	Hard sand
	5119	10	Sand and shale
	5133	14	Hard sand
	5199	66	Sandy shale
	5206	7	Sand and shale
	5232	26	Sand, sh., and shell
	5259	27	Hard sd. and shale
	5322	63	Sandy shale
	5370	48	Sand and shale
	5395	25	Sdy. sh. w/ stks. hd. sh.
	5422	27	Hard sd. and shale
	5428	6	Hard sand
	5431	3	Sand and shells
	5458	27	Tough shale
	5472	14	Shale and shell
	5490	18	Sand and shale
	5492	2	Shell
	5498	6	Sand and shale
	5508	10	Tough shale
	5521	13	Sdy. sh. and shells
	5536	15	Sand and shale
	5548	12	Tough shale
	5563	15	Sh. and stks. sand
	5577	14	Sand and shale

M 101. 80629 11-30 30M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M. Well No. FIELD #18

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Name of Formation
5577	5611	34	Tough shale
	5632	21	Sdy. sh. and shells
	5655	23	Sand and Shale
	5694	39	Shale
	5712	18	Shale and shell
	5721	9	Shale and hd. sand
	5731	10	Tough shale
	5754	23	Shale and shell
	5764	10	Sd. and stks. tgh. sh.
	5777	13	Shells and shale
	5801	24	Shale w/ stks. sand
	5817	16	Tough shale
	5819	2	Shell
	5839	20	Tough shale
	5842	3	Shell
	5846	4	Shale and shell
	5878	32	Shale
	5888	10	Shale and shell
	5910	22	Sandy shale
	5924	14	Shale and hd. sd.
	5982	58	Sandy shale
	6125	143	Sand and shale
	6150	25	Shale
	6151	1	Gray sd.
	6155	4	Hd. sh. w/ thin stks. oil sd.
	6157	2	Oil sd. and shale
	6163	6	Hard shale
	6166	3	Gray sand
	6169	3	Hard shale
	6172	3	Oil sd. and shale
	6193	21	Br. fract. sh. w/ few small stks. oil sd.
	6214	21	Fract. br. and black sh.
	6234	20	Oil sd. and shale
	6237	3	Hd. sandstone shell
	6252	15	Oil sand
	6253	1	Shale
	6255	2	Oil sand
	6256	1	Shale
	6261	5	Oil sd. w/ few stks. sh.
	6271	10	Oil sand
	6284	13	Oil sd. w/ stks. shale
	6285	1	Sandstone shell

M 101. 80629 11-30 30M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M. Well No. FIELD #18

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Name of Formation
6285	6286	1	Oil sand
	6287	1	Shell and shale
	6290	3	Oil sand
	6392	2	Shell and shale
	6301	9	Sand
	6308	7	Oil sand
	6311	3	Hd. br. shale
	6317	6	Oil sand
	6318	1	Shell
	6364	46	Oil sand
	6365	1	Shell
	6384	19	Oil sand
	6387	3	Hd. sandstone shell
	6458	71	Oil sd. w/ 3" shell on bottom
	6542	84	Sand and shell
	6545	3	Shell
	6548	3	Sand and shale
	6550	2	Hard sand
	6553	3	Br. sdy. shale
	6560	7	Br. sh. w/ stks. med. grained water sd.
	6570	10	Gray water sd. w/ few small stks. sdy. sh.
	6571	1	Hd. sdstone shell.
	6580	9	Gray water sand
	6611	31	Sand w/ hd. stks.
	6626	15	Sand
	6640	14	Sd. and stks. hd. sd.
	6650	10	Sand
	6652	2	Poor oil sd. and stks. sh.
	6654	2	Brown shale
	6660	6	Br. sh. w/ stks. gr. sd.
	6749	89	Sand and shale
	6750	1	Hd. sandstone shell
	6752	2	Fract. black shale
	6759	7	Gr. sh. stkd. w/ oil sd.
	6845	86	Sand and shale
	6847	2	Sandstone shell
	6854	7	Poor Oil sd. stks. gray
	6866	12	Firm gray sd., stks. poor oil sd.
	6877	11	Br. sh. w/ stks. good oil sd.
	6882	5	Fract. br. sh., showing oil
	6910	28	Oil sand
	6911	1	Sdy. br. shale
	6926	15	Oil sand
	6928	2	Sandstone shell
	6931	3	Oil sand

FORM 101. 80629 11-30 30M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M. Well No. FIELD #18

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Name of Formation
6931	6932	1	Sandy shale
	6940	8	Poor oil sand
	6942	2	Oil sd., w/ 3" shell on top
	6951	9	Br. sh. and oil sd.
	6953	2	Gray water sd. and black sdy. shale
	6956	3	Poor oil sd.
	6962	6	"ater sd. and sdy. sh.
	7018	56	Shell, shale and gr. water sd.
	7021	3	Hard shale
	7022	1	Br. sdy. shale
	7053	31	Gr. water sd., shell and shale
	7056	3	Brown shale, free oil in fract. planes
	7068	12	Hd. sdy. sh. w/ 6" oil sd. on top
	7077	9	Br. sh. and sdy. br. sh.
	7083	11	Soft gray sd.
	7089	1	Br. sh. and gray sd.
	7105	16	Gray water sand w/ shell on bottom
	7107	2	Shell
	7111	4	Gray sand
	7113	2	Shell
	7122	9	Gray water sand
	7125	3	Br. sdy. sh. and gr. sd.
	7135	10	Gray water sd.
	7153	18	Br. sh. and gray sd.
	7159	6	Hd. br. sdy. shale
	7161	2	Soft gray sd.
	7167	6	Br. sh. w/ stks. gr. sd.
	7169	2	Soft oil sand
	7171	2	Hd. br. shale
	7187	16	Soft oil sd. w/ stks. sh.
	7193	6	Hd. br. shale
	7207	14	Gr. water sd. w/ small stks. sh.
	7227	20	Hd. br. sh. w/ few thin stks. gray sd.
	7276	49	Sand and shale
	7283	7	Poor oil sd.
	7296	13	Sh. w/ stks. soft fair oil sd.
	7300	4	Soft fair oil sd.
	7308	8	Oil sd. and sdy. sh.
	7319	11	Hd. br. sh. w/ small lense gr. sd. near bottom
	7349	30	Oil sd. and shale
	7352	3	Br. sh. and sand
	7371	19	Oil sand
	7404	33	Br. sh. w/ stks. oil sd.

FORM 101. 80629 11-30 30M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M. Well No. FIELD #18

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Name of Formation
Top of Formation	Bottom of Formation		
7404	7424	20	Oil sd. and stks. shale
	7427	3	Oil sand
	7430	3	Hd. sandstone shell
	7443	13	Oil sand
	7463	20	Oil sd., w/ thin hd. gr. stks.
	7483	20	Gray water sd. w/ stks. oil sd.

FORM 101-A. 82953 2-31 20M
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE
FILL THIS BLANK IN WITH TYPEWRITER. WRITE ON ONE SIDE OF PAPER ONLY

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS
RECEIVED
JUN 26 1931
LOS ANGELES, CALIFORNIA

DIVISION OF OIL AND GAS

CORE RECORD OF OIL OR GAS WELL

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M., Elevation 92. Well No. FIELDS #18

In compliance with the provisions of Section 18, Chapter 718, Statutes of 1915, as amended, the information given herewith is a complete and correct record of all cores taken in this well to the depth on the accompanying log.

Signed [signature]

Date June 23rd, 1931. Title Chief Petroleum Engr.
(President, Secretary or Agent)

Reference to file of data
Maps | Model | Cross section | Cards | Forms 121

DATE	MAKE OF BARREL	SIZE OF BARREL	FROM (DEPTH)	TO (DEPTH)	CORE RECOVERED	DESCRIPTION OF CORE	ETHER TEST	CONDITION OF CORE
			6150	6172	21'	6" soft gray sd., 4' hd. shale, w/ thin stks. firm fair oil sd., & one stk. fine gray., 2" oil sd., 8" hd. shale, 8" fine good oil sd., 6' hard shale w/ one thin stk. oil sd., 1' fine gray sd., 5° dip., 2' fine firm gray sd., 3' hd. shale, 6" oil sd., 6" sh., 1' oil sd., 1' shale, 1' firm fair oil sd.	✓	
			6172	6193	15'	Slightly fract. brown shale w/ a few small stks. oil sd.		
			6193	6214	12'	3' hd. br. sh., 1½' fract. fossile black shale, 3½' hd. br. sh., 4' very fract. brown & black shale.		
			6214	6234	10½'	1'8" hd. sh., 4" fine firm oil sd., 2" shale, 2' fine firm oil sd., 6" hd. sh.,1' fine good oil sd., 1' hd. sh., 3'10" fine firm good oil sd., w/ 3" stk. shale.		
			6234	6251	3'	2½' very hd. sandstone shell, 6" med. fine fair oil sd.		
			6251	6271	19½'	1'3" fine firm good oil sd., 9" shale, 2' fine firm good oil sd., 8" shale, 4'10" fine firm fair oil sd., w/ few 2" stks. sh., 10' hd. cse. fair to poor oil sd.		
			6271	6284	6'	3' fine firm good oil sd., 6" hd. shale, 1½' med. to fine fair oil sd., 4" shale, 8" fine oil sd.		
			6284	6301	6'	1' sandstone shell, 1' fine good oil sd., 1' hd. sh.,3" sandstone shell, 1'3" fine firm fair oil sd., 1' sandstone shell, 6" sh.		
			6301	6321	18'	3" shell, 5' fine firm good oil sd., 2'9" hd. br. sh., 5'8" fine firm good oil sd.,1'4" sandstone shell, 3' fine firm good oil sd.		

FORM 101-A. 62953 2-31 20M
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE
FILL THIS BLANK IN WITH TYPEWRITER. WRITE ON ONE SIDE OF PAPER ONLY

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

CORE RECORD OF OIL OR GAS WELL

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M., Elevation 92. Well No. FIELD #18

In compliance with the provisions of Section 18, Chapter 718, Statutes of 1915, as amended, the information given herewith is a complete and correct record of all cores taken in this well to the depth on the accompanying log.

Signed [signature]

Date June 23rd, 1931 Title Chief Petroleum Engr.
(President, Secretary or Agent)

DATE	MAKE OF BARREL	SIZE OF BARREL	FROM (DEPTH)	TO (DEPTH)	CORE RECOVERED	DESCRIPTION OF CORE	ETHER TEST	CONDITION OF CORE
			6321	6341	20'	13½' med. fine hard rich oil sd., 6" slickensided br. shale, 6' med. fine hard rich oil sand.		
			6341	6361	4'	1' firm fine rich oil sd., 3' soft fine good oil sd.		
			6361	6381	9'	3' fine firm rich oil sd., w/one 2" stk. shale, 1' hd. shell, 5' fine firm good oil sd.		
			6381	6401	9½'	2'8" hd. cse. good oil sd., 4" sandstone shell, 3' hd. cse. good oil sd., 2½' hd. sandstone shell, 1' fine fairly soft good oil sd.		
			6401	6421	5'	4'8" hd. med. fine oil sd., 4" hd. sdy. sh.		
			6421	6441	6'	Fine firm soft good oil sd.		
			6441	6458	4'3"	4' hd. med. fine good oil sd., 3" hard dark sandstone shell.		
			6550	6560	5'	2½' br. sdy. sh., 5-6° dips., 2½' br. sh. w/ stks. med. gray water sd.		
			6560	6570	7½'	Med. grained gray water sd., w/ few small stks. sdy. shale		
			6570	6580	7½'	1' hd. sdstone shell, 6" fine gray sd., and br. sh. & 6' med. grained soft gray water sand.		
			6650	6660	6'	6" br. sh., 4" fine poor oil sd., 4" br. sh., 7" fine poor oil sd., 2' br. shale, some slickensiding, 3" hd. dark gray sd., 2' br. sh., stks. fine gray sd.		
			6749	6759	3'8"	1'2" hd. sandstone shell, 1'6" fract. black shale, 1' fine firm gray sd., stkd. w/ oil sd.		
			6846	6854	2½'	1' hd. sandstone shell, 1½' cse. poor oil sd., stks. gray sd.,wet.		
			6854	6866	4'	Med. fine firm gray sd., stkd. w/ poor oil sd.		
			6866	6877	11'	Br. sh., stks. fine good oil sd., 90-95% shale, dip 19°.		

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Sec. 19, T. 4S, R. 12W, S.B. B. & M., Elevation 92. Well No. FIELD #18

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Signed [signature]

Date June 23rd, 1931

Title Chief Petroleum Engr.
(President, Secretary or Agent)

DATE	MAKE OF BARREL	SIZE OF BARREL	FROM (DEPTH)	TO (DEPTH)	CORE RECOVERED	DESCRIPTION OF CORE	ETHER TEST	CONDITION OF CORE
			6877	6887	9½'	5'4" firm brown shale w/ one 2" stk. fine good oil sd., free oil in fractures. Dip 19°, 4'2" soft good oil sd.		
			6887	6898	9½'	4" hd. oil sd., 5'2" fine firm good oil sd., 6" hd. sdy. sh., 3½' fine soft good oil sd.		
			6898	6909	8'	fine firm good oil sand.		
			6909	6920	3'4"	10" fine good oil sd., 1' sdy. br. sh., 1½' fine firm good oil sd.		
			6920	6930	8'	6" hd. br. sh., 5½' fine good oil sd., 1½' hd. sdstone shell, 6" fine soft good oil sand.		
			6930	6940	6'	1' fine good oil sd., 6" sdy. sh., 4½' fine fair oil sd., does not look rich.		
			6940	6951	3'	3" very hard shell, 1½' fine soft good oil sd., 1' stks. br. sh. & oil sd.		
			6951	6962	11'	4" black sdy. sh., 1'8" water sd., 3' med. coarse poor oil sd., 6" sdy. sh., 2'6" water sd., 1½' sdy. black sh., 1½' water sand		
			6962	6970	2'	8" hd. sh., 10" gray water sd., 6" hd. sandstone shell.		
			6970	6981	10'	1' sandstone shell, 6' med. fine gray water sd.,,couple thin stks. shale, 2' hard br. shale, 1' soft gray sand.		
			6981	7001	13'	6' br. sh., couple thin stks. fine gray sand, 7' soft gray water sd., couple thin stks. shale, Dip 20°.		
			7001	7006	1-1/3'	3" hard shale, 13" firm gr. water sand.		
			7006	7018	3½'	2" gray water sd., 1'4" hard sh., 2' hard sandstone shell.		
			7018	7038	9'	3' hard shale, 1' br. sdy. sh., 1½' gr. water sd., & wet oil sd., 3" sh., 6" soft gr. sd., 9" hd. sh., 2' soft fine gr. sd.,		

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Sec. 19, T. 4S, R. 12W, S.B. B. & M., Elevation 92. Well No. FIELD #18

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Signed [signature]

Date June 23rd, 1931 Title Chief Petroleum Engr.
(President, Secretary or Agent)

DATE	MAKE OF BARREL	SIZE OF BARREL	FROM (DEPTH)	TO (DEPTH)	CORE RECOVERED	DESCRIPTION OF CORE	ETHER TEST	CONDITION OF CORE
						couple 2" stks. sh., Dip about 20°.		
			7038	7053	11'	1' soft gray sd., 6" sandstone shell, 9½' soft gray water sd., couple 2" stks. br. sh.		
			7053	7068	4'	2½" br. sh., free oil in planes, 6" fine rich oil sd., 1' hd. sdy. sh.		
			7068	7088	10'	8½' br. shale and sdy. br. shale w/ one 2" stk. oil sd., 1½' fine soft gr. sd.		
			7088	7105	10½'	1' br. sh., soft gr. sd., 9' firm and soft gr. water sd., 6" hd. sandstone shell.		
			7105	7122	12'	1½' hd. sandstone shell, 3½' med. gr. sd., 1½' hd. sandstone shell, 5½' med. soft gr. water sand.		
			7122	7135	6'	3" sandstone shell, 2'9" br. sdy. sh. & fine gr. sd., 3' soft gr. water sd., little oil staining, but all wet.		
			7135	7153	7'3"	5" stky hd. sh., sdy. br. sh., couple stks. firm gr. sd., 6" soft gr. sd., 9" br. shale, stks. fine gr. sd., 1' fine soft gr. sand.		
			7153	7167	7'4"	5'3" hd. br. sdy. sh., 1½' fine soft gr. sd., 7" br. sh., stks. gr. sd.		
			7167	7187	7'3"	2'9" soft med. fine good oil sd., good cut, 1½' hd. br. sh., 6" soft fine oil sd., 3" br. sh., 2'3" fine soft & firm oil sd., good cut, 2" sh. on bottom.		
			7187	7207	9'	5½" hd. br. sh., 3½' fine soft gr. water sd., couple 2" stks. sh., Dip about 15°.		
			7207	7227	20'	Hd. br. sh., few thin stks. gr. sd.		

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FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M., Elevation 92. Well No. FIELD #18

In compliance with the provisions of Section 18, Chapter 718, Statutes of 1915, as amended, the information given herewith is a complete and correct record of all cores taken in this well to the depth on the accompanying log.

Signed J. J. Wilbur Jr.

Date June 23rd, 1931 Title Chief Petroleum Engr.
(President, Secretary or Agent)

DATE	MAKE OF BARREL	SIZE OF BARREL	FROM (DEPTH)	TO (DEPTH)	CORE RECOVERED	DESCRIPTION OF CORE	ETHER TEST	CONDITION OF CORE
			7276	7296	9½'	5' firm poor oil sd., w/ 1-2" and 1-4" shell, 1' fine soft poor oil sand, 6" sandstone shell, 3' hd. sh., stks. soft fair oil sd.		
			7296	7308	5½'	4' fine soft fair oil sd., 4" sandstone shell, 1'2" soft fine oil sd., & sdy. shale.		
			7308	7319	6'	hd. br. sh., w/ one thin lense gr. sd., near bottom, Dip 30°.		
			7319	7329	5'	4'8" fine oil sd. & br. sh., all mixed up, 4" hd. shale.		
			7329	7349	9'	1½' firm rich oil sd., 2' hd. sh., 2½' hd. oil sd., 3' fine soft good oil sd., w/ 4" stk. sh. near bottom.		
			7349	7367	6'	3' hd. dk. br. shale w/ little sand, 3' fine good oil sd., stks. shale, 75% sd. - 29° dip.		
			7367	7386	8' 4'	Med. fine good oil sd., 4' br. shale, thin stks. fine good oil sd., 95% sh.		
			7386	7404	6'	8" hd. shale, 1' med. fine good oil sd., 4'10" br. sh., couple thin stks. oil sd. at top.		
			7404	7424	12'	2' hard good oil sd., 1' hd. sh. 3½' fine hd. fair oil sd., stks. hd. sh., 2½' med. hd. oil sd., w/ one stk. shale, 4" sandstone shell, 2'8" soft and firm good oil sd.		
			7424	7443	9'	3' med. fine good oil sd., 3' hd. sandstone shell, 3' fine soft good oil sd.		
			7443	7463	15"	Fine hard good oil sd., w/ thin hd. gray stk.		
			7463	7483	13'	Med. fine soft & firm gr. water sd., w/ stks. showing oil, couple 1" stks. sdy. shale near bottom.		

FORM 109-A. 81365 12-30 20M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T -1-22929

Los Angeles, Cal. April 17, 1931.

Mr. V. E. Wilhelm,
Los Angeles, Cal.

121

Agent for THE TEXAS Company

DEAR SIR:

Operations at your well No. "FIELDS" 18 Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Oil Field, in Los Angeles County, were witnessed by F. C. Hodges, representative of the supervisor, on April 14, 1931. There was also present D. K. Weaver, Engineer, and C. W. Sweet, Foreman.

Casing Record 13" S.P. cem. 788'; 8¼" cem. 4230', W.S.O.; 5¾" cem. 6210', W.S.O.; T.D. present hole 7483'; plugged with cement 7483'-6825'; and 6500'-6442'; Junk: (1st hole) 6¼" perf. 4273'-4529'; T.D. (1st hole) 4529', plugged with cement 4529'-4280'.

The operations were performed for the purpose of testing the location and hardness of a cement plug proposed to be placed from 6500' to 6435' in the process of plugging off bottom water.

and the data and conclusions are as follows:

MR. WEAVER REPORTED THE FOLLOWING:

1. The hole was cleaned out to 6500'.
2. On April 7, 1931, 35 sacks of Victor cement was pumped in thru 2½" drill pipe hung at 6500'. The top of the cement was located at 6260' and the hole was cleaned out to 6486'.
3. On April 11, 1931, 35 sacks of Victor cement was pumped in thru 2½" tubing hung at 6436' and a pressure of 250 lb. was applied.

THE INSPECTOR NOTED THAT the cement plug at the reported depth of 6442' supported part of the weight of the drill pipe.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 6442' ARE APPROVED.

cc-Company 2
Long Beach
FCH:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Huguenin Deputy

FORM 109-B. 82427 1-31 6M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off
(BAILING)

No. T -1-22899

Los Angeles, Cal. April 9, 1931.

Mr. V. H. Wilhelm,
Los Angeles, Cal.

Agent for THE TEXAS Company

DEAR SIR:

Your well No. "FIELDS" 18, Sec. 19, T. 4 S., R. 12 W., S.B. B. & M.,
Long Beach Oil Field, in Los Angeles County, was tested for
shut-off of water on April 6 (Time and date), 1931. Mr F. C. Hodges,
designated by the supervisor, was present as prescribed in Section 19, Chapter 718, Statutes 1915, as amended, and there were also present D. K. Weaver, Engineer, and
E. J. McEuen, Driller.

Location of water tested between 4230'-6210' and normal fluid level Not reported.

Depth and manner of water shut-off: { 6210 ft. of 5¾ in. 22.5 lb. / xft. of xxxxx in xxxxx lb.x } casing was { cemented / 3/28/31 / xlanded } in Shale Formation
at 6210 ft. with 150 sacks Victor cement by Casing method.

Water string was landed in 7-5/8" rotary (Size, rotary or cable tool) hole.

Casing record of well 13" S.P. cem. 788'; 8¼" cem. 4230', W.S.O.; 5¾" as above; 2½" tubing hung at 6089' for this test only. Junk: (1st hole) 6¼" perf. 4273'-4529'; T.D. (1st hole) 4529', plugged with cement 4529'-4280'.

Reported total depth of hole 7483 ft. Hole ~~bridged~~ plugged w/c 7483'-6828', 6500'-6435' and bridged w/c present from 6245 ft. to 6210 ft. Hole cleaned out to 6215 ft. for this test.

At time of test depth of hole measured 6213 ft. and bailer brought up sample of shale, sand and set cement.

At 3:00 p.m., April 5, 1931 (Time and date) oil bailed to showing ft., drilling fluid { ~~bailed~~ / swabbed } to 3000 ft.

At 10:00 a.m., April 6, 1931 (Time and date) top of oil found at showing ft., top of fluid found at 2960 ft.

Result of test:

MR. WEAVER REPORTED THE FOLLOWING:

1. A casing test was made by applying a pressure of 500 lb. to the inside of the casing for 1 hr. without loss.
2. 35' of set cement was drilled out of the 5¾" casing, equivalent to 4 sacks.

THE INSPECTOR NOTED THE FOLLOWING:

1. Gas was issuing from the 5¾" casing during the test.
2. The fluid rose 40' in 19 hr., equivalent to 1.2 bbl. per 24 hr.
3. A fluid sample from 6213' consisted of medium gas-cut, oily mud that tasted fresh.

THE SHUT-OFF IS APPROVED.

cc-Company 2
Long Beach
FCH:CH

R. D. BUSH
State Oil and Gas Supervisor

By E. Huguenin Deputy

FORM 109-A. 81365 12-30 20M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T -1-22870

Los Angeles, Cal. March 30, 1931.

Mr. V. H. Wilhelm,
Los Angeles, Cal.

Agent for THE TEXAS Company

DEAR SIR:

Operations at your well No. "FIELDS" 18 Section 19, T. 4 S., R. 12 W., S. B. B. & M., Long Beach Oil Field, in Los Angeles County, were witnessed by Paul J. Howard, representative of the supervisor, on March 27, 1931. There was also present D. K. WEAVER, Engineer, and E. J. McEuen, Driller.

Casing Record 13" S.P. cem. 788'; 8¼" cem. 4230', W.S.O.; T.D. 7483'; plugged with cement 7483' to 6828' and 6500' to 6435'. Junk: (1st hole) 6¼" perf. 4273'-4529'; T.D. 4529'; plugged with cement 4529' to 4280'.

The operations were performed for the purpose of demonstrating that the formations between 4230' and 6210' were mudded until the loss was not more than 4 bbl. per hr.

and the data and conclusions are as follows:

MR. WEAVER REPORTED THE FOLLOWING:

1. A 7-5/8" rotary hole was drilled from 4230' to 7483'.
2. The hole was filled with heavy mud from 6828' to 6500'.
3. Cement bridges were placed in the hole from 6500' to 6435' and from 6245' to 6210'. The latter bridge was placed for the sole purpose of aiding in securing a test of shut-off.
4. Mud fluid was circulated for 28 hr. prior to the test.
5. No record was kept of the loss of mud fluid prior to the test.
6. The drill pipe was hanging at 6200' during the test.
7. Cores were taken from the following important depth:
   6170' - 6220' Shale with a few thin streaks of oil sand.

THE INSPECTOR NOTED THE FOLLOWING:

1. During a circulation test from 9:00 a. m. to 9:30 a. m. mud fluid was loss from the pit at the rate of 3.0 bbl. per hr.
2. The cement bridge at 6210' supported 9 points of the weight of the drill pipe.

THE MUDDING OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED.

Oral approval given to cement 5¾" casing at 6210' is hereby confirmed.

cc-Company 2
Long Beach
PJH:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Hugenin Deputy

FORM 109-A. 81365 12-30 20M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T -1-22856

Los Angeles, Cal. March 27, 1931.

Mr. V. H. Wilhelm,
Los Angeles, Cal.

Agent for THE TEXAS Company

DEAR SIR:

Operations at your well No. "FIELDS" 18 Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Oil Field, in Los Angeles County, were witnessed by Paul J. Howard, representative of the supervisor, on March 25, 1931. There was also present D. K. Weaver, Engineer, and E. J. McEuen, Driller.

Casing Record 13" S.P. cem. 788'; 8¼" cem. 4230', W.S.O.; T.D. 7483'; plugged with cement 7483'-6828'; Junk: 6¼" landed 4529'. perf. 4273'-4529', pulled from 4273'; T.D. 4529'; plugged with cement 4529'-4280'.

The operations were performed for the purpose of testing the location and hardness of a cement plug proposed to be placed from 7483' to 6850' in the process of plugging.

and the data and conclusions are as follows:

MR. WEAVER REPORTED THE FOLLOWING:

1. On March 21, 1931, 170 sacks Victor cement was pumped into the hole thru 4" drill pipe hung at 7481'.
2. The top of the cement was located at 6828'.

THE INSPECTOR NOTED THAT The plug at 6828' supported 6 points of the weight of the drill pipe.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 6828' ARE APPROVED.

cc-Company 2
Long Beach
PJH:OH
CRB

R. D. BUSH
State Oil and Gas Supervisor

By E. Huguenin Deputy

FORM 111. 79322 9-30 20M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P-1-23170

Los Angeles, Cal. March 27, 1931.

Mr. V. H. Wilhelm,
Los Angeles, Cal.
Agent for THE TEXAS Company

Dear Sir:

Your supplementary proposal to redrill oil string and deepen Well No. "FIELDS" 18,
Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Oil Field, Los Angeles County,
dated March 25, 1931, received March 26, 1931, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

Records in addition to, or at variance with those shown in the notice:
The 8½" shut-off was approved.

THE NOTICE STATES:
"The new conditions are as follows:
13" S.P. cem. 788'
8-1/4" cem. 4230'
6-1/4" landed 4529' incl. 307' perfs. Pulled from 4273'. Plugged w/ 40 sacks cement under pressure 4529-4280.
Total depth 7483'
Cored shale 6170-6220'
" oil zone 6220-6450'
" water sands 6550-6650/6750 and continuous 6850 to 7319. Cored oil zone 7319-7440 and water sands to 7483'."

PROPOSAL:
"We now propose
Plug hole w/ cement under pressure 7483' to 6850' and have plug witnessed. Fill with heavy mud to 6500'. Put in cement plug 6500-6435'. Cement solid string of 5-3/4" casing 6215'. Test shoe, and set 4-3/4" flush joint perf. liner 6210 to 6435 and attempt to produce."

DECISION:
THE PROPOSAL IS APPROVED PROVIDED THAT THIS DIVISION SHALL BE NOTIFIED TO WITNESS the location and hardness of the cement plug at 6435'.

cc-Company 2
Long Beach
WJC:OH

GFB

R. D. BUSH
State Oil and Gas Supervisor
By E. H. Guerin Deputy

FORM 123. 66215 6-29 5M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAR 26 1931
LOS ANGELES, CALIFORNIA

Supplementary Notice

Long Beach, Cal. March 25, 1931

MR. E. Huguenin

Deputy State Oil and Gas Supervisor

Los Angeles, Cal.

DEAR SIR:

Please be advised that our notice to you dated November 7, 1930,

stating our intention to redrill and deepen well No. "Fields" 18,
(Drill, deepen, redrill, abandon)

Sec. 19, T. 4 S, R. 12 W, S.B. B. & M. Long Beach Oil Field

Los Angeles County, must be amended on account of changed or recently discovered conditions.

The new conditions are as follows:

13" S.P. cem. 788'
8-1/4" cem. 4230'
6-1/4" landed 4529' incl. 307' perfs. Pulled from 4273'. Plugged w/ 40 sacks cement under pressure 4529-4280.
Total depth 7483'
Cored shale 6170-6220'
" oil zone 6220-6450'
" water sands 6550-6650-6750 and continuous 6850 to 7319. Cored oil zone 7319-7440 and water sands to 7483'.

We now propose

Plug hole w/ cement under pressure 7483' to 6850' and have plug witnessed. Fill with heavy mud to 6500'. Put in cement plug 6500-6435'. Cement solid string of 5-3/4" casing 6215'. Test shoe, and set 4-3/4" flush joint perf. liner 6210 to 6435 and attempt to produce.

Reference to file of data

Maps	Field	Cross Section	Cards	Forms	
					✓

Respectfully yours

(Name of Company)

By The Texas Co.

FORM 111. 79322 9-30 20M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P-1-22652

Los Angeles, Cal. November 12, 1930.

MR. V. H. Wilhelm,

Los Angeles, Cal.

121

Agent for THE TEXAS Company

DEAR SIR:

Your proposal to redrill and deepen oil string/ Well No. "FIELDS" 18,

Section 19, T. 4-S., R. 12-W. S.B. B. & M., Long Beach Oil Field, Los Angeles County,

dated Nov. 7, 1930, received Nov. 8, 1930, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

Records in addition to or at variance with those shown in the notice:
The 8¼" shut-off was approved.
Total depth 4529'.

THE NOTICE STATES:
"The present condition of the well is as follows:
13" S.P. cemented at 788'
8¼" Casing " at 4230'
6¼" Casing landed at 4529' including 307' Perforations
Produced before curtailment
35 barrels oil - 10 barrels water daily."

PROPOSAL:
"The proposed work is as follows:
To plug 6¼" solid of cement 4280'-4529'.
Pull 6¼" from 4280, redrill and deepen to 7500', cementing 6-5/8" casing at 6500' with 5" oil string on bottom."

DECISION:
THE PROPOSAL IS APPROVED PROVIDED THAT:

1. The proposed cement plug from 4529' to 4280' shall be placed under a minimum pressure of 500 lb.
2. Adequate blow-out prevention equipment shall be provided and ready for operation at all times.
3. Any hole to be sidetracked at any time during the drilling of this well shall be completely filled with cement.
4. The formations to be left back of the 6-5/8" casing shall be mudded by open circulation until the loss is not more than 2.0 bbl. per hr.
5. The exact cementing depth for the 6-5/8" casing shall be determined by careful coring, beginning not lower than 6150'.
6. Sufficient cement shall be used to fill back of the 6-5/8" casing to reach to at least 1000' above the shoe.
7. The column of mud fluid back of the 6-5/8" casing shall be maintained to the surface for at least 30 days after cementing this casing.
8. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   (a) Final mudding operations before cementing the 6-5/8" casing.
   (b) Bailing test of the 6-5/8" shut-Off.

cc-Company 2
Long Beach

GP:GH

R. D. BUSH
State Oil and Gas Supervisor

By [signature] Deputy

FORM 107. 68217 6-29 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
NOV 8 - 1930
LOS ANGELES, CALIFORNIA

Notice of Intention to Deepen, Redrill, Plug or Alter Casing in Well

This notice must be given fifteen days before work begins when possible

Los Angeles, Cal. November 7th, 19 30

MR. E. Huguenin,

Deputy State Oil and Gas Supervisor

Los Angeles, Cal.

DEAR SIR:

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of deepening, redrilling, plugging or altering casing at well No. Fields #18
(Cross out unnecessary words)
, Sec. 19, T. 4-S, R. 12-W, S.B. B. & M.
Long Beach Oil Field, Los Angeles County.

The present condition of the well is as follows:

13" S.P. cemented at 788'
8¼"Casing " "4230'
6¼"Casing landed "4529' including 307' Perforations

Produced before curtailment

35 barrels oil - 10 barrels water daily

The proposed work is as follows:

To plug 6¼" solid of cement 4280' - 4529'.

Pull 6¼" from 4280, redrill and deepen to 7500', cementing 6 5/8" casing at 6500' with 5" oil string on bottom.

redrill o.s. & deepen

Reference to file of data

Maps	Model	Cross section	Cards	Forms	
				✓	✓

Respectfully yours

The Texas Company
Name of Company or Operator

By V. H. Wilhelm
Chief Petroleum Engineer R

ADDRESS NOTICE TO DEPUTY STATE OIL AND GAS SUPERVISOR IN CHARGE OF DISTRICT WHERE WELL IS LOCATED

Form 100.

Fill th ink in with typewriter. Write on one side of p only

CALIFORNIA STATE MINING BUREAU

FERRY BUILDING, SAN FRANCISCO

LOG OF OIL OR GAS WELL

CALIFORNIA STATE MINING BUREAU
RECEIVED
JUL 10 1926
Department of Petroleum and Gas
LOS ANGELES, CALIFORNIA

FIELD Long Beach COMPANY California Petroleum Corp. of Cal.

Township 4S Range 12W Section 19 Elevation 92' Number of Well Fields #18

In compliance with the provisions of Chapter 718, Statutes 1915, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Signed J. P. Thomas

Date July 8, 1926 Title Engineer.
(President, Secretary or Agent)

Reference to file of data

	Cross Section	Cards	
			✓

The summary on this page is for the ORIGINAL condition of the well

OIL SANDS

1st sand from 4232 to 4235 4th sand from ____ to ____
2d sand from 4525 to 4529 5th sand from ____ to ____
3d sand from ____ to ____ 6th sand from ____ to ____

IMPORTANT WATER SANDS

1st sand from ____ to ____ 3d sand from ____ to ____
2d sand from ____ to ____ 4th sand from ____ to ____

CASING RECORD

Size of Casing	Where Landed	Where Cut	Weight Per Foot	Threads Per Inch	Kind of Shoe	Make of Casing	Cemented Yes	Cemented No	Number Sacks
13"	788		S.P.			Here.	x		100
8¼"	4230		36#	8		Std.Seam.	x		400
6¼"	4529		26#	10		" "		x	

CEMENTING OR OTHER SHUT-OFF RECORD

Casing, Size	Sacks	Time Set	Method	Test and Result (Give water level and bailing results)
8¼"	400	5 days	Perkins	Bailed to 2000. No fluid entered well in 12 hrs. WSOOK

PLUGS AND ADAPTERS

Heaving Plug—Material ____ Length ____ Where set ____

Adapters —Material ____ Size ____

TOOLS

Rotary Tools were used from 0 ft. to 4529 ft.

Cable Tools were used from ____ ft. to ____ ft.

PERFORATIONS

State clearly whether a machine was used or casing was drilled in shop

From	To	Size of Holes	Number of Rows	Holes Per Foot	Machine—Shop
4222 ft.	4529 ft.	EMS Screen			
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				

Thirty days after completion well produced 67 barrels of oil per day.

The gravity of oil was 17.6 degrees Baumé. Water in oil amounted to 23.3 per cent.

FORM 103. 43286 1-26 10M

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

HISTORY OF OIL OR GAS WELL

CALIFORNIA STATE MINING BUREAU
RECEIVED
Department of Petroleum and Gas

FIELD Long Beach COMPANY California Petroleum Corp. of Cal.

Township 4S, *Range* 12W, *Section* 19, *Number of well* Fields #18

Signed J P Thomas

Date July 8, 1926 Title Engineer.

(*President, Secretary or Agent*)

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

	Cross Section	Cards

Spudded well in 2-4-26.

Drilled to 788' and cemented 13" S.P. at 788' w/100 sax McDuffy treated cement, by Perkins.

Drilled to 4235' and took mud test, which was witnessed and approved by your Department.

Cemented 4230' of 8¼" 36# Standard Seamless csg. at 4230' w/400 sax McDuffy treated cement, under 800# pressure, by Perkins.

Drilled out cement 4194-4235.

Bailed to 2000'. No fluid entered well in 12 hrs. Your Department witnessed and approved the shut-off.

Drilled to 4829' and landed 6¼" 26# Standard Seamless csg. incl. 307' EMS Screen on bottom.

Swabbed and bailed well. Pumped to sump 4-5-25

4-6-26 Produced 80 bbl. 15.8 grav. 16% water, 18% emulsion.

NAMES OF DRILLERS

A. L. Anders

F. C. Brown

Homer Batson

NAMES OF TOOL DRESSERS

S. G. Vanzant

F. N. Bakers

F. Camp

Date drilling started 2-4-26

Date well was completed 4-6-26

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Name of Formation
Top of Formation	Bottom of Formation		
0	500	500	Sand & gravel
	735	235	Sand, gravel & shale
	760	25	Hard sand
	788	28	Shale
	858	70	Sand & shale
	1155	247	Sandy shale
	1225	70	Sticky shale
	1235	10	Hard sand
	1388	153	Sand & gravel
	1658	270	Sand & shale
	1700	42	Sandy shale
	1800	100	Sand & stks. hard sand
	1820	20	Sticky shale
	1900	80	Sand
	1930	30	Sticky shale
	2015	85	Stky.sh. & stks. hard sand
	2165	150	Sticky shale
	2185	20	Sandy shale
	2230	45	Sticky shale
	2305	75	Sandy shale
	2425	120	Sticky shale
	2435	10	Sandy shale
	2455	20	Sticky shale
	2550	95	Sticky shale & stks. sand
	2635	85	Hard sandy shale
	2665	30	Sticky shale
	2675	10	Hard sand
	2760	85	Sandy shale
	2875	115	Stky.sh. & stks. hard sand
	2890	15	Sandy shale
	3003	113	Sticky sh. & stks. hard sd.
	3015	12	Hard sand
	3038	23	Sticky shale
	3065	27	Hard sand & stky.shale
	3110	45	Stky.sh. w/stks. sand
	3135	25	Tough shale
	3185	50	Sandy shale
	3195	10	Hard sand
	3215	20	Hard sandy shale
	3275	60	Hard sand
	3300	25	Stky.sh. w/stks. hard sand
	3306	6	Sticky shale
	3331	25	Stky.sh. w/stks. hard sand

Form 101. 32282 4-24 15M

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

CALIFORNIA STATE MINING BUREAU
RECEIVED
JUL 10 1926
Department of Petroleum

LOG OF OIL OR GAS WELL—Continued

FIELD Long Beach COMPANY California Petroleum Corp. of Cal.

Township 4S, *Range* 12W, *Section* 19, *Number of well* Fields #18

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Name of Formation
Top of Formation	Bottom of Formation		
3331	3336	5	Hard sand
	3368	32	Sticky shale
	3378	10	Hard sand
	3408	30	Stky. sh. & hard sand
	3500	92	Sandy shale
	3515	15	Hard sandy shale
	3555	40	Sticky shale
	3570	15	Sandy sh. stks. hard sand
	3618	48	Sandy shale
	3665	47	Sandy sh. stks. hard sand
	3738	73	Hard sand
	3756	18	Hard sand & stks. shale
	3771	15	Tough shale
	3818	47	Hard sand
	3851	33	Sticky shale
	3933	82	Hard sand
	3935	2	Sticky shale
	3940	5	Hard sand
	3963	23	Sandy sh. w/stks. hard sand
	4000	37	Sandy shale
	4013	13	Sticky shale
	4033	20	Sandy shale
	4060	27	Sandy sh. w/stks. hard sand
	4070	10	Hard sand
	4072	2	Shell
	4073	1	Sand
	4096	23	Hard sand
	4110	14	Sticky shale
	4120	10	Sandy shale
	4150	30	Hard sand
	4170	20	Hard sandy shale
	4232	62	Brown shale, continuous core 4200-4235
	4235	3	Brown shale stkd. w/oil sand
	4239	4	Sandy shale
	4258	19	Hard sand
	4275	17	Sandy shale w/stks. hard sand
	4295	20	Hard sand & sandy shale
	4320	25	Sandy shell & stks. sand
	4321	1	Hard sand & shell
	4382	61	Hard sand stks. shale
	4443	61	Hard sand
	4450	7	Sticky shale
	4465	15	Hard sand & sandy shale
	4525	60	Sandy shale
	4529	4	Oil sand, cored

FORM 109-B. 39807 7-25 10M

CALI_ _RNIA STATE MINING B[ ]EAU

DEPARTMENT OF PETROLEUM AND GAS

Report on Test of Water Shut-off

(BAILING)

No. T-1-10178

Los Angeles, Cal. March 30, 1926

Mr. J. R. Thomas

Montebello, Cal.

Agent for CALIFORNIA PETROLEUM CORPORATION OF ~~CALIFORNIA~~ Company CALIFORNIA.

DEAR SIR:

Your well No. "FIELDS" 18, Sec. 19, T. 4 S, R. 12 W, S.B. B. & M., Long Beach Oil Field, in Los Angeles County, was tested for shut-off of water on March 17, Time and date 1926. Mr. V. AUSTIN, designated by the supervisor, was present as prescribed in Section 19, Chapter 718, Statutes 1915, as amended, and there were also present Frank Halfen, Foreman and R. R. Crandall, Engineer

Location of water tested above 4230 and normal fluid level not determined

Depth and manner of water shut-off: { 4230 ft. of 8¼ in. 36 lb. / ____ ft. of ____ in. ____ lb. } casing was { cemented / ~~landed~~ } 4-11-26 in brown shale Formation

at 4230 ft. with 400 sacks Santa Cruz cement by Perkins method; 12" Rotary Size and kind tools were used in landing water string. The last 100 sacks of cement was treated with quick setting chemical.

Casing record of well 13" S. P. cemented at 788', 8¼" as above

Reported total depth of hole 4235 ft. Hole bridged from - ft. to - ft. Hole cleaned out to 4235 ft. for this test.

At time of test depth of hole measured 4232 ft. and bailer brought up sample of sand

At 4:30 a.m. Mar. 17, 1926, Time and date oil bailed to - ft., ~~water~~ fluid bailed to 2000 ft.

At 4:30 p.m. Mar. 17, 1926 Time and date top of oil found at - ft., top of ~~water~~ fluid found at 2000 ft.

Result of bailing test:

MR. HALFEN REPORTED THE FOLLOWING:
1. No casing test was made.
2. 36' of set cement was drilled out of the 8¼" casing.

THE INSPECTOR NOTED THE FOLLOWING:
1. No fluid entered the well while standing 12 hrs. for test.
2. The fluid samples taken were as follows:
   from the top - heavy mud fluid
   " "bottom - " " " showing some gas.

THE SHUT OFF IS APPROVED.

cc-J.R.Thomas
Long Beach

VA:LH

R. D. BUSH,
State Oil and Gas Supervisor

By E. Haguenin Deputy

106. 32204 4-24 10M

CALIFORNIA STATE MINING BUREAU
RECEIVED
MAR 18 1926
Department of Petroleum and Gas
LOS ANGELES, CAL.

CALIF[ ]NIA STATE MINING BU[ ]AU

DEPARTMENT OF PETROLEUM AND GAS

Notice of Test of Water Shut-off

This notice must be given at least five days before the test, and a longer time is desirable

Montebello, Cal. March 15, 1926

MR. E. Huguenin,
Deputy State Oil and Gas Supervisor

Los Angeles, Cal.

DEAR SIR:

In compliance with Section 19, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to test the shut-off of water in well number Fields #18, Sec. 19, T. 4S, R. 12W, S.B. B. & M., Long Beach Oil Field, Los Angeles County, on the 16th day of March 1926

8¼ inch 36 lb. casing was ~~landed~~/cemented in brown shale (Formation) at 4230 (Depth)

on March 11, (Date) 1926

400 sacks S.C. (Kind) of cement were used.

The Perkins method was used in placing cement.

Fluid level will be bailed to a depth of 2000 feet and left undisturbed for at least 12 hours before your inspection.

The well is 4235 feet deep. There ~~is~~/is not a plug or bridge from x feet to x feet.

Respectfully yours,

California Petroleum Corp. of Cal.
(Name of Company or Operator)

By J. R. Thomas
Engineer.

Address notice to Deputy State Oil and Gas Supervisor in charge of district where well is located

Reference to file of data

Maps	Model	Cross Section	Cards	Logs	
	3/24/26			114	✓

FORM 109-A. 39906 7-25 1M

CALI RNIA STATE MINING BU EAU
DEPARTMENT OF PETROLEUM AND GAS

Special Report on Operations Witnessed

No. T-1-10126

Los Angeles Cal. March 18 1926

Mr. J. R. Thomas

Montebello Cal.

Agent for CALIFORNIA PETROLEUM CORPORATION OF ~~CALIFORNIA~~ Company CALIFORNIA

DEAR SIR:

Operations at your well No. "FIELDS" 18 Section 19, T. 4 S, R. 12 W, S.B. B. & M.,

Long Beach Oil Field, in Los Angeles County, were witnessed by

V. Austin, representative of the supervisor,

on Mar. 10, 1926. There were also present R. R. Crandall, Engineer and C. W. Shaw, Foreman

Casing Record 13" S.P. cemented at 788', only

The operations were performed for the purpose of testing the effectiveness of the mudding of the formations between 788' and 4230'.

and the data and conclusions are as follows:

MR. CRANDALL REPORTED THE FOLLOWING:
1. A 12" rotary hole was drilled from 788' to 4235'.
2. Mud fluid was circulated for 12 hr. prior to the test.
3. No record was kept of the loss of mud fluid prior to the test.
4. The drill pipe was hanging at 4230' during the test.

THE INSPECTOR NOTED THAT during a circulation test from 10:30 a.m. to 11 a.m. mud fluid was lost from the pit at the rate of 4 bbl. per hr.

THE MUDDING OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED.

Oral approval given to cement 8¼" casing at 4230' is hereby confirmed.

cc--J. R. Thomas
Long Beach

VA:D

R. D. BUSH,
State Oil and Gas Supervisor

By E. Huguenin Deputy

FORM 111. 39803 7-25 10M

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

Report on Proposed Operations

No. P -1-12459

Los Angeles, Cal. January 27, 1926

Mr. J. R. Thomas

Montebello, Cal.

Agent for CALIFORNIA PETROLEUM CORPORATION OF ~~XXXXX~~ Company CALIFORNIA

DEAR SIR:

Your proposal to drill Well No. "FIELDS" 18,

Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Oil Field, Los Angeles County,

dated Jan. 12, 1926, received Jan. 20, 1926, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:
"The well is 160' S. of N. prop. line and 660' E. from int. c/l Atlantic Ave. & Crest Drive. Dist. parallel and at right angles to c/l streets.
The elevation of the derrick floor above sea level is 92.00'.
We estimate that the first productive oil or gas sand should be encountered at a depth of about--------feet, more or less."

PROPOSAL:
"We propose to use the following strings of casing either cementing or landing them as here indicated:

Size of Casing	Weight	New or Second Hand	Depth	Landed or Cemented
13	S.P.	New	800	Cemented
8¼	36#	"	4270	"
6¼	26#	"	4560	Landed

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing."

RECOMMENDATION:
We estimate that the top of the oil zone should be encountered at a depth of about 4205' at this location.

THE PROPOSAL IS APPROVED WITH THE FOLLOWING RECOMMENDATIONS:
1. The exact top of the oil zone shall be located be careful coring below a depth of 4185'.
2. Effective mudding of the formations to be left back of the 8¼" casing shall be demonstrated by circulating mud fluid through the drill pipe hanging just off bottom after drilling and reaming to the cementing depth for this casing until the loss is not more than 5 bbl. per hr.

KINDLY NOTIFY THIS DEPARTMENT TO WITNESS:
1. Final mudding operations before cementing the 8¼" casing.
2. A bailing test of the 8¼" shut off.

cc--J. R. Thomas
Long Beach

R. D. BUSH,
State Oil and Gas Supervisor

By E. Ferguson Deputy

LWS:L

Form 105. 36617 1-25 10M

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

JAN 20 1926

Department of Petroleum and Gas
LOS ANGELES, CAL.

NOTICE OF INTENTION TO DRILL NEW WELL

037-11543

This notice must be given before drilling begins

TEXACO INC.

Montebello, Cal. Jan. 12, 1926

MR. E. Huguenin,

Deputy State Oil and Gas Supervisor

Los Angeles, Cal.

DEAR SIR:

"Field" 18

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of drilling well number Fields 18 Section 19 T. 4S R. 12W, S.B. B. & M., Long Beach Oil Field, Los Angeles County.

* The well is 160 feet ~~N.~~ or S. of N. prop. line and 660 feet E. ~~or W.~~ from Int. c/l Atlantic Ave. & Crest Drive,
(Give location in distance from section corners or other corners of legal subdivision)
Dist. parallel and at right angles to c/l streets.

The elevation of the derrick floor above sea level is 92.00 feet.

We propose to use the following strings of casing either cementing or landing them as here indicated:

Size of Casing, Inches	Weight, Lb. Per Foot	New or Second Hand	Depth	Landed or Cemented
13"	S.P.	New	800	Cemented
8¼"	36#	"	4270	"
6¼"	26#	"	4560	Landed

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing.

We estimate that the first productive oil or gas sand should be encountered at a depth of about ..... feet, more or less.

Respectfully yours,

Address .....

California Petroleum Corp. of Cal.
(Name of Company or Operator)

Telephone number .....

By J. R. Thomas
Engineer.

Address notice to Deputy State Oil and Gas Supervisor in charge of district where well is located

Reference to file of data

		Cross section	Cards	Forms 114	Forms 121
#20					
HMO. 1/20/26	HMO 1/21/26			✓	✓

+ Correy to HMO 1/21/26

OB HMO. 1/21/26

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF WELL PLUGGING AND ABANDONMENT

Cypress, California
May 4, 2007

Target Dept. Stores
c/o M.E. Wright
16531 Bolsa Chica St. #301
Huntington Beach, CA 92649

Your report of the plugging and **reabandonment** of well **Chevron U.S.A. Inc./"Field" 24**, A.P.I. No. **037-11549**, Section **19**, T. **4**S, R. **12**W, S.B. B & M., **Long Beach** Field, **Los Angeles** County, dated **02-21-07**, received **04-16-07**, has been examined in conjunction with operations witnessed and records filed in this office.

We have determined that all of the requirements of this Division have been fulfilled relative to plugging and **reabandonment** of the well, removal of well equipment and junk, and the filing of well records.

NOTE:

1. Surface plugging completed on **03-30-07**.
2. Surface inspection made and approved on **05-02-07**.

Hal Bopp
State Oil and Gas Supervisor

By: _____
For: R. K. Baker, *Deputy Supervisor*

INDIVIDUAL BOND

cc: Update
Los Angeles County Assessor
Los Angeles County Fire Prevention Bureau
Long Beach Department of Building & Planning
Department of Oil Properties
Chevron U.S.A. Inc.

KMC:dw

DIVIS OF OIL, GAS, AND GEOTHERMAL RE IRCES

CHECK LIST – RECORDS RECEIVED AND WELL STATUS

Company:	**Target Dept. Stores**	Well: **Chevron U.S.A. Inc./"Fields" 24**
API#:	**037-11549**	Sec. **19**, T. **4S**, R.**12W**. S. B. B. & M.
County:	**Los Angeles**	Field: **Long Beach**

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
History (Form OG103)	**4/18/07**
Core Record (Form OG101)	
Directional Survey	
Sidewall Samples	
Date final records received.	
Electric Logs:	
Other:	

STATUS			
Producing	☐	Drilling	☐
Abandoned	☐	Idle	☐
Reabandoned	☐	Other	☐

WELL TYPE			
Oil	☐	Waterflood	☐
Gas	☐	Water Disposal	☐
Water Source	☐	Cyclic Steam	☐
Observation	☐	Steam Flood	☐
Exploratory	☐	Fire Flood	☐
Dry Hole	☐	Other	☐

EFFECTIVE DATE:

REMARKS:

	ENGINEERS CHECK LIST
☐	Summary, History & Core Record (Dupl.)
☐	Electric Log
☐	Operator's Name
☐	Signature
☐	Well Designation
☐	Location
☐	Elevation
☐	Notices
☐	"T" Reports
☐	Casing Record
☐	Plugs
☐	Directional Survey
☐	Production/Injection (FAP Codes:)
☐	E Well on Prod., enter EDP
☐	Surface Inspection Required
☐	Surface inspection Waived (Island)
☐	Well site restoration deferred (common cellar)
☐	Final Letter Required AB: ☐ REAB: ☐
☐	Other:

CLERICAL CHECK LIST
Location change
Elevation change
Form OGD121
Form OGD150b (Release of Bond)
Duplicate logs to archives
Notice of Records Due
EDP
District Date Base
Final Letter (OG159)
Update Center
FIELD CHECK LIST
Date Surface Inspection Completed:
Other:

RECORDS NOT APPROVED	RECORDS APPROVED
(Reason:)	*(Signature)*
	RELEASE BOND
	Date Eligible
	(Use date last needed records received.)
	MAP AND MAP BOOK

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

Operator Target Dept. Stores. Field LONG BEACH County LOS ANGELES

Well Target-Chevron-Texaco "FIELDS" 24 Sec. 19 T. 4S R. 12 S.B. B.&M.

A.P.I. No. 037-11549 Name M. E. WRIGHT Title CONSULTANT
(Person submitting report) (President, Secretary, or Agent)

Date 2-21-07
(Month, day, year)

Signature M. E. Wright

Address 3350 - 6th St, CC 3425, Minneapolis, MN 55402 Telephone Number 612-204-0214

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment, with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, and initial production data.

Date 2007	
3-21	Hauled in and spotted mud pump, pipe trailer, drilling mat and BOPE on location. Moved in and spotted rig. RU mast. Sank marsh anchors and put out guy lines. Installed, nippled up and function tested BOPE. Set up working platform. Secured rig and well.
3-22	Drove to location. Serviced rig and equipment. RU and filled mud pump with mud. RU power swivel. Picked up one 3-1/2" drill collar and made up 4-3/4" bit on bottom. Started drilling on cement at surface. Unable to get bit past 5-1/2" csg stub at surface. Replaced 4-3/4" bit with 4-3/8" bit and continued trying to drill cmt, still couldn't get bit through 5-1/2" csg stub. Pulled bit and removed BOPE. Found lip on csg stub to be rolled over, restricting inside diameter of stub. Secured rig and well.
3-23	Drove to location. Serviced rig and equipment. Removed work floor and BOPE. Used chisels to chip out concrete from inside 5-1/2" csg stub down to about 1'. Used cutting torch to remove rolled over lip from top of csg stub. Re-installed BOPE and set up work floor. Picked up one 3-1/2" drill collar, made up 4-5/8" bit. Hooked up power swivel, mud pump and circulating equipment. Drilled out cmt plug from 0' to 50', cleaned out fill from 50' to 70'±. Continued running in hole with bit and two 3-1/2" drill collars, picking up 97 joints 2-7/8" tbg from trailer. Broke circulation with bit at 3060'. Circulated hole clean. Secured rig and well.
3-26	Drove to location. Serviced rig and equipment. Continued running in hole with 4-5/8" bit and two 3-1/2" drill collars, after hauling to location and picking up 23 joints 2-7/8" tbg, tagged TOC plug at 3662'. Hooked up mud pump. Broke circulation and circulated hole clean at 3662'. POOH. Laying down 117 joints 2-7/8" tbg, two 3-1/2" drill collars and 4-5/8" bit. Picked up and ran in hole with 117 joints 2-7/8" tbg with saw toothed collar on bottom. Secured rig and well.
3-27	Drove to location. Serviced rig and equipment. Continued running in hole with 2-7/8" saw tooth collar and tagged TOC plug at 3662'. RU Ausburn Cementers. Ausburn mixed, pumped and displaced 11 sx (13 cu. ft.) class "G" neat cement with 2% CaCl2. Pulled tubing up to 3300'± with calculated TOC at 3562'±. Cement in place at 9:12 AM. Waited on cement until 1:30 PM. Checked cement sample and found cement still too soft to tag. DOGGR A. B. Gorashi inspected BOPE Class 2. DOGGR A. B. Gorashi witnessed bottom plug, 13 cu. ft. Est. TOC at 3562'. Secured rig and well.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

3-28 Drove to location. Serviced rig and equipment. Ran in with 2-7/8" saw toothed collar and tagged TOC plug at 3600'. Pumped 46 bbls, 73# clay base mud to mud hole from 3600' to 1845'. POOH, laying down excess tbg. RU Tiger Wireline Service. Tiger made 1 run and shot eight ½" holes in 5-1/2" csg from 1845' to 1847'. RIH and hung tbg at 1850'. RU Ausburn Cementers. Mixed, pumped and displaced 49 sx "G" neat cmt. Pulled 10 stands, filled hole and shut well in. Squeezed away total of 22 cu. ft. at 600 # max and final shut in pressure. Calc TOC @ 1600'. Witness BFW SQZ @, 56 cu. ft.
DOGGR A. B. Gorashi witnessed cmt tag at 3600'. DOGGR E. Moser witnessed mudding from 3600' to 1845±.

3-29 Drove to location. Serviced rig and equipment. RIH with tbg and tagged TOC plug at 1591'. Hung tbg at 1588' and pumped 22 bbls, 73# clay based P & A mud to mud hole up to 730'. Pulled and LD 28 jnts excess tbg. RU Ausburn Cementers with bottom of tbg at 740'. Ausburn filled hole, shut well in and attempted to pressure test 5-1/2" csg to 600# psi, would not hold pressure. Bleeds off slowly, no low pressure checked. Ausburn mixed, pumped and displaced 16 sx (18 cu. ft) "G" neat cmt with 3% CaCl2, pulled tbg up to 430'. Calc TOC at 605'. CIP at 10:00 AM. Waited on cmt until 2:00 PM. Ran in and tagged at 680'. Hung btm of tbg at 678'. Mixed, pumped and displaced 10 sx "G" neat cmt. Pulled tbg up to 400'. Calc TOC at 596'. CIP at 2:27 PM. Secured rig and well.
DOGGR E. Moser witnessed cmt tag at 1,591, mudding from 1591 to 750, tag TOC @ 680. DOGGR E. Moser witnessed placement of cmt @ 680', est TOC 596.

3-30 Drove to location. Serviced rig and equipment. Ran in with 2-7/8" saw toothed collar and tagged TOC plug at 588' (calc TOC at 596'). Hung tbg at 586' and hooked up mud pump, pumped 20 bbls, 73# clay based P & A mud to fill 5-1/2" csg from 588' to surface. Pulled and LD remainder of tbg. Removed work floor and BOPE. RIH with tbg to 100'. Hooked up Ausburn Cementers. Ausburn mixed and pumped 21 sx "G" neat cmt (24 cu. ft). Pulled and LD tbg. Loaded out tools and equipment. Took down guy lines. Rigged down mast. Cleaned location and moved rig off.
DOGGR A. B. Gorashi witnessed port sleeve plug tag at 588'.
DOGGR A. B. Gorashi witnessed mudding (588' to surface), 14 bbls.

4-3 Drove to location. Backhoe dug down, removed cellar ring. Dug down around well csg. Cut csg 6' below grade. Got ready for gas test. Made location safe.
Gas test approved by DOG.

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST – RECORDS RECEIVED AND WELL STATUS

Company:	**Target Dept. Stores**	Well: **Chevron U.S.A. Inc./"Fields" 24**
API#:	**037-11549**	Sec. **19**, T. **4S**, R.**12W**. S. B. B. & M.
County:	**Los Angeles**	Field: **Long Beach**

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
History (Form OG103)	**4/16/07**
Core Record (Form OG101)	
Directional Survey	
Sidewall Samples	
Date final records received.	
Electric Logs:	
Other:	

STATUS

Producing	☐	Drilling	☐
Abandoned	☐	Idle	☐
Reabandoned	☒	Other	☐

WELL TYPE

Oil	☑	Waterflood	☐
Gas	☐	Water Disposal	☐
Water Source	☐	Cyclic Steam	☐
Observation	☐	Steam Flood	☐
Exploratory	☐	Fire Flood	☐
Dry Hole	☐	Other	☐

EFFECTIVE DATE: 3/30/07

REMARKS: Reabd

	ENGINEERS CHECK LIST
☑	Summary, History & Core Record (Dupl.)
☐	Electric Log
☑	Operator's Name
☑	Signature
☒	Well Designation
☐	Location
☐	Elevation
☒	Notices
☑	"T" Reports
☑	Casing Record
☒	Plugs
☐	Directional Survey
☐	Production/Injection (FAP Codes:)
☐	E Well on Prod., enter EDP
☒	Surface Inspection Required
☐	Surface inspection Waived (Island)
☐	Well site restoration deferred (common cellar)
☒	Final Letter Required AB: ☐ REAB: ☒ 5-4-07 DW
☐	Other:

CLERICAL CHECK LIST
Location change
Elevation change
Form OGD121
Form OGD150b (Release of Bond)
Duplicate logs to archives
Notice of Records Due
EDP 5.15.07 vm
District Date Base
Final Letter (OG159) 5/10/07 SL
Update Center 5.15.07 vm
FIELD CHECK LIST
Date Surface Inspection Completed: 5-2-07 GBR
Other:

RECORDS NOT APPROVED	RECORDS APPROVED
(Reason:)	*(Signature)* 4/07
	RELEASE BOND
	Date Eligible
	(Use date last needed records received.)
	MAP AND MAP BOOK
	N/C

Need sout insp

OGD2 5/16/01 CYPRESS

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

Operator Target Dept. Stores, Field LONG BEACH County LOS ANGELES
Well Target-Chevron-Texaco "FIELDS" 24 Sec. 19 T. 4S R. 12 S.B. B.&M.
A.P.I. No. 037-11549 Name M. E. WRIGHT Title CONSULTANT
(Person submitting report) (President, Secretary, or Agent)

Date 2-21-07
(Month, day, year)

Signature M. E. Wright

Address 3350 - 6th St, CC 3425, Minneapolis, MN 55402 Telephone Number 612-204-0214

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RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

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DOGGR A. ~~B. Gorashi witnessed cmt tag~~ E-MOSGR at 3600'. DOGGR E. Moser witnessed mudding from 3600' to 1845±.

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RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CONSTRUCTION SITE WELL INSPECTION

District Ref. No. _____

Field: Long Beach City/County Long Beach Sec. 19 T. 4S R. 12W S.BB.&M.

Location (major cross streets): Atlantic Ave and 33rd Street

Development representative: Mick Beyer Phone: (310) 505-9787

Describe the exact location of the excavation or well at the building site (from a reference point on a Division Map):

How the location was determined: Measured ☒ Surveyed ☐ Other ☐

Describe: _____

Well designation: "Field" 24 , API No. 03711549

Operator: Target Dept. Stores

SAFETY PRECAUTIONS AND UNSAFE EXCAVATIONS

CAUTION! Oil and gas wells may produce hydrogen sulfide gas, which is highly poisonous and will accumulate and concentrate in low areas such as excavations. Before entering an excavation area, test to ensure that there is sufficient oxygen and that the flammable/toxic gas readings are within safe limits.

INSPECTIONS	1	Initials Date	2	Initials Date	3	Initials Date	4	Initials Date
Excavation size	6'X6' 6' down	4/5/07 AB						
Picture No.								
Picture direction								
Metal detector (Y/N)	N							
Visible casing size(s) (or comment)	103/4" & 51/2"							
Fluid leaks (Y/N)*	N							
Amount (est.)								
Gas leaks (Y/N)*	N							
Amount (est.)								
Gas detector (N/Y)	Y							
Bubble test (Y/N)	Y							

*Leak location(s): N/A

Describe hazardous or damaged well condition(s): N/A

Report finalized by: AB Gorashi A., Division of Oil, Gas & Geothermal Res. Date: 4/5/07

Abdulm

OG190A (12/00/GSR1/1M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

No. T 107-0401

REPORT ON OPERATIONS

Cypress, California
April 18, 2007

Target Dept. Stores
C/O M.E. Wright
16531 Bolsa Chica St. #301
Huntington Beach, CA 92649

Your operations at well **Chevron U.S.A. Inc./"Field" 24,** A.P.I. No. **037-11549**, Sec. **19**, T. **4**S., R. **12**W, S.B. B. & M., **Long Beach** Field, **Los Angeles** County, were witnessed on **04-05-07**. **AB Gorashi**, representative of the supervisor, was present from **0830** to **1000**. There was also present **Mick Beyer**, Supervisor.

Present condition of well: **10 3/4" cem 20'; 5 1/2" cem 5050', cp 727' & 1845', perf 4242' WSO, perf 4255'-4300', @ int 4470'-4825'. Junk below 4100'. TD 5050'. Plugged w/cem 3892'-3864', 3730'-3600', 1845'-1591', 740'-588' & 100'-6'.**

The operations were performed for the purpose of witnessing the plugging operations in the process of reabandonment.

DECISION: APPROVED.

NOTE: The required Class II2M blowout prevention equipment was inspected and approved on **03-27-07**.

DEFICIENCIES: None.

CONTRACTOR: Allenco

Witness Inspection Approved 5-2-07 GB

KMC:dw

cc: Update
Chevron U.S.A. Inc.

Hal Bopp
State Oil and Gas Supervisor

By: _____
For: R. K. Baker, *Deputy Supervisor*

T107-0401

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CEMENTING/PLUGGING MEMO

Operator TARGET DEPT. STORES Well No. CHEVRON U.S.A. INC. / "FIELD" 24
API No. 037-11549 Sec. 19 T. 4S R. 12W , B&M
Field LONG BEACH , County LOS ANGELES. On 4/05/07 ,
Mr. / Ms. AB GORASHI A , representative of the supervisor, was present from 830 to 1000 .

There were also present MICK BEYER, SUPERVISOR

Casing record of well: 10 3/4" CEM 20'; 5-1/2" CEM 5050', CP 727' & 1845', perfs 4242' WSO, perf 4255'-4300', & int 4470'-4825'. Junk below 4100'. TD 5050. plugged w/CEM 3892'-3864', 3730'-3600', 1845'-1591', 746'-588', 100'-6'.

The operations were performed for the purpose of: REABANDON

☒ The plugging/cementing operations as witnessed and reported are approved.

☐ The location and hardness of the cement plug @ _____ ' are approved.

Hole size: _____ " fr. _____ ' to _____ ', _____ " to _____ ' & _____ " to _____ '

Casing				Cemented			Top of Fill		Squeezed Away	Final Pressure	Perforations
Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			
5 1/2	15.5#	0	5050	3/28/07	TD 1845	56 cf	1745	1614'	24 cf	400 psi	CP 1847-1845

Casing/tubing recovered: _____ " Shot/cut at _____ ', _____ ', _____ ', Pulled fr. _____ ';
_____ " Shot/cut at _____ ', _____ ', _____ ', Pulled fr. _____ '.

Junk (in hole):

Hole fluid (bailed to) at _____ '. Witnessed by _____

Mudding	Date	bbls	Displaced	Poured	Fill	Engineer
73#	3/28/07	46 BBLS	3600'		1845'	E-MOSER
73#	3/29/07	22 BBLS	1591'		750	E. MOSER
73#	3/30/07	14 BBLS	588'		SURFACE	AB. GORASHI

NOTE (K) #2M, 3/27/07 C/O DEPTH 3662'

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engineer	Depth	Wt/Sample	Date & Time	Engineer
3/27/07	13 cf	TD 3662	900	AB GORASHI	3600' 3562'	ATW	3/28/07 800	E. MOSER
3/28/07	56 cf	TD 1845	1400	AB GORASHI	1591' 1614'	ATW	3/29/07	E MOSER
3/29/07	18 cf	TD 740'	1400	E. MOSER	588' 596'	ATW	3/30/07 730	AB GORASHI
3/30/07	24 cf	TD 100'		RPT	6' 5'	VISUAL	4/5/07	AB GORASHI

API No. 037-11549 D...ON OF OIL, GAS, AND GEOTHERMAL RESOURCES T_____

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator TARGET DEPT. STORES Well CHEVRON U-S-A. INC / FIG 24 Sec. 19 T. 4S R. 12W

Field LONG BEACH County L-A Spud Date _____

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	3/27/07	AB GORASHI A.	(800 to 1100)		
2nd			(to)		

Contractor ALLENCO Rig# 5 Contractor's Rep. & Title CECIL GLENN, RIG SUPERVISOR

Casing record of well: MEMO

OPERATION: Testing (inspecting) the blowout prevention equipment and installation. Critical well? Y____ N____

DECISION: The blowout prevention equipment and its installation on the 10 3/4" casing are approved.

Proposed Well Opns: _____. MACP: _____ psi

Hole size: _____" fr. _____' to _____', _____" to _____' & _____" to _____'

REQUIRED BOPE CLASS: II 2M

CASING RECORD OF BOPE ANCHOR STRING

Size	Weight(s)	Grade(s)	Shoe at	CP at	Cement Details	Top of Cement: Casing	Top of Cement: Annulus
CD							

BOP STACK

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul
RD	27/8"	TOWNSON		9"	3000	
RD	CSO	TOWNSON		9"	3000	

TEST DATA

Gal. to Close	Recovery Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
0-68						
0-68						

TOTAL: 1.36

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure 1500 psi

Total Rated Pump Output _____ gpm Fluid Level OK

Distance From Well Bore _____ ft.

	Accum. Manufacturer	Capacity	Precharge
1	HAND PUMP	10 gal.	— psi
2		gal.	psi

	CONTROL STATIONS	Elec.	Hyd.	Pneu.
	Manifold at accumulator unit			
	Remote at Driller's station			
	Other: HAND PUMP		X	

	EMERG. BACKUP SYSTEM			Press.	Wkg. Fluid
X	N_2 Cylinders	1	L=51"	2600	5-5 gal.
	Other:	2	L= "		gal.
		3	L= "		gal.
		4	L= "		gal.
		5	L= "		gal.
		6	L= "		gal.
			TOTAL:		5-5 gal.

AUXILIARY EQUIPMENT

		No.	Size (in.)	Rated Press.	Connections: Weld	Connections: Flange	Connections: Thread	Test Press.
	Fill-up Line							
X	Kill Line		2"	3000				
X	Control Valve(s)	3		3000				
	Check Valve(s)							
	Aux. Pump Connect.							
	Choke Line							
	Control Valve(s)							
	Pressure Gauge							
	Adjustable Choke(s)							
	Bleed Line							
	Upper Kelly Cock							
	Lower Kelly Cock							
	Standpipe Valve							
	Standpipe Press. Gauge							
X	Pipe Safety Valve		2 7/8	3000				
	Internal Preventer							

	HOLE FLUID MONITORING EQUIPMENT	Alarm Type: Audible	Alarm Type: Visual	Class
	Calibrated Mud Pit			A
	Pit Level Indicator			B
	Pump Stroke Counter			B
	Pit Level Recorder			B
	Flow Sensor			C
	Mud Totalizer			C
	Calibrated Trip Tank			C
	Other:			C

Hole Fluid Type	Weight	Storage Pits (Type & Size)
WATER + MUD	9-24/GAL	100 BBLS

REMARKS AND DEFICIENCIES:

CONTRACTOR: ALLENCO

UNCORRECTABLE DEFICIENCIES:

DEFICIENCIES NOTED AND TO BE CORRECTED:

DEFICIENCIES NOTED AND CORRECTED:



RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

No. P 107-0114

412 (Field Code)

06 (Area Code)

-- (New Pool Code)

-- (Old Pool Code)

PERMIT TO CONDUCT WELL OPERATIONS

Target Dept. Stores
C/O M.E. Wright
16531 Bolsa Chica St. #301
Huntington Beach CA 92649

Cypress, California
February 22, 2007

Your proposal to **reabandon** well **Chevron U.S.A. Inc./"Field" 24**, A.P.I. No. **037-11549**, Section **19**, T. **4S**, R. **12W**, **S.B.** B. & M., **Long Beach** Field, **Old** area, **--** pool, **Los Angeles** County, dated **02/08/07**, received **02/08/07** has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment with hydraulic controls, equivalent to this Division's Class **II2M** requirements, or better, shall be installed and maintained in operating condition.
2. Well killing fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
3. At least **360'** of surface casing shall be cemented in the well, if the surface casing is not competent.
4. The well shall be plugged with cement from **730'** to **630'**.
5. All portions of the well not plugged with cement shall be filled with clay base mud having a minimum density of 72 lb/cu ft and a minimum gel-shear strength of 25 lb/100 sq ft.
6. This Division shall be consulted and a Supplementary Notice may be required before making any changes in the proposed program.
7. **THIS DIVISION SHALL BE NOTIFIED TO:**
   a. Inspect the installed blowout prevention equipment prior to commencing downhole operations.
   b. Witness the clean-out depth.
   c. Witness the mudding of the hole.
   d. Witness the placing, location and hardness of the cement plug from **3662'** to **3605'**.
   e. Witness the squeeze cementing of the **5 1/2"** casing through the **perforations** at **1845'**.
   f. Witness the placing, location and hardness of the cement plug from **1845'** to **1745'**, inside and outside the **5 1/2"** casing.
   g. Witness the placing, location and hardness of the cement plug from **730'** to **630'**.
   h. Witness the placing, location and hardness of the cement plug from **100'** to **5'**, inside and outside **all** casings.
   i. Inspect and approve the cleanup of the well site within 60 days after placement of the surface plug.

NOTE:

1. A crew drill may be required at the time of the blowout prevention equipment inspection.
2. This Division does not pass upon your right to enter the property, but merely approves the proposal as conforming to our requirements.
3. The proposed surface plug shall not contain rock or gravel.
4. The base of the freshwater sands is at **1845'±**.

KMC:kc
cc: Update
Chevron U.S.A. Inc.
INDIVIDUAL BOND

Engineer: Kenneth Carlson

Phone: 714/816-6847

Hal Bopp
State Oil and Gas Supervisor

By _____
For R. K. Baker, *Deputy Supervisor*

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended. OG 111

09/KC

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Notice of ~~Intention to~~ RE Abandon Well

R# 1070114

FOR DIVISION USE ONLY			
CARDS	BOND	FORMS OGD114	FORMS OGD121
		2/10/07 KG	2/9/07 KG

DIVISION OF OIL AND GAS

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to ~~abandon~~ RE abandon well TARGET-CHEVRON-TEXACO Chevron U.S.A. Inc. FIELDS "N" 24, API No. 037-11549

Sec. 19, T. 4S, R. 12W, SB B. & M., Long Beach Field, Los Angeles County.

commencing work on FEB 21, ~~19~~ 2007

The present condition of the well is:

1. Total depth 5050 (Plug 5045)
2. Complete casing record, including plugs and perforations (present hole) See Attached Diagram
3. Last produced Nov '46 3 — 3 (Date) (Oil, B/D) (Gas, Mcf/D) (Water, B/D)

or

4. Last injected (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure)

Additional data for dry hole (show depths):

5. Oil or gas shows
6. Stratigraphic markers
7. Formation and age at total depth
8. Base of fresh water sands 1750 (Dog, Map)

9. Is this a critical well according to the definition on the reverse side of this form? ☐ Yes ☒ No

The proposed work is as follows:

See attached program

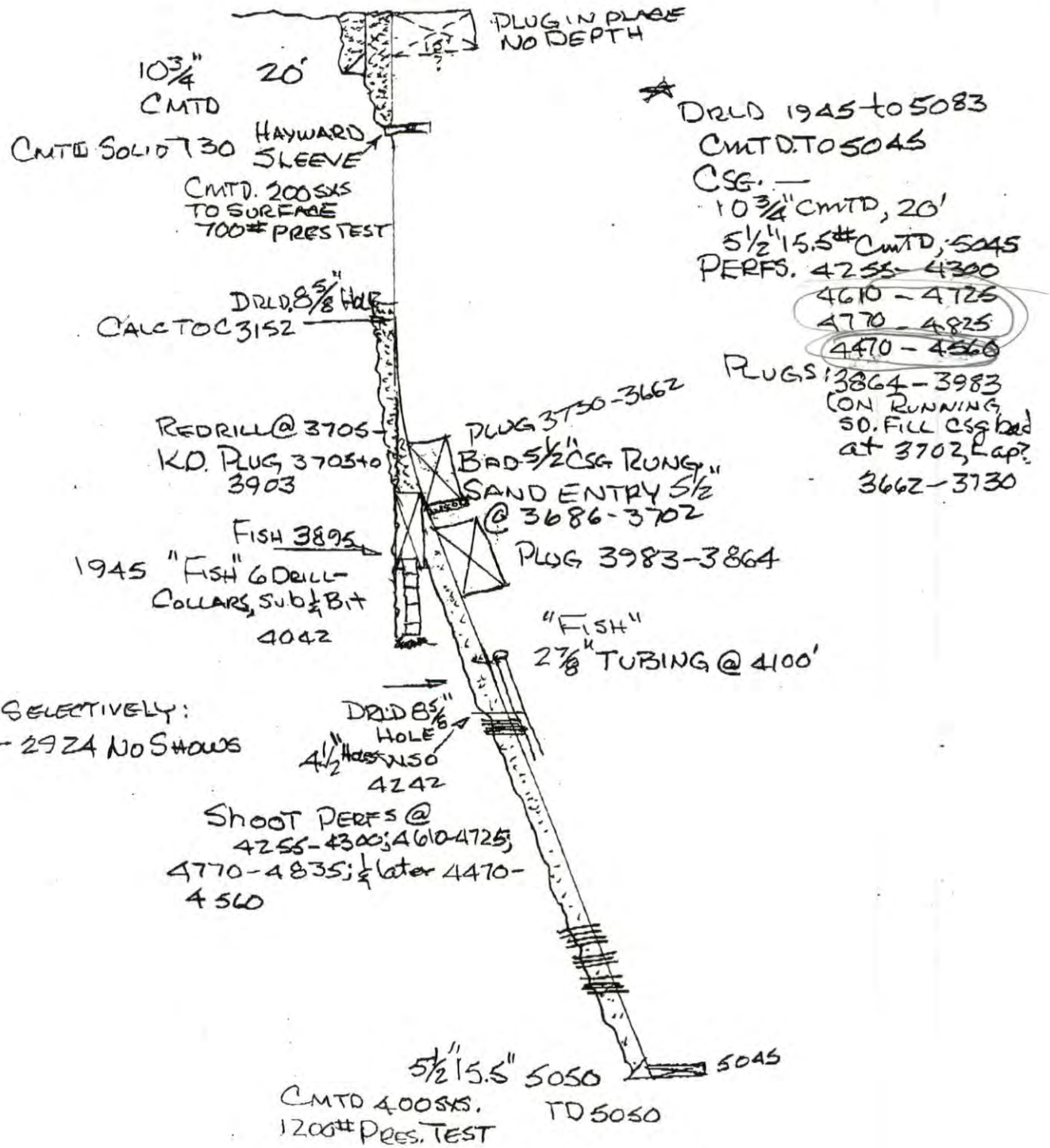
It is understood that if changes in this plan become necessary, we are to notify you immediately.

Address 33506th St. CC.3425 (Street)
Minneapolis MN 55402 (City) (State) (Zip)
Telephone Number (612) 304-0214 (Area Code) (Number)

TARGET DEPT STORES (Name of Operator)
By B. Ullery - M.E. WRIGHT (C.O. Below) (Print Name)
M.E. Wright (714) 3779234 2/08/07 (Signature) (Date)
C.O. 16531 Bolsa Chica St #301
HUNTINGTON BEACH CA 92649

OG108 (2/84/DWRR/5M)

TARGET - CHEVRON TEXACO
WELL DIAGRAM FIELDS 24
API # 037-11549



MEW 2-05-07

ABANDONMENT PROGRAM
CHEVRON-TEXACO "FIELDS" 24

API 037-11549 LONG BEACH FIELD -Sec 19 - T4S - R12W -

PROGRAM

1. MIRU - Install BOP equipment on the 5 1/2' csg. 20' long 10 3/4" is too short to support equipment.
2. Fill hole with water.
3. Drill out and clean out surface plug to 3662 raise plug too 3605. Can't drill out below, 5 1/2" casing bad 3686 and has running sand entry.
4. Shoot eight 1/2" holes at 1845, base of fresh water.
5. Squeeze cement 1845 to 1745. Tag TOC.
6. Fill hole with spec mud to 100 feet.
7. Cement surface plug 100 feet to surface. 5 1/2" is cemented from 730 to surface.
8. Gas test and weld on a ID plate.

MEW 2/08/07

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF PROPERTY AND WELL TRANSFER

Field or County	District
Imperial Co., Wilmington, L.A. Co., W. Coyote, Montebello, Beverly Hills, Seal Beach, El Segundo, Inglewood, Rosecrans, Venice Beach, Las Cienegas, S. Salt Lake, Dominguez, Hyperion, Lawndale, Leffingwell, Long Beach, Los Angeles Downtown, Potrero, Salt Lake, Santa Fe Springs, Cheviot Hills, Sherman, Torrance, Whittier, Howard Townsite, Huntington Beach, Yorba Linda, Orange Co., Richfield, Kraemer, W. Newport, Sunset Beach, Belmont Offshore	District 1 (Cypress, California)
Former owner: ChevronTexaco Exploration & Production Co. C5680	Date: 9/23/2005

Well Name	API Number	Section Township Range
See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA	See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA	See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA

Description of the land upon which the well (s) is (are) located.
Various

Date of transfer	New owner		Type of organization
7/11/2005		Chevron U.S.A. Inc. **C5640**	Corp.
	Address:	9525 Camino Media Bakersfield, CA 93311	Telephone: 661/654-7065

Reported by	OG30A received in Sacramento 9/2005
Confirmed by	Same as above
New operator new status: **PA**	Designation of Agent: Greg Leyendecker, Agent
Old operator new status: **AB**	Remarks: For further information see Operator file (C5640) Chevron U.S.A. Inc.

OPERATOR STATUS ABBREVIATIONS
PA – Producing Active
NPA- No potential, Active
PI- Potential Inactive
NPI-No potential, Inactive
AB-Abandoned or No More Wells

cc: Update; Envir Desk (2); File
Conservation Committee
Harold W. Bertholf, Inc.
L.A. & Orange County Assessors
WellStats – Cypress Dist. 1
WellStats – Sacrament HQS

Deputy Supervisor: R. K. Baker

Signature: Richard K. Baker, District Deputy

FORM AND RECORD CHECK LIST

Form or Record	Initials	Date	Form or Record	Initials	Date
Form OGD121	—	—	Map and Book		
Operator Card	CC	9-23-05	Notice cancellations	—	—
Well Records	CC	9/26/05	Bond Status BB	CC	9-23-05
Log Records	CC	9/26/05	EDP HQS	J.C	7-11-05
Production Reports	—	—	Data Base Pdoy D1	GM	9-26-05

WELL TRANSFER NOTICE

Effective August 22, 2002

Chevron USA Inc.
Texaco California Inc.
And
Texaco Exploration and Production, Inc.

Transferred ALL THEIR WELLS
To

ChevronTexaco Exploration & Production Company

See OGD156 dated October 18, 2002 in Operator File for ChevronTexaco Exploration & Production Company (C5680) for details

1015 West Olympic Blvd.,
Los Angeles 15, California,
May 27, 1947.

Mr. W. H. Loomis,
P. O. Box 320,
Long Beach 1, California.

Agent for The Texas Company.

Dear Sir:

Your report of abandonment of well No. "Field" 24, Sec. 19, T. 4 S., R. 12 W., S. B. B. & M., Long Beach oil field, Los Angeles County, dated May 20, 1947, and submitted to this division on our form No. 103, has been examined in conjunction with records filed in this office.

A review of the reports and records shows that the requirements of this division, which are based on all information filed with it, have been fulfilled.

Yours truly,

R. D. BUSH,
State Oil and Gas Supervisor,

By C H Wasser
Deputy Supervisor.

my
cc - Mr. R. D. Bush
- Long Beach
- Mr. W. A. Clark

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
20	5-28-47 P.W.B.		Blanket		✓

FORM 103. 36346 7-44 37,500
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAY 22 1947
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR THE TEXAS COMPANY FIELD Signal Hill

Well No. Field #24, Sec. 19, T. 4-S, R. 12-W, S.B. B. & M.

Signed

Date May 20, 1947 Title Division Engineer
(President, Secretary or Agent)

Use this form in reporting all important operations at the well, together with the dates thereof, in the order of their performance. Such operations include drilling, redrilling, deepening, plugging, or altering casing as by perforating, shooting, or pulling. Include in your report size of hole drilled, redrilled, or deepened; size, weight and length of casing landed, cemented, or removed, amount and location of perforations; number of sacks of cement used in cementing or plugging operations, number of feet of cement drilled out of casing, location of top and bottom of cement plugs. If the well was dynamited, give date, dimensions and weight of all shots. If tests were made give interval tested and results of tests, such as, amount and nature of fluids recovered.

Date	
1946	
10/30	Well sanded up. Tubing stuck. Bottom of tubing 4823'.
10/31	Could not work tubing loose.
11/ 1	Fishing rods with left hand rods. 73 rods out.
11/ 2	" " " " " " . 137 " "
11/ 3	" " " " " " . 142 " "
11/ 4	" " " " " " . 156 " "
11/ 5	Left one rod and pump in hole.
11/ 6	Cut tubing at 4763'. The bottom piece dropped, but could not pull tubing loose. McCullough Magna-Tector showed tubing stuck at 3800'.
11/ 8	Re-ran Magna-Tector. Found tubing stuck at 4025'. Relanded tubing. Ran pump and rods with an Ardmore anchor set at 4325'.
11/ 9	Pumped 8 barrels and pumped off.
11/10	Not producing.
	Idle.
11/16	Fished parted rods and lowered tubing to 4435'.
11/17	Pumped 9 barrels.
11/18	" 7 "
11/19	" 5 "
11/20	" 2 "
11/21	" 10 " . Off 10 hours, lowered pump to 4600'.
11/22	" 10 "
11/23	" 5 "
11/24	Pump sanded up. Could not work pump loose.
11/25	Recovered 112 rods with left hand rods.
11/26	Recovered 30 rods.
11/27	Recovered 4 rods for a total of 146. Left 4, 3/4" rods, pump and Ardmore anchor at 4600'.
	Idle.
12/16	Checked fluid level in tubing at 870'.
12/17	Bailed mud from 4418' to 4462'. Rod box up at 4462'.
12/18	Bailed mud.
12/23	Recovered rod box with left hand rods.
12/24	Could not recover rods.
12/26	Cut tubing at 4200'. Not loose.
12/27	Cut tubing at 4100'.
12/30	Bailed sand inside of tubing from 4002' to 4091'.

FORM 103. 54705 2-46 50M
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAY 22 1947
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR THE TEXAS COMPANY FIELD Signal Hill

Well No. Field #24, Sec. 19, T. 4-S, R. 12-W, S.B. B. & M.

Signed W. A. Clark

Date May 20, 1947 Title Division Engineer
(President, Secretary or Agent)

Use this form in reporting all important operations at the well, together with the dates thereof, in the order of their performance. Such operations include drilling, redrilling, deepening, plugging, or altering casing as by perforating, shooting, or pulling. Include in your report size of hole drilled, redrilled, or deepened; size, weight and length of casing landed, cemented, or removed, amount and location of perforations; number of sacks of cement used in cementing or plugging operations, number of feet of cement drilled out of casing, location of top and bottom of cement plugs. If the well was dynamited, give date, dimensions and weight of all shots. If tests were made give interval tested and results of tests, such as, amount and nature of fluids recovered.

Date	
1946	
12/31	Cleaned out inside of tubing at 4040'. After bailing for a time, the tubing could be pulled a short distance. Recovered 5 joints of tubing.
1947	
1/ 2	Cleaned out inside of tubing from 3715' to 3825'. Pulled out 15' of tubing.
1/ 3	Cleaned out inside of tubing and recovered a total of 4100' of tubing.
1/ 4	Checked fluid at 1425', top mud 3670' and top of sand 3736'. Cleaned out to 3820'.
1/ 6	Cleaned out to 3855'. Recovered mud and sand at 3815' and coarse sand at 3855'.
1/ 7	Cleaned out to 3870'. Coarse gravel at 3870'.
1/ 8	Cleaned out to 3878'.
	Idle.
4/30	Found fluid at 1180' and sand at 3690'. Cleaned out to 3715'.
5/ 1	Cleaned out to 3855'.
5/ 2	Cleaned out to 3885'.
5/ 3	Cleaned out to 3893'. Dumped 3-1/2 sacks of cement at 3893'. D.O.G. representative witnessed and approved location and hardness of plug at 3864'.
5/ 5	Dumped 9 sacks cement in stages starting at 3730'.
5/ 6	Dumped 1-1/2 sacks cement at 3674'. D.O.G. representative witnessed and approved location and hardness of plug at 3662'. Set wood plug at 32' and dumped 3 sacks cement. Top of plug 6 feet below surface. Abandoned well.

RFC:tg

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

DIVISION OF OIL AND GAS
RECEIVED
MAY 17 1947
LOS ANGELES, CALIFORNIA

No. T_____

_____ Calif. _____ 19____

Mr._____

_____ Calif.

Agent for The Texas Company

DEAR SIR:

Operations at your well No. "Field" 29 Sec. 19, T. 4S, R. 12W, S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by A. Pfeil - Inspector, representative of the supervisor, on May 13, 1947. There was also present _____

Casing Record	Junk
Nema.	

The operations were performed for the purpose of _____

The inspector arrived at the well at _____ and Mr. _____ reported:

1. The 5½" casing is plugged with cement at the surface.
2. There is no evidence of Oil or gas escaping at the surface.

R. D. BUSH
State Oil and Gas Supervisor

By _____ Deputy

43395 3-45 15M
STATE PRINTING OFFICE

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-46720

Los Angeles 15, Calif. May 13, 1947

Mr. W. H. Loomis
Long Beach 1, Calif.
Agent for THE TEXAS COMPANY

171

DEAR SIR:

Operations at your well No. "Field" 24 Sec. 19, T. 4 S., R. 12W, S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by John M. Carls, Inspector, representative of the supervisor, on May 6, 1947. There was also present J. R. Flum, Driller; C. C. Jackson, Helper.

Casing Record 10-3/4" cem. 20'; 5-1/2" cem. 5050', c.p. 730', four test holes at 4242', W. S. O., perf. 4835'-4770', 4725'-4610', 4300'-4255', bad at 3686'-3702'. Junk (in hole) 2-1/2" tubing, 4100'-4763'. T. D. (present hole) 5047', plugged with cement 3893'-3864' and 3730'-3662'.

Junk (1st hole) drill collar and bit, 3792'-3939'; T. D. 3939', plugged with cement 3939'-3792'.

The operations were performed for the purpose of testing the location and hardness of a cement plug placed from 3730' to 3662' in the process of abandonment.

The inspector arrived at the well at 10:45 a.m. and Mr. Flum reported:
On May 5, 1947, 10-1/2 sacks of cement was dumped in the hole on a wooden plug at 3730'.

THE INSPECTOR NOTED THAT the bailer could not be spudded below 3662' and brought up a sample of set cement.

The test was completed at 11:15 a.m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 3663' ARE APPROVED.

JMC:OH

cc- Company
Long Beach

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Musser Deputy

59352 6-46 15M
STATE PRINTING OFFICE

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T1-46719

Los Angeles 15, Calif. May 13, 1947

Mr. W. H. Loomis
Long Beach 1, Calif.
Agent for THE TEXAS COMPANY

DEAR SIR:

Operations at your well No. "Field" 24 Sec. 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by John M. Carls, Inspector, representative of the supervisor, on May 5, 1947. There was also present J. R. Flum, Driller; C. C. Jackson, Helper.

Casing Record 10-3/4" cem. 20'; 5-1/2" cem. 5050', c.p. 730', four test holes at 4242', W. S. O., perf. 4835'-4770', 4725'-4610', 4300'-4255', bad 3686'-3702'; Junk (in hole) 2-1/2" tubing 4100'-4763'; T. D. (present hole) 5047', plugged with cement 3893'-3864'.

Junk(1st hole) drill collar and bit, 3792'-3939'; T. D. 3939', plugged with cement 3939'-3792'.

The operations were performed for the purpose of testing the location and hardness of a cement plug placed from 3893' to 3864' in the process of abandonment.

The inspector arrived at the well at 2:30 p.m. and Mr. Flum reported:

1. The hole could not be cleaned out below 3893'.
2. On May 5, 1947, 3-1/2 sacks of cement was dumped in the hole at 3893'.

THE INSPECTOR NOTED THAT the bailer could not be spudded below 3864' and brought up a sample of set cement.

The test was completed at 3:15 p.m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 3864' ARE APPROVED.

JMC:OH

cc- Company
Long Beach

B/W

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Meesen Deputy

59352 6-46 15M
STATE PRINTING OFFICE

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-43026

Los Angeles 14, Calif. February 7, 1947

Mr. W. H. Loomis

Long Beach 1, Calif.

Agent for THE TEXAS COMPANY

Dear Sir:

Your proposal to abandon Well No. "Field" 24,

Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, Los Angeles County,

dated Jan. 30, 1947, received Feb. 5, 1947, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS IN ADDITION TO, OR AT VARIANCE WITH, THOSE SHOWN IN THE NOTICE:

Junk (1st hole) drill collar and bit 3792'-3939', T. D. 3939', plugged with cement 3939'-3792'.

THE NOTICE STATES:

"The present condition of the well is as follows:

1. Complete casing record.

5-1/2", 15.5# - 5050' cmt'd. w/400 sacks, CTP at 730' w/200 sacks. W. S. O. on 4, 1/2" holes at 4242'. Gun perforated 4835'-4770', 4725'-4610', 4300'-4255'. 2-1/2" tubing stuck at 4823', cut at 4763' and bottom piece dropped approximately 30' with tubing still stuck. Cut at 4200'- not loose. Cut and recovered from 4100'. Top sand in 5-1/2" casing found at 3736'. Cleaned out to 3878'; casing bad and sand running in at 3686' to 3702'.

October 1946 Ave. : 27 B/D, 18° gravity oil with 27 B/D water.

November 1946 Ave.: 3 B/D oil, 3 B/D water."

PROPOSAL:

"PROPOSED WORK:

1. Clean out below bad place in 5-1/2" casing at 3686'-3702' by running fluid in hole to hold back sand, if possible.
2. Place 20' cement bridge in solid blank casing below bad place and continue plug up above 3666'.
3. Cap surface and abandon well."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT

1. If possible the hole should be cleaned out to 4100' and a 20' cement plug placed on the stub of the junk tubing.
2. THIS DIVISION SHALL BE NOTIFIED AS FOLLOWS:
   (a) To witness the location and hardness of cement plugs at 4080' and 3666'.
   (b) To inspect the completed surface cap or plug.

Hist. of abnd. 5/22/47 SHR

SHR:OH

cc- Company
Long Beach

R. D. BUSH
State Oil and Gas Supervisor

By H. Mueller Deputy

Blanket bond.

FORM 108. 20296 1-43 5M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
FEB 5 1947
LOS ANGELES, CALIFORNIA

Notice of Intention to Abandon Well

This notice must be given at least five days before work is to begin

Long Beach, Calif. January 30, 1 19 47

DIVISION OF OIL AND GAS

Los Angeles 14, Calif.

In compliance with Sec. 3228, 3229, 3230, 3231 and 3232, Ch. 93, Stat. 1939, notice is hereby given that it is our intention to abandon well No. Field #24

Sec. 19, T. 4-S, R. 12-W, S.B. B. & M. Long Beach Field, Los Angeles County, commencing work on the day of 19.

The present condition of the well is as follows:

1. Complete casing record.

5-1/2", 15.5# - 5050' cmt'd. w/400 sacks, CTP at 730' w/200 sacks. W.S.O. on 4, 1/2" holes at 4242'. Gun perforated 4835'-4770', 4725'-4610', 4300'-4255'. 2-1/2" tubing stuck at 4823', cut at 4763' and bottom piece dropped approximately 30' with tubing still stuck. Cut at 4200' - not loose. Cut and recovered from 4100'. Top sand in 5-1/2" casing found at 3736'. Cleaned out to 3878'; casing bad and sand running in at 3686' to 3702'.

2. Last produced.

Date	Net oil	Gravity	Cut
October 1946 Ave. :	27 B/D, 18° gravity oil with 27 B/D water.		
November 1946 Ave.:	3 B/D oil, 3 B/D water.		

~~The proposed work is as follows:~~

PROPOSED WORK:

1. Clean out below bad place in 5-1/2" casing at 3686'-3702' by running fluid in hole to hold back sand, if possible.
2. Place 20' cement bridge in solid blank casing below bad place and continue plug up above 3666'.
3. Cap surface and abandon well.

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
		Cmt	Blanket	Cmt	Cmt

HOW:tg

abandon

THE TEXAS COMPANY
(Name of Operator)

By H. O. Woodruff
District Engineer

ADDRESS NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

STENOGRAPHER

Forms Filed 100-101-103-elec. log

Date Rec'd. 9-28-45

Electric Log 25-5048 (1)

Location ✓

Elevation ✓

ENGINEER

Form Needed —

Map Correction producing

Form 150b (Date of Release)

At Request of Operator Blankut

Because Abandoned

Because Request by Oper.

Remarks log last core record

elec log (1)

ERma

SUBMIT LOG IN DUPLICATE

FILL IN BLANK IN WITH TYPEWRITER. WRITE ON ONE SIDE OF P ONLY

STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
SEP 28 1945
LOS ANGELES, CALIFORNIA

WELL SUMMARY REPORT

Operator The Texas Company Field Long Beach

Well No. Field #24 Sec. 19, T. 4S, R. 12W, S.B. B. & M.

Location 370' Sly. on C/L California Ave. from C/L 33rd St. thence Wly. 260' at 90° Elevation of derrick floor / ground above sea level KB 96.52 Floor 93.42 Mat 86.94 feet.

In compliance with the provisions of Chapter 93, Statutes of 1939, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date 9-17-45 Signed W. A. Clark
W. A. Clark

H. O. Woodruff (Engineer or Geologist) W. H. Loomis (Superintendent) Title Division Engineer (President, Secretary or Agent)

Commenced drilling 8-19-44 Completed drilling 9-28-44 Drilling tools Cable / Rotary

Total depth 5050 Plugged depth 5045

Junk Bit, and 6 drill collars from 3895 to 4042 in sidetracked hole.

GEOLOGICAL MARKERS	DEPTH
Top Brown Zone	4252

Commenced producing October 1, 1944 (date) Flowing / gas lift / pumping (cross out unnecessary words)

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	30	17.1	66%	-	-	-
Production after 30 days	36	17.1	34.0%			

Casing Record (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Casing landed in	Number of Sacks of Cement	Depth of Cementing if through perforations
5½	5050	0	15.5	New	Smles.	J-55 cmt'd thru Hayward sleeve at 730 ft B with 200.	6-5/8	400	

Perforations

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
5½	4255 ft.	4300 ft.	½" holes		6"	Gun perforations
	4610 ft.	4725 ft.				
	4770 ft.	4835 ft.				
	ft.	ft.				
	ft.	ft.				

MAP | MAP BOOK | CARDS | BOND | FORMS 114 121

Electrical Log Depths 25 - 5048 (Attach Copy of Log)

DIVISION OF OIL AND GAS
RECEIVED
SEP 28 1945
LOS ANGELES, CALIFORNIA

The Texas Company — Long Beach

Field #24 — 19 — 4S — 12W — S.B.

W. A. Clark

W. A. Clark
Division Engineer

9-17-45

1944

8-19 Spudded in at 5:00 P.M., drilling an 8-5/8" hole.

8-21 Drilled an 8-5/8" hole to 2527 and started coring in an 8-5/8" hole.

8-27 Cored in 8-5/8" hole to 2924 and drilled ahead in 8-5/8" hole.

8-30 Drilled an 8-5/8" hole to 4042. Pulled out kelly and one stand pipe, then drill pipe backed off while rotating. Dropped 36 stands, 6 drill collars and bit. Top of fish 664. Recovered 5 stands of drill pipe leaving top of fish at 1123.

8-31 Took hold of fish, established circulation and spotted oil. Could not jar fish loose. Backed off leaving sub on top of fish. Ran socket on left hand drill pipe. Backed off drill pipe at top of drill collars, leaving bit, 6 drill collars and sub in hole. Top of fish 3895.

9-1 Took hold of drill collars with socket but could not jar fish loose. Reamed hole.

9-2 Reamed to top of fish. Washed over fish to 3897.

9-3 Washed over fish to 3945.

9-4 Repaired equipment.

9-5 Washed over fish to 3967.

9-6 Washed over fish to 3946.

9-7 Washed over fish to 4042.

9-8 Took hold of fish with socket. Could not jar fish loose. Washed over fish to 4042.

9-9 Could not jar fish loose. Could not drill by top of fish.

9-10 Could not drill by fish. Washed over fish to 3903.

DIVISION OF OIL AND GAS
RECEIVED
SEP 28 1945
LOS ANGELES, CALIFORNIA

The Texas Company
Field #24

Long Beach
19 4S 12W S.B.

9-11 Could not wash over fish below 3903. Ran Halliburton hole caliper log. Pumped in 75 sacks of Victor construction cement through drill pipe hung at 3891. Displaced cement with 150 cu. ft. of mud and pulled out. M.T. 6 min., D.T. 3 min.

9-12 Drilled out cement from 3655 to 3705.

9-13 Reamed hole and conditioned mud. Whipstock would not go to bottom.

9-14 Ran removable whipstock and started redrilling at 3705.

9-23 Drilled and 8-5/8" hole to 5050 and ran Schlumberger electric log. Ran and cemented 113 joints, 5083.83' of 5½", 15.5#, J-55, seamless, 8 round thread, new, National Tube Co. casing at 5050 K.B. Used Baker guide shoe on bottom and Baker float collar one joint, 41.69', up. Hayward collar at 730'. Used 3 B & W scratchers at each of the following points: 5040, 4830, 4748, 4619, 4533, 4494, 4316 and 4273. Cemented shoe with 400 sacks of Victor construction cement using one top plug. Bumped plug at 1200# final pressure. M.T. 47 min., D.T. 18 min., T.T. 1 hr. 12 min. Cemented Hayward sleeve at 730' K.B. with 200 sacks of Victor construction cement. M.T. 17 min., D.T. 3 min., T.T. 22 min. ave. Slurry Wt. 118#/cu.ft. Closed Hayward sleeve and tested at 700# pressure for 10 minutes without loss. Surface cementing operations were witnessed and approved by a D.O.G. representative.

9-24 Landed casing and laid down drill pipe.

9-25 Drilled out cement from 667 to 733.

9-26 Drilled out cement from 5005 to 5045. Perforated 4½" holes at 4242' K.B. using a McCullough gun. Ran Halliburton tester on 2-7/8" O.D. tubing with packer set at 4220 with tailpipe extending to 4240. Tailpipe included 2 pressure bombs, 5' perforated and 3/8" choke. Used no cushion. Valve open at 1:20 P.M., closed valve at 1:51 P.M. Valve open 31 min. Had a good puff then dead. Recovered 27' of medium drilling fluid. Both bombs showed testor open. D.O.G. representative witnessed and approved water shut off. Changed mud to oil.

9-27 Perforated 4255-4300, 4610-4725, 4770-4835 with 450 ½" holes, using a McCullough gun.

9-28 Hung 2-7/8" O.D. tubing at 4239.

9-29 Moved out drilling equipment.

9-30 Moved out drilling equipment.

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The Texas Company
Field #24

Long Beach
19 4S 12W S.B.

10-1 30 Bbls. net, 66% LLCut
25 " " 36% "
28 " " 28% "
33 " " 16% "
22 " " 30% "
25 " " 30% "
18 " " 46% "
32 " " 24% "
39 " " 9.6% "

12-29 Pulled rods and tubing. Lane Wells Gun perforated the 5½" casing 4470-4560 with 180 - ½" holes, 6" centers. Stuck gun at 4465'.

12-30 Ran Bowen socket and fished for perforating gun.

12-31 Recovered gun.

1945

1-1 Cleaned out to 5036.

1-2 Landed 2⅛" tubing at 4450'.

1-3 53 Bbls. net, 32% cut

1-4 31 " " 56% "

1-5 31 " " 48% "

1-6 25 " " 57% "

1-7 36 " " 34% "

1-8 20 " " 57% "

1-9 16 " " 71% "

Produced 873 barrels net oil during 30 days in January 1945 for an average of 29 B/D net, 15.9° gravity, 47.7% cut.

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121

FORM 101
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
SEP 28 1945
LOS ANGELES, CALIFORNIA

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator The Texas Company Field Long Beach

Well No. Field #24 Sec. 19, T. 4S, R. 12W, S.B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
0	391		Drilled		Surface conglomerate
391	2527		"		Sand and shale
2527	2547		Core #1	12'	½' Soft black organic shale 1' Soft coarse gray sand 2½' Soft black sandy organic shale 8' Soft coarse gray sand becoming silty toward bottom.
2547	2567		Core #2	5'	1/6' Soft silty gray sand 1/6' Hard sandstone shell 1/6' Soft sandy black organic shale 2½' Soft mushy coarse gray sand.
2567	2587		Core #3	6'	Soft silty gray sand.
2587	2607		Core #4	14'	1' Soft coarse gray sand 1' Soft black organic shale 3' Soft coarse gray sand 4' Soft black organic shale 1' Soft coarse gray sand 2' Soft black organic shale 2' Soft coarse gray sand
2607	2627		Core #5	0	No recovery.
2627	2647		Core #6	3½'	½' Medium hard, dark gray sandy shale 3' Fine soft gray sand.
2647	2667		Core #7	12'	6' Medium hard, dark gray shale. Forams No dips 2' Fine, loose, soft, gray sand ½' Medium hard dark gray shale 3' Fine, loose, soft, gray sand. Increasingly silty to bottom. ½' Very sandy, soft, dark gray shale
2667	2687		Core #8	18'	Medium hard sand, micaceous medium gray shale. Forams.

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SEP 28 1945

The Texas Company
Field #24

Long Beach LOS ANGELES, CALIFORNIA
19 4S 12W S.B.

2687	2703	Core #9	3'	Soft, fine, loose, gray sand.
2703	2723	Core #10	18'	Soft, coarse, loose, gray sand. Silty in parts.
2723	2744	Core #11	12'	Soft, coarse, loose, gray sand.
2744	2765	Core #12	12'	3½' Coarse, mushy, gray sand . ½' Soft, dark gray, sandy shale. 3½' Coarse, mushy, gray sand. 4½' Soft, gray, sandy, micaceous shale.
2765	2786	Core #13	14'	3' Soft, very sandy, dark gray, micaceous shale. Forams Wafery. Dips ∔ 20°. 4' Soft black, micaceous shale with good partings. Forams. 1' Soft, interbedded black shale and gray sand. 2' Medium to soft, micaceous shale with partings. Forams. 4' Soft, silty, gray sand.
2786	2803	Core #14	12'	Hard, massive, micaceous, sandy shale with a few irregular enclosures of gray sand. No dips.
2803	2823	Core #15	18'	½' Massive, dark gray, sandy, micaceous shale 1' Medium grained soft gray sand. 9½' Massive, soft, sandy micaceous dark gray shale with irregular inclusions of coarse gray sand on bottom. 1' Coarse, soft, gray sand. ½' Massive shale as above. 5½' Coarse, soft, gray sand.
2823	2844	Core #16	13'	Medium hard, massive, sandy, micaceous gray shale. Forams. No dips.
2844	2864	Core #17	13'	5' Shale as above. 4' Coarse, soft, gray sand. 1½' Shale as above. ¼' Coarse, soft, gray sand. 1' Shale as above. 1¼' Coarse, soft, gray sand.
2864	2885	Core #18	12'	4' Massive, dark gray, micaceous shale. Forams. Very sandy. 1' Fine, loose, gray sand. 1' Shale as above. 2' Gray sand and shale. Crushed in core bbl. 1' Massive, hard, dark gray, micaceous shale. Forams. 1½' Fine, loose, gray sand. 1½' Massive, sandy, dark gray, micaceous shale. Forams.

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SEP 28 1945
LOS ANGELES, CALIFORNIA

The Texas Company
Field #24

Long Beach
19 4S 12W S.B.

2885	2906	Core #19	8'	1' Fine, loose, gray sand. 2' Very sandy, medium hard, gray shale. 1½' Medium mushy, gray sand. 1½' Sandy, gray shale with irregular inclusions of fine gray sand. 2' Coarse, loose, gray sand.
2906	2924	Core #20	12'	Hard, light gray, massive, sandy, micaceous shale. Forams.
2924	5050	Drilled		Sand and shale.

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121

DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

No. 782

La Calif. 10-23 1944

The Texas Co.
Name of Operator

Address

This is to acknowledge the receipt of logs and similar records of wells on Sec. 19 T. 4S R. 12W, SB B. & M., *as herewith enumerated by well numbers.*

Logs Field 24 Long Beach

History

Core record

Subsequent work electric log 9-23-44

R. D. BUSH, *State Oil and Gas Supervisor*

FORM 127
36195 7-44 3500 TRIP SPO

By E. B. Spencer *Deputy*

FORM 109-A

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off
(FORMATION TESTER)

No. T 1-43277

Los Angeles 14, Calif. October 9, 1944

Mr. W. H. Loomis
Long Beach 1, Calif.
Agent for THE TEXAS COMPANY

DEAR SIR:

Your well No. "Field" 24, Sec. 19, T. 4 S., R. 12 W., S. B. B. & M. Long Beach Field, in Los Angeles County, was tested for water shut-off on September 26, 1944. Mr. Chas. Corwin, Inspector, designated by the supervisor, was present as prescribed in Sec. 3222 and 3223, Ch. 93, Stat. 1939; there were also present R. F. Cory, Engineer, and R. D. Crum, Driller.

Shut-off data: 5-1/2 in. 15.5 lb. casing was cemented at 5047 ft. on September 24, 1944 in 8-5/8" hole with 400 sacks of cement of which 5 sacks was left in casing. Casing record of well: 10-3/4" cem. 20'; 5-1/2" cem. 5047', c.p. 727', perf. 4 test holes at 4242', W.S.O. Junk (1st hole) drill collar and bit 3792'-3939'. T.D. 3939', plugged with cement 3939'-3792'.

Reported total depth present hole 5047 ft. Bridged with cement from 5047 ft. to 5042 ft. Cleaned out to 5042 ft. for this test. A pressure of xxx lb. was applied to the inside of casing for xxx min. without loss after cleaning out to xxx ft. A Halliburton tester was run into the hole on 2-1/2 in. drill pipe, with xxx ft. of water cushion, and packer set at 4220 ft. with tailpiece to 4240 ft. Tester valve, with 3/8" bean, was opened at 1:20 p.m. and remained open for xxx hr. and 30 min. During this interval there was an initial puff and no blow for the balance of the test.

THE INSPECTOR ARRIVED AT THE WELL AT 3:00 P.M. AND MR. CORY REPORTED:

1. The 5-1/2" casing was perforated with four, 1/2" holes at 4242'.
2. A Halliburton tester was run into the hole as noted above.

THE INSPECTOR NOTED:

1. When the drill pipe was removed 27' of medium drilling fluid was found in the drill pipe above the tester, equivalent to 0.2 bbl.
2. The recording pressure bomb chart showed that the tester valve was open 30 minutes.

The test was completed at 3:40 p.m.

THE SHUT-OFF ABOVE 4242' IS APPROVED.

CC:OK

cc- Company
Long Beach

W/L

R. D. BUSH, State Oil and Gas Supervisor

By E. H. Musser, Deputy

36194 7-44 7500
STATE PRINTING OFFICE

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-43258

Los Angeles 14, Calif. October 2, 1944

Mr. W. H. Loomis
Long Beach 1, Calif.
Agent for THE TEXAS COMPANY

DEAR SIR:

Operations at your well No. "Field" 24 Sec. 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by A. Pfeil, Inspector, representative of the supervisor, on September 23, 1944. There was also present D. M. Smith, Engineer, and M. M. French, Drilling Foreman.

Casing Record 10-3/4" cem. 20'; 5-1/2" cem. 5047', c.p. 727'; T.D. 5047'.

Junk (1st hole) drill collar and bit 3792'-3939'; T.D. 3939', plugged with cement 3939'-3792'.

The operations were performed for the purpose of demonstrating that the known surface waters are adequately protected.

The inspector arrived at the well at 9:10 p.m and Mr. Smith reported:

1. An 8-5/8" rotary hole was drilled from 20' to 5047'.
2. Electrical core readings showed the top of the Brown zone 4252'.
3. On September 24, 1944, the 5-1/2", 15.5 lb. casing with a Hayward collar at 727', was cemented with 400 sacks of cement.

THE INSPECTOR NOTED:

1. The 5-1/2" casing was cemented through ports at 727' with 200 sacks of cement.
2. The cement was displaced from the casing with 98 cubic feet of drilling fluid.
3. The final pressure was 200 lb.
4. After closing the cementing ports, a pressure of 700 lb. was applied and held for 10 minutes without loss.

The cementing operations were completed at 11:30 p.m.

THE CEMENTING OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED AS INDICATING THAT THE KNOWN SURFACE WATERS ARE ADEQUATELY PROTECTED.

AP:OH

cc- Company
Long Beach

R/C 213

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Wiesser Deputy

28381 10-43 15M
STATE PRINTING OFFICE

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-39926

Los Angeles 14, Calif. August 17, 1944

MR. W. H. Loomis

Long Beach 1, Calif.

121

Agent for THE TEXAS COMPANY

DEAR SIR:

Your proposal to drill Well No. "Field" 24,

Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, Los Angeles County,

dated Aug. 10, 1944, received Aug. 14, 1944, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:

"The well is 370' S. along ℄ Calif. Ave. from ℄ 33rd St. and 260' W'ly at 90°
The elevation of the derrick floor / ground above sea level is * feet.
We estimate that the first productive oil or gas sand should be encountered at a depth of about 4250 feet."

* See Form 100

PROPOSAL:

"We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing	Weight	Grade and Type	Depth	Landed or Cemented
5-1/2"	15.5	J-55 Seamless cmtd. through Hayward collar	5050 700	Cmtd. w/400 w/200

Well is to be drilled with rotary tools.
It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Mud fluid consistent with good drilling practice shall be used and the column of mud fluid maintained at all times to the surface, particularly while pulling the drill pipe.
2. Any hole to be sidetracked in any oil zone shall be filled with cement, if possible.
3. This division shall be consulted before running the 5-1/2" casing.
4. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   (a) The cementing of the 5-1/2" casing through the upper ports. Any subsequent testing required will be specified at that time.
   (b) A test of the effectiveness of the 5-1/2" shut-off through holes opposite the Brown zone shale.

ERMA:OH

cc- P. A. W.
Company
Long Beach

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Musser Deputy
EHB

Blanket bond No. 130253-C

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL & GAS
RECEIVED
AUG 14 1944
LOS ANGELES, CALIFORNIA

Notice of Intention to Drill New Well

This notice must be given and surety bond filed before drilling begins

037-11549

TEXACO INC.

Long Beach 1, Calif. August 10, 1944

DIVISION OF OIL AND GAS

Los Angeles 14, Calif.

"Field "24

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of drilling well No. "Field" #24, Sec. 19, T. 4-S, R. 12-W, S.B. B. & M., Long Beach Field, Los Angeles County.

Lease consists of

The well is 370' S. along ℄ Calif. Ave. from ℄ 33rd St. and 260' W'ly at 90° feet N. or S., and feet E. or W. from

(Give location in distance from section corners or other corners of legal subdivision)

The elevation of the derrick floor / ground above sea level is * 96.52 feet. * see form 100

We estimate that the first productive oil or gas sand should be encountered at a depth of about 4250 feet.

We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing, Inches	Weight, Lb. Per Foot	Grade and Type	Depth	Landed or Cemented
5-1/2"	15.5	J-55 Seamless	5050	Cmtd. w/400
		cmtd. through Hayward collar	700	w/200

Well is to be drilled with rotary ~~xxxxx~~ tools.

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing.

Address Box 320, Long Beach 1, Calif. THE TEXAS COMPANY
(Name of Operator)

Telephone number 416-21 By H. O. Woodruff
District Engineer

ADDRESS NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

PAW

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
20					
Aug 14 1944 G.L.	8-14-44 G.L.	Ents	Blanket 130253-C	Ents	Ents

Phase II Environmental Site Assessment

MEARNS CONSULTING LLC
ENVIRONMENTAL CONSULTANTS
RISK ASSESSORS

738 Ashland Avenue, Santa Monica, California 90405
Cell 310.403.1921
Tel 310.396.9606 Fax 310.396.6878
Mearns.Consulting@verizon.net
www.MearnsConsulting.com

Phase II Environmental Site Assessment
950 East 33rdth Street
3177 California Avenue
Signal Hill, California 90755

March 11, 2020

Prepared for:

Venture Point Inc.
4685 MacArthur Court
Newport Beach, California 92660

Signal Hill Petroleum Inc.
2633 Cherry Avenue
Signal Hill, California 90755

Prepared by:

Mearns Consulting LLC
738 Ashland Avenue
Santa Monica, California 90405

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Mearns.Consulting@verizon.net
www.MearnsConsulting.com

March 11, 2020

via email

Messrs. Tom Lee and John Clement
Venture Point, Inc.
2865 MacArthur Court
Newport Beach, California 92660

Mr. Kevin Laney
Signal Hill Petroleum, Inc.
2633 Cherry Avenue
Signal Hill, California 90755

RE: **Phase II Environmental Site Assessment Report**
950 East 33rd Street, 3177 California Avenue, Signal Hill, California 90755

Dear Messrs. Lee, Clement and Laney:

This Phase II Environmental Site Assessment (Phase II ESA) report has been prepared for the property located at 950 East 33rd Street and 3177 California Avenue in Signal Hill California 90755 (the site) pursuant to the City of Signal Hill Project Development Guide (June 20, 2017).

The site is being redeveloped as a commercial development, including an addition to the existing 135,911 square foot retail store, a 5,000 square foot shop, a 5,000 square foot drive-through restaurant and a 59,115 square foot storage facility.

The 950 East 33rd Street portion of the site has the following recognized environmental conditions per the Phase I ESA: two previously abandoned oil wells, aboveground storage tanks and visible soil impacts in the 1928, 1947 and 1953 aerial photographs, the former Tesoro Service Station located at the northwestern corner of the site that has caused soil matrix, soil vapor and groundwater contamination. This Phase II ESA was prepared to investigate these recognized environmental conditions.

The results of this Phase II ESA indicate a human health risk assessment including vapor intrusion assessment should be prepared to address the detected concentrations of metals and semi-volatile organics in site soils and volatile organic compounds in soil vapor that exceed their respective environmental screening level thresholds.

Should you have any questions or desire additional information, please contact me at your earliest convenience at 310.403.1921.

Sincerely,

Scott Fagan

Scott Fagan PG #4289

PROFESSIONAL GEOLOGIST
SCOTT R. FAGAN
NO. 4289
3/11/20
STATE OF CALIFORNIA

x Susan Mearns

Susan L. Mearns, Ph.D.

Mearns Consulting LLC

MEARNS CONSULTING LLC
ENVIRONMENTAL CONSULTANTS
RISK ASSESSORS

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Phase II Environmental Site Assessment
950 East 33rd Street
3177 California Avenue
Signal Hill, California 90755

Background
Mearns Consulting LLC performed a Phase I Environmental Site Assessment (Phase I ESA) on the portion of the 9.067-acre property located at 950 East 33rd Street, Signal Hill, California (the site) in February 2020.

The Phase I ESA had the following conclusions:

- The 9.067-acre site was an oil field since at least 1924; there are two previously abandoned oil wells onsite. Historically, the site had these two oil wells, aboveground storage tanks and oil field activities that visually impacted the land.

- The Tesoro Service Station formerly located at the northwestern corner of the site has caused soil matrix, soil vapor and groundwater contamination.

Recognized Environmental Conditions onsite include: (1) the two previously abandoned oil wells; (2) the aboveground storage tanks and visible soil impacts in the 1928, 1947 and 1953 aerial photographs; and (3) the former Tesoro Service Station.

The Phase I ESA had the following recommendations:

Suspect asbestos containing building materials and lead-based paint should be tested and appropriately abated by a licensed contractor prior to demolition of the building if warranted.

A Limited Phase II Environmental Site Assessment (Phase II ESA) should be performed on the site. The Phase II ESA should include soil matrix and soil vapor sampling adjacent to the former Tesoro Service Station at the planned location of a new drive-thru restaurant, adjacent to the previously abandoned oil wells, at the planned location of an additional 11,500 square feet of retail, and at the planned location of 5,000 square feet of shopping.

A methane assessment of the site should be conducted pursuant to the City of Signal Hill Oil and Gas Code §16.24.080 and Project Development Guide (June 20, 2017).

A baseline human health risk assessment should be performed with the data generated from the Phase II ESA.

As the site contains abandoned oil wells redevelopment of the site will require City oversight pursuant to the City of Signal Hill Oil and Gas Code §16.24 and Project Development Guide (June 20, 2017).

A soil management plan should be prepared prior to any grading activities to be conducted onsite. This soil management plan should provide instructions for the contractor to implement in the event discolored or odiferous soils are discovered during any grading operations.

Phase II ESA

Based on the conclusions, including the identification of Recognized Environmental Conditions, of the Phase I ESA, Mearns Consulting LLC conducted a Phase II ESA.

Mearns Consulting LLC delineated the work areas with white spray paint and notified Underground Service Alert to clear public utility lines as required by law on February 11, 2020, at least two business days prior to boring activities conducted on February 18, 2020 (ticket numbers B200420334-00B and B200420342-00B).

Prior to drilling, all locations were excavated to a minimum depth of 5-feet bgs using a hand auger to prevent damage to possible unidentified subsurface utilities.

Gregg Drilling, LLC advanced the borings using a track mounted direct push rig. The sampling system was appropriately cleaned between each borehole. Rinsate generated from cleaning was appropriately disposed.

Mearns Consulting LLC collected soil matrix samples pursuant to SW846 from nine locations (SV1-SV9) at depths of 5-feet below ground surface (bgs) and 10-feet bgs. Soil samples were collected in acetate sleeves with Teflon liners and end caps with minimal headspace, logged onto a chain-of-custody form and stored in a cooler at 4ºC until delivered under chain of custody to Sierra Analytical Labs (a State of California Department of Health Services ELAP accredited laboratory; ELAP No. 2320). Analyses requested were total hydrocarbons-gasoline range (TPH-g), TPH-diesel range (TPH-d), TPH-oil range (TPH-o), speciated carbon chains via USEPA method GC/FID 8015B, total threshold limit concentration (TTLC) metals including hexavalent chromium via USEPA methods 6000/7000, volatile organic compounds (VOCs) via USEPA 8260B, collected via USEPA 5035B in the field by placing 5g of soil into volatile organic analyte (VOA) vials to which preservative had been added and semi-volatile organic compounds (SVOCs) via USEPA 8270C. Soil matrix analytical results are included as Appendix A.

These soil borings were then developed as dual-nested soil vapor probes at 5-feet and 10-feet bgs (SV1-SV9) in accordance with *Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, DTSC, October 2011 and the *Advisory Active Soil Gas Investigations*, DTSC, LARWQCB, SFRWQCB, June 2015.

A new section of ¼-inch diameter nylaflow tubing with a new 6-inch stainless steel probe tip at the terminal end was inserted into the borehole to the desired sampling depth. One-inch diameter polyvinyl chloride (PVC) casing was used as a guide for the tubing to ensure that the desired sampling depth was achieved. Sand was poured into the boring annulus to form an approximately one-foot long sand pack around the probe tip, at which time the PVC piping was withdrawn. Approximately one foot of dry, granular bentonite was placed atop the sand pack and the remainder of the borehole was backfilled with hydrated bentonite to the ground surface to form a seal. The sampling end of the tubing was fitted with a three-way valve and the probe was labeled for identification. A diagram of the triple nested probes is provided as Figure 5.

Soil gas samples were collected in general accordance with the July 2015 Department of Toxic Substances Control (DTSC) and Los Angeles Regional Water Quality Control Board (LARWQCB) "Advisory – Active Soil Gas Investigations."

Each probe was allowed to equilibrate for a minimum of 48-hours after installation prior to sampling by a mobile laboratory. Soil vapor samples were collected in glass gas-tight syringes equipped with Teflon plungers. A tracer gas mixture of n-pentane, n-hexane, and n-heptane was placed at the tubing-surface interface before sampling. These compounds were analyzed during the 8260B analytical run to determine if there were surface leaks into the subsurface due to improper installation of the probe. The sampling rate was approximately 200 cc/min, except when noted differently on the chain of custody record, using a glass gas-tight syringe. Purging was completed using a pump set at approximately 200 cc/min, except when noted differently on the chain of custody record. A default of

three purge volumes was used as recommended by July 2015 DTSC/RWQCB guidance documents. Prior to purging and sampling of soil vapor at each location, a shut-in test was conducted to check for leaks in the aboveground fittings. The shut-in test was performed on the aboveground apparatus by evacuating the line to a vacuum of 100 inches of water, sealing the entire system and watching the vacuum for at least one minute. A vacuum gauge attached in parallel to the apparatus measured the vacuum. If there is any observable loss of vacuum, the fittings were adjusted as needed until the vacuum did not change noticeably. The soil gas sample was then collected. No flow conditions occur when a sampling rate greater than 10 mL/min cannot be maintained without applying a vacuum greater than 100 inches of water to the sampling train. The sampling train is left at a vacuum for no less than three minutes. If the vacuum does not subside appreciably after three minutes, the sample location is determined to be a no flow sample.

Twenty soil vapor samples were collected from these soil vapor probes by a Jones Environmental, Inc. (ELAP 2882) chemist and analyzed in a mobile laboratory on February 21, 2020. Two duplicates, one per 10 soil vapor samples, were collected and analyzed by the chemist. Soil vapor analytical results are included as Appendix B.

All drilling, logging and sampling activities were conducted by or under the direct supervision of a California-Professional Geologist, and in accordance with California Well Standards presented in the Department of Water Resources (DWR) Bulletins 74-81 and 74-90. The Site Geology section and boring logs were prepared by Mr. Scott R. Fagan, a State of California Professional Geologist PG #4289. Boring logs are included as Appendix C.

Site Geology - The site is located in the Los Angeles Coastal Plain near the northwest side of the Signal Hill uplift in Signal Hill, California. The Signal Hill Uplift is the surface expression of the east-west trending Newport-Inglewood fault zone. The site is just north of the Cherry Hill Fault, the fault with the largest vertical offset in the Newport Inglewood fault complex.

Surface sediments in this area are characterized as sand, silt, gravel and clays of the Lakewood Formation within the Upper Pleistocene Series of the Quaternary System. Sediments encountered during the investigation were silt and clay.

The closest aquifer is the Gage aquifer at approximately 50-75 feet from the surface. Groundwater was not encountered during this investigation at 10 feet bgs.

Soil Vapor Analytical Results – The following VOCs were detected in soil vapor: benzene, chloroform, ethylbenzene, n-propylbenzene, tetrachloroethene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, m,p-xylenes and o-xylene. Detected concentrations of benzene, chloroform and ethylbenzene did exceed their respective San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (ESLs) (Table 1 and Figure 3). Detected concentrations of the remaining VOCs in soil vapor did not exceed their respective ESLs.

Soil Matrix Analytical Results – The following metals were detected in concentrations greater than their respective reporting limits and less than their respective ESLs, barium, cobalt, trivalent chromium, copper, mercury, nickel, silver and zinc. The following metals were detected at concentrations greater than their respective ESLs, lead and vanadium (Table 2 and Figure 4). Although arsenic was not detected in concentrations greater than its reporting limit, the reporting limit of 7.7 is greater than the ESL, 0.67 milligrams per kilogram (mg/kg). However the reporting limit is less than the regulatory accepted background concentration of arsenic in Southern California soils, 10 mg/kg (Table 2).

Total volatile petroleum hydrocarbons - diesel range (TPH-d) and TPH-oil range (TPH-o) were detected in two soil borings at depths of 5-feet bgs at concentrations greater than their respective reporting limits and less than their respective ESLs. Seven SVOCs: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, fluoranthene, phenanthrene and pyrene were detected once in the soil matrix (SV7-5'). Benzo(a)pyrene and

fluoranthene were detected at concentrations greater than their respective ESLs, the remaining SVOCs were detected at concentrations less than their respective ESLs (Table 3 and Figure 4).

Conclusions

Total petroleum hydrocarbons, carbon chains and SVOCs were detected in the soil matrix, and fuel related VOCs, were detected in the soil vapor (Figures 3 and 4).

Benzene, chloroform and ethylbenzene were detected in soil vapor at concentrations greater than their respective ESLs (Figure 3).

The metals, lead and vanadium, and the SVOCs, benzo(a)pyrene and fluoranthene were detected at concentrations greater than their respective ESLs (Figure 4).

Recommendations

As the proposed future development for the site is commercial, a human health risk assessment including vapor intrusion is warranted based on the results of this Phase II ESA. The human health risk assessment should include an evaluation of potential health impacts to future commercial and construction workers.

The Phase I ESA recommendations: building material sampling of the existing structures prior to renovation for appropriate abatement and disposal, if necessary, a methane assessment pursuant to the City of Signal Hill Oil and Gas Code §16.24.080 and Project Development Guide (June 20, 2017) and a soil management plan are warranted.

References

City of Signal Hill. June 2, 2015. Oil and Gas Code.

City of Signal Hill. June 20, 2017. Project Development Guide.

Mearns Consulting LLC. February 12, 2020. Phase I Environmental Site Assessment, 950 East 33rd Street, Signal Hill, California 90755. Two volumes.

San Francisco Bay Regional Water Quality Control Board. 2019. Rev. 2. Environmental Screening Levels.

USEPA. November 2019. Regional Screening Levels.

TABLES

Table 1 - Soil Vapor Analytical Results

SAMPLE ID	DATE SAMPLED	Benzene µg/m³	Chloroform µg/m³	Ethylbenzene µg/m³	n-Propylbenzene µg/m³	Tetrachloroethene µg/m³	Toluene µg/m³	1,2,4-Trimethylbenzene µg/m³	1,3,5-Trimethylbenzene µg/m³	m,p-xylenes µg/m³	o-xylene µg/m³
ESL		3.2	4.1	37		15	10,000			3,500	3,500
SV1-5'	2/21/20	<8	**12**	18	<8	<8	21	8	9	100	34
SV1-10'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV2-5'	2/21/20	<8	<8	<8	<8	8	33	11	<8	<16	<8
SV2-10'	2/21/20	<8	<8	<8	<8	<8	11	<8	<8	<16	<8
SV3-5'	2/21/20	<8	<8	<8	<8	<8	32	11	<8	<16	<8
SV3-10'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV4-5'	2/21/20	<8	<8	<8	<8	<8	10	16	<8	<16	<8
SV4-10'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV4-10' REP	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV5-5'	2/21/20	<8	8	<8	<8	<8	<8	13	<8	19	9
SV5-10'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV6-5'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV6-5' REP	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV6-10	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV7-5'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV7-10'	2/21/20	**19**	**11**	23	20	<8	45	123	40	76	40
SV8-5'	2/21/20	<8	**34**	<8	<8	<8	<8	<8	<8	<16	<8
SV8-10'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV9-5'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV9-10'	2/21/20	**19**	**20**	**99**	<8	<8	27	<8	<8	322	151

Notes:

µg/m³ = micrograms per cubic meter

<8 = concentration is less than the Reporting Limit (8), i.e., not detected (ND)

SV1-5' = Soil Vapor Probe 1, 5' bgs

BOLD = detected concentration exceeds ESL

Analytical results are included as Appendix A

Only detected concentrations of VOCs are presented in this table. All other VOCs were ND.

ESL = San Francisco Regional Water Quality Control Board Environmental Screening Level 2019 (Rev. 2)

Blank Cell = ESL Not Available

Table 2 - Metals Analytical Results in Soil Matrix

SAMPLE ID	DATE SAMPLED	As mg/kg	Ba mg/kg	Co mg/kg	Cr^{+3} mg/kg	Cu mg/kg	Hg mg/kg	Ni mg/kg	Pb mg/kg	Ag mg/kg	V mg/kg	Zn mg/kg
ESL		0.67	390	23	120,000	180	13	86	32	25	18	340
SV1-5	2/18/20	**<7.7**	66	6.6	15	12	<0.05	10	2.6	<1	**22**	26
SV1-10	2/18/20	**<7.7**	44	4.7	10	<7	<0.06	<6.8	<2.6	<1	16	23
SV2-5	2/18/20	**<7.7**	42	5	16	7.3	<0.06	7.5	3	<1	**34**	21
SV2-10	2/18/20	**<7.7**	35	4.1	7.6	<7	<0.05	7.4	<2.6	<1	13	19
SV3-5	2/18/20	**<7.7**	53	7.9	21	11	<0.06	16	3.5	<1	**28**	35
SV3-10	2/18/20	**<7.7**	30	3.8	6.9	<7	<0.05	<6.8	<2.6	<1	11	17
SV4-5	2/18/20	**<7.7**	110	7	14	27	0.2	10	**33**	1.1	**23**	110
SV4-10	2/18/20	**<7.7**	33	5.5	14	8.8	<0.06	9.2	<2.6	1	**23**	29
SV5-5	2/18/20	**<7.7**	130	8.3	17	15	0.06	12	13	1.2	**28**	76
SV5-10	2/18/20	**<7.7**	63	7.6	19	12	<0.05	15	3.5	1.1	**26**	41
SV6-5	2/18/20	**<7.7**	110	5	11	7.8	<0.06	7.1	6.9	<1	18	30
SV6-10	2/18/20	**<7.7**	74	7.7	24	11	<0.06	11	5.4	1.5	**32**	44
SV7-5	2/18/20	**<7.7**	85	4.5	9.8	7	0.09	<6.8	8.4	<1	17	36
SV7-10	2/18/20	**<7.7**	240	6.5	27	11	<0.06	10	3.7	1.1	**25**	35
SV8-5	2/18/20	**<7.7**	86	5.8	12	8.4	<0.06	8.2	6.8	<1	**20**	32
SV8-10	2/18/20	**<7.7**	87	10	28	19	<0.05	22	5.7	1.1	**34**	57
SV9-5	2/18/20	**<7.7**	130	6.3	14	9.7	0.09	9.1	7.1	<1	**24**	38
SV9-10	2/18/20	**<7.7**	64	7	25	11	<0.06	14	4.6	1	**38**	39

Notes:
mg/kg = milligram per kilogram
As = arsenic, Ba = barium, Co = cobalt, Cr^{+3} = trivalent chromium, Cu = copper, Hg = mercury, Ni = nickel, Pb = lead, Ag = silver, V = vanadium
Zn = zinc
<7.7 = concentration is less than the Reporting Limit (7.7), i.e., not detected (ND)
SV1-5 = Soil Boring1, 5-feet below ground surface (bgs).
BOLD = value exceeds the ESL
Analytical results are included as Appendix B
Soil was collected from 5-feet bgs and 10-feet bgs from the same boring.
Only detected concentrations of metals are presented in this table. All other metals were ND.
ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels 2019 (Rev. 2)

Table 3 - Total Petroleum Hydrocarbons and SemiVolatile Organic Compounds Analytical Results in Soil Matrix

Sample ID	Date Sampled	TPHd mg/kg	TPHo mg/kg	<C8 mg/kg	C8-C9 mg/kg	C9-C10 mg/kg	C10-C11 mg/kg	C11-C12 mg/kg	C12-C14 mg/kg	C14-C16 mg/kg	C16-C18 mg/kg	C18-C20 mg/kg	C20-C24 mg/kg	C24-C28 mg/kg	C28-C32 mg/kg	C>32 mg/kg	C7-C36 mg/kg	Benzo(b)fluoranthene mg/kg	Benzo(k)fluoranthene mg/kg	Benzo(a)pyrene mg/kg	Chrysene mg/kg	Fluoranthene mg/kg	Phenanthrene mg/kg	Pyrene mg/kg
RSL*r Aromatic*		97	2,400																					
ESL																		1.1	2.8	0.11	2.2	0.69	7.8	45
SV1-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV1-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV2-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV2-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV3-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV3-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV4-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV4-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV5-5	2/18/20	48	45	<1	<1	<1	<1	<1	<1	<1	8	9.9	19	15	8.3	3.9	64	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV5-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV6-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV6-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV7-5	2/18/20	69	33	<1	<1	<1	<1	<1	<1	33	8.2	9.5	16	12	5.8	2.3	87	0.67	0.65	**0.53**	0.7	**1.1**	0.63	2.5
SV7-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV8-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV8-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV9-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV9-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33

Notes:

TPH-d = Total Petroleum Hydrocarbons-diesel range C10-C24

TPH-o = Total Petroleum Hydrocarbons-oil range C22-C36

mg/kg = milligram per kilogram

<1 = concentration is less than the Reporting Limit (1), i.e., not detected (ND)

SV1-5 = Soil Boring1, 5-feet below ground surface (bgs).

Analytical results are included as Appendix B

BOLD = detected concentrations exceeded the respective ESL

Soil was collected from 5-feet bgs and 10-feet bgs from the same boring

RSL*r* = USEPA Regional Screening Level for residential soils (November 2019)

ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels 2019 (Rev. 2)

FIGURES



EXPLANATION

Previously abandoned oil wells

A12, A17, AW-2, and A22 are operating oil wells

N

0 500 feet

Base map: Google Earth Pro, 2019

Figure 1: Site Location Map
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



EXPLANATION

Previously abandoned oil wells

A12, A17, AW-2, and A22 are operating oil wells

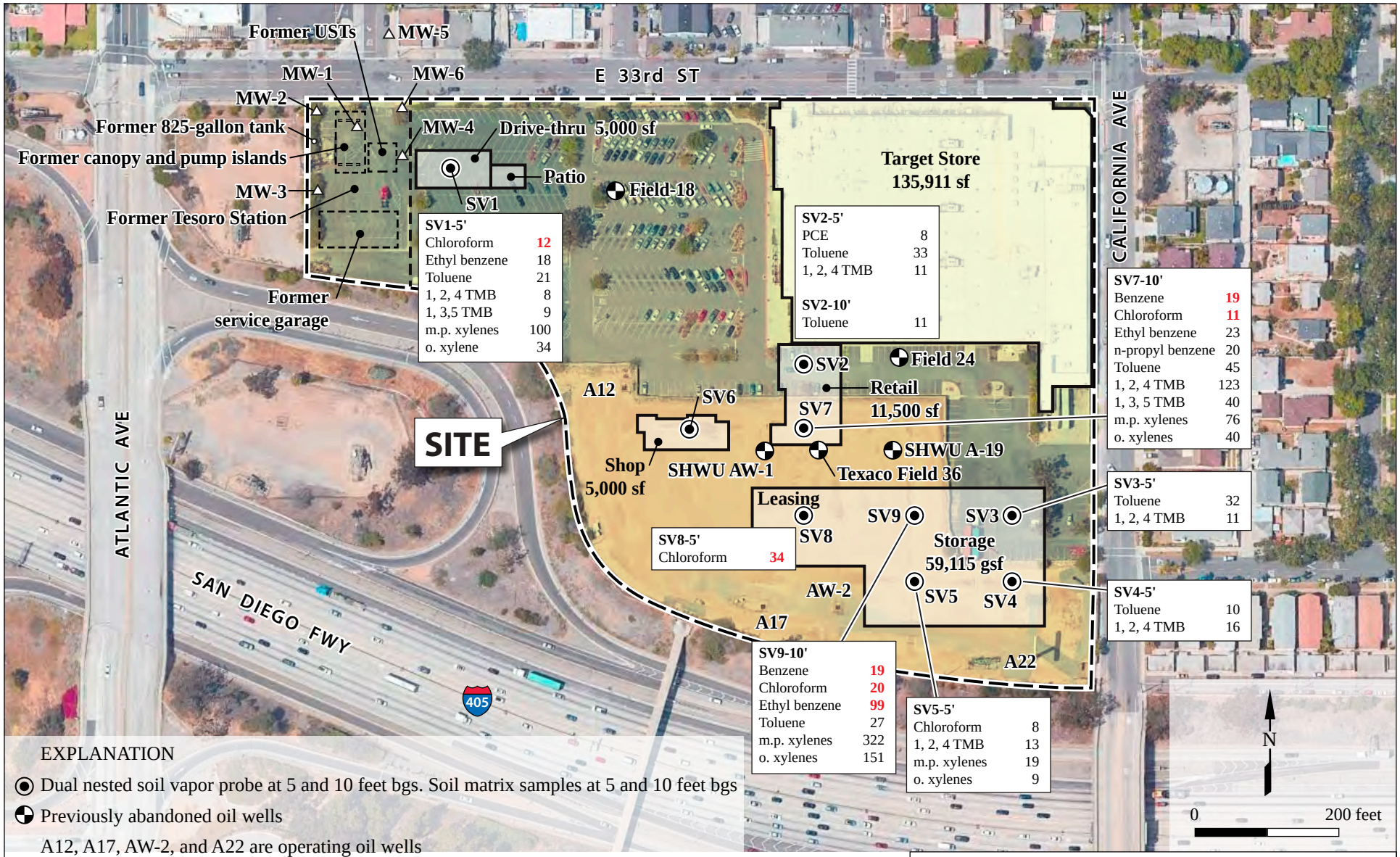
N

0 200 feet

Base map: Google Earth Pro, 2019

Figure 2: Site Map
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



EXPLANATION

◉ Dual nested soil vapor probe at 5 and 10 feet bgs. Soil matrix samples at 5 and 10 feet bgs

◓ Previously abandoned oil wells

A12, A17, AW-2, and A22 are operating oil wells

△ Monitoring wells

PCE = Tetrachloroethene

1, 2, 4 TMB = 1, 2, 4 Trimethyl benzene

1,3, 5 TMB = 1, 3, 5 Trimethyl benzene

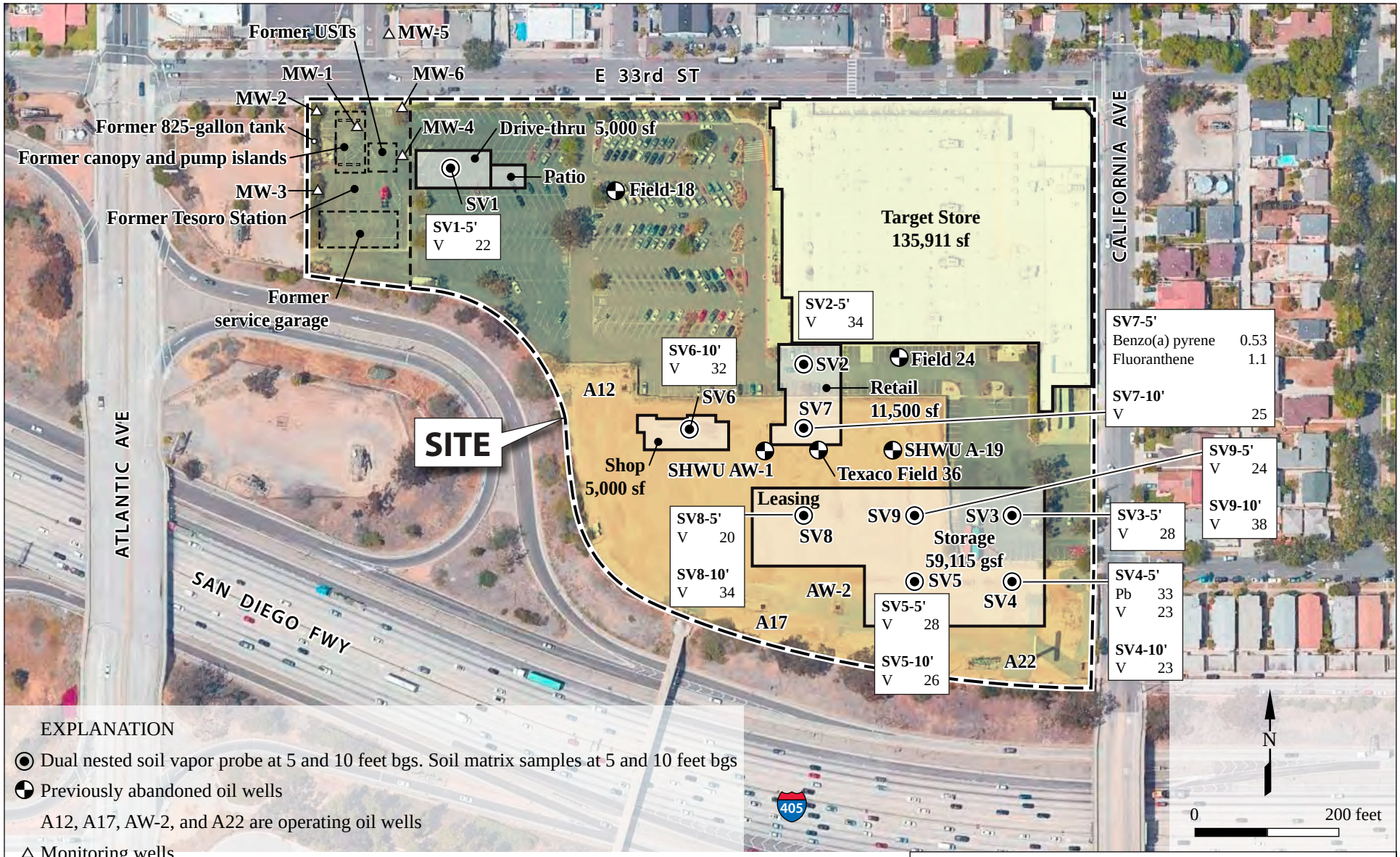
Units are micrograms per cubic meter ($\mu g/m^3$)

Red numbers = Detected concentration exceeds SFRWQCB ESL

Base map:
Google Earth Pro, 2019

Figure 3: Soil Vapor Analytical Results
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



EXPLANATION

◉ Dual nested soil vapor probe at 5 and 10 feet bgs. Soil matrix samples at 5 and 10 feet bgs

◓ Previously abandoned oil wells

A12, A17, AW-2, and A22 are operating oil wells

△ Monitoring wells

PB = Lead

V = Vanadium

Units are milligrams per kilogram (mg/kg)

RSLr = USEPA Regional Screening Levels for Residential Soils (November 2019)

ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels, 2019) (Rev. 2)

Base map: Google Earth Pro, 2019

Figure 4: Metals and SVOCs Analytical Results Exceeding Thresholds
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC

TRIPLE NESTED PROBE

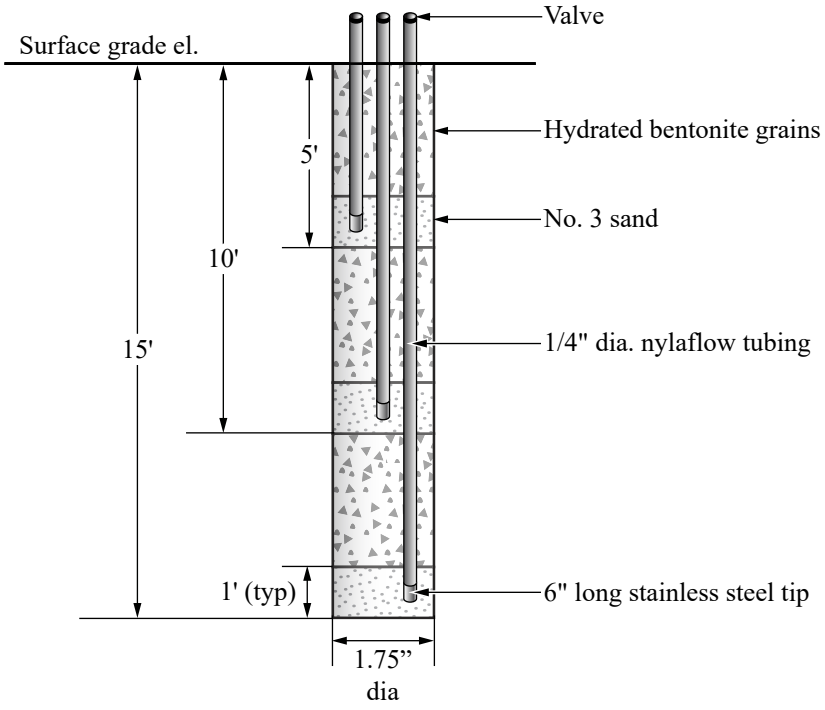


Figure 5: Soil Vapor Probe
950 East 33rd Street,
3177 California Avenue
Signal Hill, CA 90755

Date: 02/18/20

Not to scale

Mearns Consulting LLC

APPENDIX A

Sierra Analytical Labs, Inc.
Soil Matrix Analytical Data
February 18, 2020

26 February 2020

Susan Mearns
Mearns Consulting LLC
738 Ashland Avenue
Santa Monica, CA 90405

RE:950 E. 33rd & 3177 California Ave.

Work Order No.: 2002212

Attached are the results of the analyses for samples received by the laboratory on 02/18/20 16:10.

The samples were received by Sierra Analytical Labs, Inc. with a chain of custody record attached or completed at the submittal of the samples.

The analyses were performed according to the prescribed method as outlined by EPA, Standard Methods, and A.S.T.M.

The remaining portions of the samples will be disposed of within 30 days from the date of this report.
If you require any additional retaining time, please advise us.

Sincerely,

Richard K. Forsyth

Richard K. Forsyth

Laboratory Director

Sierra Analytical Labs, Inc. is certified by the California Department of Health Services (DOHS),
Environmental Laboratory Accredidation Program (ELAP) No. 2320.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB1-5	2002212-01	Soil	02/18/20 08:17	02/18/20 16:10
SB1-10	2002212-02	Soil	02/18/20 08:17	02/18/20 16:10
SB2-5	2002212-03	Soil	02/18/20 09:17	02/18/20 16:10
SB2-10	2002212-04	Soil	02/18/20 09:24	02/18/20 16:10
SB3-5	2002212-05	Soil	02/18/20 10:14	02/18/20 16:10
SB3-10	2002212-06	Soil	02/18/20 10:21	02/18/20 16:10
SB4-5	2002212-07	Soil	02/18/20 11:09	02/18/20 16:10
SB4-10	2002212-08	Soil	02/18/20 11:16	02/18/20 16:10
SB5-5	2002212-09	Soil	02/18/20 11:42	02/18/20 16:10
SB5-10	2002212-10	Soil	02/18/20 11:49	02/18/20 16:10
SB6-5	2002212-11	Soil	02/18/20 13:01	02/18/20 16:10
SB6-10	2002212-12	Soil	02/18/20 13:10	02/18/20 16:10
SB7-5	2002212-13	Soil	02/18/20 13:41	02/18/20 16:10
SB7-10	2002212-14	Soil	02/18/20 13:48	02/18/20 16:10
SB8-5	2002212-15	Soil	02/18/20 14:22	02/18/20 16:10
SB8-10	2002212-16	Soil	02/18/20 14:35	02/18/20 16:10
SB9-5	2002212-17	Soil	02/18/20 15:08	02/18/20 16:10
SB9-10	2002212-18	Soil	02/18/20 15:19	02/18/20 16:10

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
TELEPHONE: (949) 348-9389 FAX: (949) 348-9115
E-MAIL: SIERRALABS @ SIERRALABS.NET

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**66**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**6.6**	1.5	"	"	"	"	"	"	
Chromium	**15**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**12**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.05	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**10**	6.8	"	"	"	"	"	"	
Lead	**2.6**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**22**	3.0	"	"	"	"	"	"	
Zinc	**26**	4.0	"	"	"	"	"	"	
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**44**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**4.7**	1.5	"	"	"	"	"	"	
Chromium	**10**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	ND	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	ND	6.8	"	"	"	"	"	"	
Lead	ND	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**16**	3.0	"	"	"	"	"	"	
Zinc	**23**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**42**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**5.0**	1.5	"	"	"	"	"	"	
Chromium	**16**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**7.3**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**7.5**	6.8	"	"	"	"	"	"	
Lead	**3.0**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**34**	3.0	"	"	"	"	"	"	
Zinc	**21**	4.0	"	"	"	"	"	"	
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**35**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**4.1**	1.5	"	"	"	"	"	"	
Chromium	**7.6**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	ND	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.05	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**7.4**	6.8	"	"	"	"	"	"	
Lead	ND	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**13**	3.0	"	"	"	"	"	"	
Zinc	**19**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**53**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**7.9**	1.5	"	"	"	"	"	"	
Chromium	**21**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**11**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**16**	6.8	"	"	"	"	"	"	
Lead	**3.5**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**28**	3.0	"	"	"	"	"	"	
Zinc	**35**	4.0	"	"	"	"	"	"	
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**30**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**3.8**	1.5	"	"	"	"	"	"	
Chromium	**6.9**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	ND	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.05	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	ND	6.8	"	"	"	"	"	"	
Lead	ND	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**11**	3.0	"	"	"	"	"	"	
Zinc	**17**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Silver	**1.1**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**110**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**7.0**	1.5	"	"	"	"	"	"	
Chromium	**14**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**27**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	**0.20**	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**10**	6.8	"	"	"	"	"	"	
Lead	**33**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**23**	3.0	"	"	"	"	"	"	
Zinc	**110**	4.0	"	"	"	"	"	"	
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
Silver	**1.0**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**33**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**5.5**	1.5	"	"	"	"	"	"	
Chromium	**14**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**8.8**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**9.2**	6.8	"	"	"	"	"	"	
Lead	ND	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**23**	3.0	"	"	"	"	"	"	
Zinc	**29**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
Silver	**1.2**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**130**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**8.3**	1.5	"	"	"	"	"	"	
Chromium	**17**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**15**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	**0.06**	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**12**	6.8	"	"	"	"	"	"	
Lead	**13**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**28**	3.0	"	"	"	"	"	"	
Zinc	**76**	4.0	"	"	"	"	"	"	
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Silver	**1.1**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**63**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**7.6**	1.5	"	"	"	"	"	"	
Chromium	**19**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**12**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.05	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**15**	6.8	"	"	"	"	"	"	
Lead	**3.5**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**26**	3.0	"	"	"	"	"	"	
Zinc	**41**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**110**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**5.0**	1.5	"	"	"	"	"	"	
Chromium	**11**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**7.8**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**7.1**	6.8	"	"	"	"	"	"	
Lead	**6.9**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**18**	3.0	"	"	"	"	"	"	
Zinc	**30**	4.0	"	"	"	"	"	"	
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
Silver	**1.5**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**74**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**7.7**	1.5	"	"	"	"	"	"	
Chromium	**24**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**11**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**11**	6.8	"	"	"	"	"	"	
Lead	**5.4**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**32**	3.0	"	"	"	"	"	"	
Zinc	**44**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**85**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**4.5**	1.5	"	"	"	"	"	"	
Chromium	**9.8**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**7.0**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	**0.09**	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	ND	6.8	"	"	"	"	"	"	
Lead	**8.4**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**17**	3.0	"	"	"	"	"	"	
Zinc	**36**	4.0	"	"	"	"	"	"	
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
Silver	**1.1**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**240**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**6.5**	1.5	"	"	"	"	"	"	
Chromium	**27**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**11**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**10**	6.8	"	"	"	"	"	"	
Lead	**3.7**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**25**	3.0	"	"	"	"	"	"	
Zinc	**35**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**86**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**5.8**	1.5	"	"	"	"	"	"	
Chromium	**12**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**8.4**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**8.2**	6.8	"	"	"	"	"	"	
Lead	**6.8**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**20**	3.0	"	"	"	"	"	"	
Zinc	**32**	4.0	"	"	"	"	"	"	
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Silver	**1.1**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**87**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**10**	1.5	"	"	"	"	"	"	
Chromium	**28**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**19**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.05	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**22**	6.8	"	"	"	"	"	"	
Lead	**5.7**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**34**	3.0	"	"	"	"	"	"	
Zinc	**57**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**130**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**6.3**	1.5	"	"	"	"	"	"	
Chromium	**14**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.38	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**9.7**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	**0.09**	0.05	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**9.1**	6.8	"	"	"	"	"	"	
Lead	**7.1**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**24**	3.0	"	"	"	"	"	"	
Zinc	**38**	4.0	"	"	"	"	"	"	
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
Silver	**1.0**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**64**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**7.0**	1.5	"	"	"	"	"	"	
Chromium	**25**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**11**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**14**	6.8	"	"	"	"	"	"	
Lead	**4.6**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**38**	3.0	"	"	"	"	"	"	
Zinc	**39**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Volatile Petroleum Hydrocarbons (TVPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.045	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*102 %*	*35-130*		"	"	"	"	
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*92.5 %*	*35-130*		"	"	"	"	
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.041	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*94.5 %*	*35-130*		"	"	"	"	
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*99.5 %*	*35-130*		"	"	"	"	
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.042	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*90.5 %*	*35-130*		"	"	"	"	
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*65.2 %*	*35-130*		"	"	"	"	
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.043	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*70.8 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Volatile Petroleum Hydrocarbons (TVPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*98.5 %*	*35-130*		"	"	"	"	
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.035	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*36.8 %*	*35-130*		"	"	"	"	
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*39.5 %*	*35-130*		"	"	"	"	
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.043	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*98.8 %*	*35-130*		"	"	"	"	
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.041	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*95.8 %*	*35-130*		"	"	"	"	
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.042	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*94.7 %*	*35-130*		"	"	"	"	
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*66.7 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Volatile Petroleum Hydrocarbons (TVPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.038	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*92.2 %*	*35-130*		"	"	"	"	
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*94.7 %*	*35-130*		"	"	"	"	
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.043	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*86.5 %*	*35-130*		"	"	"	"	
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*94.4 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons (TPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*128 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*128 %*	*60-175*		"	"	"	"	
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*140 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*140 %*	*60-175*		"	"	"	"	
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*98.4 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*98.4 %*	*60-175*		"	"	"	"	
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*70.0 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*70.0 %*	*60-175*		"	"	"	"	
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*158 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*158 %*	*60-175*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons (TPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*101 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*101 %*	*60-175*		"	"	"	"	
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*87.6 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*87.6 %*	*60-175*		"	"	"	"	
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*74.4 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*74.4 %*	*60-175*		"	"	"	"	
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	**48**	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*138 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	**45**	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*138 %*	*60-175*		"	"	"	"	
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*97.6 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*97.6 %*	*60-175*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons (TPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*63.2 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*63.2 %*	*60-175*		"	"	"	"	
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*72.8 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*72.8 %*	*60-175*		"	"	"	"	
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	**69**	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*68.4 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	**33**	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*68.4 %*	*60-175*		"	"	"	"	
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*70.4 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*70.4 %*	*60-175*		"	"	"	"	
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*73.6 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*73.6 %*	*60-175*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons (TPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*60.0 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*60.0 %*	*60-175*		"	"	"	"	
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*75.2 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*75.2 %*	*60-175*		"	"	"	"	
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*64.8 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*64.8 %*	*60-175*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*128 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0090	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0090	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0090	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0090	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0090	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0090	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0090	"	"	"	"	"	"	
HC >= C12	ND	0.0090	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.045	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*102 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*140 %*		*60-175*	"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*92.5 %*		*35-130*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*98.4 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0083	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0083	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0083	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0083	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0083	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0083	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0083	"	"	"	"	"	"	
HC >= C12	ND	0.0083	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.041	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*94.5 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*70.0 %*		*60-175*	"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*99.5 %*		*35-130*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*158 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0084	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0084	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0084	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0084	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0084	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0084	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0084	"	"	"	"	"	"	
HC >= C12	ND	0.0084	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.042	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*90.5 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*101 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*65.2 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*87.6 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0085	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0085	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0085	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0085	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0085	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0085	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0085	"	"	"	"	"	"	
HC >= C12	ND	0.0085	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.043	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*70.8 %*	*35-130*		"	"	"	"	

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26052 Merit Circle Suite 105, Laguna Hills, California 92653
Telephone: (949) 348-9389 Fax: (949) 348-9115
E-Mail: sierralabs @ sierralabs.net

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*74.4 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*98.5 %*	*35-130*		"	"	"	"	

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26052 Merit Circle Suite 105, Laguna Hills, California 92653
Telephone: (949) 348-9389 Fax: (949) 348-9115
E-Mail: sierralabs @ sierralabs.net

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	**8.0**	1.0	"	"	"	"	"	"	
C18 <= HC < C20	**9.9**	1.0	"	"	"	"	"	"	
C20 <= HC < C24	**19**	1.0	"	"	"	"	"	"	
C24 <= HC < C28	**15**	1.0	"	"	"	"	"	"	
C28 <= HC < C32	**8.3**	1.0	"	"	"	"	"	"	
HC >= C32	**3.9**	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	**64**	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*138 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0071	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0071	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0071	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0071	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0071	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0071	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0071	"	"	"	"	"	"	
HC >= C12	ND	0.0071	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.035	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*36.8 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*97.6 %*		*60-175*	"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*39.5 %*		*35-130*	"	"	"	"	

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Mearns Consulting LLC	Project:	950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number:	[none]	**Reported:**
Santa Monica CA, 90405	Project Manager:	Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*63.2 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0085	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0085	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0085	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0085	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0085	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0085	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0085	"	"	"	"	"	"	
HC >= C12	ND	0.0085	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.043	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*98.8 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*72.8 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0083	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0083	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0083	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0083	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0083	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0083	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0083	"	"	"	"	"	"	
HC >= C12	ND	0.0083	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.041	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*95.8 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	**33**	1.0	"	"	"	"	"	"	
C16 <= HC < C18	**8.2**	1.0	"	"	"	"	"	"	
C18 <= HC < C20	**9.5**	1.0	"	"	"	"	"	"	
C20 <= HC < C24	**16**	1.0	"	"	"	"	"	"	
C24 <= HC < C28	**12**	1.0	"	"	"	"	"	"	
C28 <= HC < C32	**5.8**	1.0	"	"	"	"	"	"	
HC >= C32	**2.3**	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	**87**	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*68.4 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0085	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0085	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0085	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0085	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0085	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0085	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0085	"	"	"	"	"	"	
HC >= C12	ND	0.0085	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.042	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*94.7 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*70.4 %*		*60-175*	"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*96.9 %*		*35-130*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*73.6 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0076	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0076	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0076	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0076	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0076	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0076	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0076	"	"	"	"	"	"	
HC >= C12	ND	0.0076	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.038	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*92.2 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*60.0 %*		*60-175*	"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*94.7 %*		*35-130*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*75.2 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0086	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0086	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0086	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0086	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0086	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0086	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0086	"	"	"	"	"	"	
HC >= C12	ND	0.0086	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.043	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*86.5 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*64.8 %*		*60-175*	"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*94.4 %*		*35-130*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Benzene	ND	4.2	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.2	"	"	"	"	"	"	
Bromochloromethane	ND	4.2	"	"	"	"	"	"	
Bromodichloromethane	ND	4.2	"	"	"	"	"	"	
Bromoform	ND	4.2	"	"	"	"	"	"	
Bromomethane	ND	4.2	"	"	"	"	"	"	
n-Butylbenzene	ND	4.2	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.2	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.2	"	"	"	"	"	"	
Chlorobenzene	ND	4.2	"	"	"	"	"	"	
Chloroethane	ND	4.2	"	"	"	"	"	"	
Chloroform	ND	4.2	"	"	"	"	"	"	
Chloromethane	ND	4.2	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.2	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.2	"	"	"	"	"	"	
Dibromochloromethane	ND	4.2	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	4.2	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.2	"	"	"	"	"	"	
Dibromomethane	ND	4.2	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.2	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.2	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.2	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.2	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.2	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.2	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.2	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.2	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.2	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.2	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.2	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.2	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.2	"	"	"	"	"	"	
Ethylbenzene	ND	4.2	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.2	"	"	"	"	"	"	
Isopropylbenzene	ND	4.2	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.2	"	"	"	"	"	"	
Methylene chloride	ND	4.2	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.2	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Naphthalene	ND	4.2	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
n-Propylbenzene	ND	4.2	"	"	"	"	"	"	
Styrene	ND	4.2	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.2	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.2	"	"	"	"	"	"	
Tetrachloroethene	ND	4.2	"	"	"	"	"	"	
Toluene	ND	4.2	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.2	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	4.2	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.2	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.2	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.2	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.2	"	"	"	"	"	"	
Vinyl chloride	ND	4.2	"	"	"	"	"	"	
m,p-Xylene	ND	4.2	"	"	"	"	"	"	
o-Xylene	ND	4.2	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*117 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*114 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*117 %*		*74-121*	"	"	"	"	
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Benzene	ND	5.6	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.6	"	"	"	"	"	"	
Bromochloromethane	ND	5.6	"	"	"	"	"	"	
Bromodichloromethane	ND	5.6	"	"	"	"	"	"	
Bromoform	ND	5.6	"	"	"	"	"	"	
Bromomethane	ND	5.6	"	"	"	"	"	"	
n-Butylbenzene	ND	5.6	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.6	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.6	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.6	"	"	"	"	"	"	
Chlorobenzene	ND	5.6	"	"	"	"	"	"	
Chloroethane	ND	5.6	"	"	"	"	"	"	
Chloroform	ND	5.6	"	"	"	"	"	"	
Chloromethane	ND	5.6	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.6	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.6	"	"	"	"	"	"	
Dibromochloromethane	ND	5.6	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
1,2-Dibromo-3-chloropropane	ND	5.6	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.6	"	"	"	"	"	"	
Dibromomethane	ND	5.6	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.6	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.6	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.6	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.6	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.6	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.6	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.6	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.6	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.6	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.6	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.6	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.6	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.6	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.6	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.6	"	"	"	"	"	"	
Ethylbenzene	ND	5.6	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.6	"	"	"	"	"	"	
Isopropylbenzene	ND	5.6	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.6	"	"	"	"	"	"	
Methylene chloride	ND	5.6	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.6	"	"	"	"	"	"	
Naphthalene	ND	5.6	"	"	"	"	"	"	
n-Propylbenzene	ND	5.6	"	"	"	"	"	"	
Styrene	ND	5.6	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.6	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.6	"	"	"	"	"	"	
Tetrachloroethene	ND	5.6	"	"	"	"	"	"	
Toluene	ND	5.6	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.6	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.6	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.6	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.6	"	"	"	"	"	"	
Trichloroethene	ND	5.6	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.6	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.6	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.6	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.6	"	"	"	"	"	"	
Vinyl chloride	ND	5.6	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
m,p-Xylene	ND	5.6	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
o-Xylene	ND	5.6	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*104 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*102 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*116 %*	*74-121*		"	"	"	"	
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
Benzene	ND	4.3	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.3	"	"	"	"	"	"	
Bromochloromethane	ND	4.3	"	"	"	"	"	"	
Bromodichloromethane	ND	4.3	"	"	"	"	"	"	
Bromoform	ND	4.3	"	"	"	"	"	"	
Bromomethane	ND	4.3	"	"	"	"	"	"	
n-Butylbenzene	ND	4.3	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.3	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.3	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.3	"	"	"	"	"	"	
Chlorobenzene	ND	4.3	"	"	"	"	"	"	
Chloroethane	ND	4.3	"	"	"	"	"	"	
Chloroform	ND	4.3	"	"	"	"	"	"	
Chloromethane	ND	4.3	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.3	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.3	"	"	"	"	"	"	
Dibromochloromethane	ND	4.3	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	4.3	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.3	"	"	"	"	"	"	
Dibromomethane	ND	4.3	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.3	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.3	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.3	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.3	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.3	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.3	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.3	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.3	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.3	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.3	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.3	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.3	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.3	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
trans-1,3-Dichloropropene	ND	4.3	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Ethylbenzene	ND	4.3	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.3	"	"	"	"	"	"	
Isopropylbenzene	ND	4.3	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.3	"	"	"	"	"	"	
Methylene chloride	ND	4.3	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.3	"	"	"	"	"	"	
Naphthalene	ND	4.3	"	"	"	"	"	"	
n-Propylbenzene	ND	4.3	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.3	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.3	"	"	"	"	"	"	
Tetrachloroethene	ND	4.3	"	"	"	"	"	"	
Toluene	ND	4.3	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.3	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.3	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.3	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.3	"	"	"	"	"	"	
Trichloroethene	ND	4.3	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.3	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.3	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.3	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.3	"	"	"	"	"	"	
Vinyl chloride	ND	4.3	"	"	"	"	"	"	
m,p-Xylene	ND	4.3	"	"	"	"	"	"	
o-Xylene	ND	4.3	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*119 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*112 %*		*74-121*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Naphthalene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*99.6 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*74-121*		"	"	"	"	
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
Benzene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.1	"	"	"	"	"	"	
Bromochloromethane	ND	4.1	"	"	"	"	"	"	
Bromodichloromethane	ND	4.1	"	"	"	"	"	"	
Bromoform	ND	4.1	"	"	"	"	"	"	
Bromomethane	ND	4.1	"	"	"	"	"	"	
n-Butylbenzene	ND	4.1	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.1	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.1	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.1	"	"	"	"	"	"	
Chlorobenzene	ND	4.1	"	"	"	"	"	"	
Chloroethane	ND	4.1	"	"	"	"	"	"	
Chloroform	ND	4.1	"	"	"	"	"	"	
Chloromethane	ND	4.1	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
Dibromochloromethane	ND	4.1	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
1,2-Dibromo-3-chloropropane	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	4.1	"	"	"	"	"	"	
Dibromomethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.1	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.1	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.1	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.1	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.1	"	"	"	"	"	"	
Ethylbenzene	ND	4.1	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.1	"	"	"	"	"	"	
Isopropylbenzene	ND	4.1	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.1	"	"	"	"	"	"	
Methylene chloride	ND	4.1	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.1	"	"	"	"	"	"	
Naphthalene	ND	4.1	"	"	"	"	"	"	
n-Propylbenzene	ND	4.1	"	"	"	"	"	"	
Styrene	ND	4.1	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
Tetrachloroethene	ND	4.1	"	"	"	"	"	"	
Toluene	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.1	"	"	"	"	"	"	
Trichloroethene	ND	4.1	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.1	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
Vinyl chloride	ND	4.1	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
m,p-Xylene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
o-Xylene	ND	4.1	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*116 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*108 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.3 %*	*74-121*		"	"	"	"	
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
trans-1,3-Dichloropropene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*116 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*74-121*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Benzene	ND	4.2	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.2	"	"	"	"	"	"	
Bromochloromethane	ND	4.2	"	"	"	"	"	"	
Bromodichloromethane	ND	4.2	"	"	"	"	"	"	
Bromoform	ND	4.2	"	"	"	"	"	"	
Bromomethane	ND	4.2	"	"	"	"	"	"	
n-Butylbenzene	ND	4.2	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.2	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.2	"	"	"	"	"	"	
Chlorobenzene	ND	4.2	"	"	"	"	"	"	
Chloroethane	ND	4.2	"	"	"	"	"	"	
Chloroform	ND	4.2	"	"	"	"	"	"	
Chloromethane	ND	4.2	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.2	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.2	"	"	"	"	"	"	
Dibromochloromethane	ND	4.2	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	4.2	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.2	"	"	"	"	"	"	
Dibromomethane	ND	4.2	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.2	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.2	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.2	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.2	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.2	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.2	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.2	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.2	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.2	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.2	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.2	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.2	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.2	"	"	"	"	"	"	
Ethylbenzene	ND	4.2	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.2	"	"	"	"	"	"	
Isopropylbenzene	ND	4.2	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.2	"	"	"	"	"	"	
Methylene chloride	ND	4.2	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.2	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Naphthalene	ND	4.2	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
n-Propylbenzene	ND	4.2	"	"	"	"	"	"	
Styrene	ND	4.2	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.2	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.2	"	"	"	"	"	"	
Tetrachloroethene	ND	4.2	"	"	"	"	"	"	
Toluene	ND	4.2	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.2	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	4.2	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.2	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.2	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.2	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.2	"	"	"	"	"	"	
Vinyl chloride	ND	4.2	"	"	"	"	"	"	
m,p-Xylene	ND	4.2	"	"	"	"	"	"	
o-Xylene	ND	4.2	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*117 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*114 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*118 %*		*74-121*	"	"	"	"	
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
1,2-Dibromo-3-chloropropane	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
m,p-Xylene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*99.6 %*		*80-120*		"	"	"	
Surrogate: Toluene-d8		*115 %*		*81-117*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*		*74-121*		"	"	"	
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
Benzene	ND	3.9	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	3.9	"	"	"	"	"	"	
Bromochloromethane	ND	3.9	"	"	"	"	"	"	
Bromodichloromethane	ND	3.9	"	"	"	"	"	"	
Bromoform	ND	3.9	"	"	"	"	"	"	
Bromomethane	ND	3.9	"	"	"	"	"	"	
n-Butylbenzene	ND	3.9	"	"	"	"	"	"	
sec-Butylbenzene	ND	3.9	"	"	"	"	"	"	
tert-Butylbenzene	ND	3.9	"	"	"	"	"	"	
Carbon tetrachloride	ND	3.9	"	"	"	"	"	"	
Chlorobenzene	ND	3.9	"	"	"	"	"	"	
Chloroethane	ND	3.9	"	"	"	"	"	"	
Chloroform	ND	3.9	"	"	"	"	"	"	
Chloromethane	ND	3.9	"	"	"	"	"	"	
2-Chlorotoluene	ND	3.9	"	"	"	"	"	"	
4-Chlorotoluene	ND	3.9	"	"	"	"	"	"	
Dibromochloromethane	ND	3.9	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	3.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	3.9	"	"	"	"	"	"	
Dibromomethane	ND	3.9	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	3.9	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	3.9	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	3.9	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	3.9	"	"	"	"	"	"	
1,1-Dichloroethane	ND	3.9	"	"	"	"	"	"	
1,2-Dichloroethane	ND	3.9	"	"	"	"	"	"	
1,1-Dichloroethene	ND	3.9	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	3.9	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	3.9	"	"	"	"	"	"	
1,2-Dichloropropane	ND	3.9	"	"	"	"	"	"	
1,3-Dichloropropane	ND	3.9	"	"	"	"	"	"	
2,2-Dichloropropane	ND	3.9	"	"	"	"	"	"	
1,1-Dichloropropene	ND	3.9	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	3.9	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
trans-1,3-Dichloropropene	ND	3.9	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Ethylbenzene	ND	3.9	"	"	"	"	"	"	
Hexachlorobutadiene	ND	3.9	"	"	"	"	"	"	
Isopropylbenzene	ND	3.9	"	"	"	"	"	"	
p-Isopropyltoluene	ND	3.9	"	"	"	"	"	"	
Methylene chloride	ND	3.9	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	3.9	"	"	"	"	"	"	
Naphthalene	ND	3.9	"	"	"	"	"	"	
n-Propylbenzene	ND	3.9	"	"	"	"	"	"	
Styrene	ND	3.9	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	3.9	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	3.9	"	"	"	"	"	"	
Tetrachloroethene	ND	3.9	"	"	"	"	"	"	
Toluene	ND	3.9	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	3.9	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	3.9	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	3.9	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	3.9	"	"	"	"	"	"	
Trichloroethene	ND	3.9	"	"	"	"	"	"	
Trichlorofluoromethane	ND	3.9	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	3.9	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	3.9	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	3.9	"	"	"	"	"	"	
Vinyl chloride	ND	3.9	"	"	"	"	"	"	
m,p-Xylene	ND	3.9	"	"	"	"	"	"	
o-Xylene	ND	3.9	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*96.1 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*108 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93.1 %*		*74-121*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Naphthalene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*86.6 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.5 %*		*74-121*	"	"	"	"	
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
Benzene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.1	"	"	"	"	"	"	
Bromochloromethane	ND	4.1	"	"	"	"	"	"	
Bromodichloromethane	ND	4.1	"	"	"	"	"	"	
Bromoform	ND	4.1	"	"	"	"	"	"	
Bromomethane	ND	4.1	"	"	"	"	"	"	
n-Butylbenzene	ND	4.1	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.1	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.1	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.1	"	"	"	"	"	"	
Chlorobenzene	ND	4.1	"	"	"	"	"	"	
Chloroethane	ND	4.1	"	"	"	"	"	"	
Chloroform	ND	4.1	"	"	"	"	"	"	
Chloromethane	ND	4.1	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
Dibromochloromethane	ND	4.1	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
1,2-Dibromo-3-chloropropane	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	4.1	"	"	"	"	"	"	
Dibromomethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.1	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.1	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.1	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.1	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.1	"	"	"	"	"	"	
Ethylbenzene	ND	4.1	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.1	"	"	"	"	"	"	
Isopropylbenzene	ND	4.1	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.1	"	"	"	"	"	"	
Methylene chloride	ND	4.1	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.1	"	"	"	"	"	"	
Naphthalene	ND	4.1	"	"	"	"	"	"	
n-Propylbenzene	ND	4.1	"	"	"	"	"	"	
Styrene	ND	4.1	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
Tetrachloroethene	ND	4.1	"	"	"	"	"	"	
Toluene	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.1	"	"	"	"	"	"	
Trichloroethene	ND	4.1	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.1	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
Vinyl chloride	ND	4.1	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
m,p-Xylene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
o-Xylene	ND	4.1	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*113 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*117 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*74-121*		"	"	"	"	
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
Benzene	ND	4.4	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.4	"	"	"	"	"	"	
Bromochloromethane	ND	4.4	"	"	"	"	"	"	
Bromodichloromethane	ND	4.4	"	"	"	"	"	"	
Bromoform	ND	4.4	"	"	"	"	"	"	
Bromomethane	ND	4.4	"	"	"	"	"	"	
n-Butylbenzene	ND	4.4	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.4	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.4	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.4	"	"	"	"	"	"	
Chlorobenzene	ND	4.4	"	"	"	"	"	"	
Chloroethane	ND	4.4	"	"	"	"	"	"	
Chloroform	ND	4.4	"	"	"	"	"	"	
Chloromethane	ND	4.4	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.4	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.4	"	"	"	"	"	"	
Dibromochloromethane	ND	4.4	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	4.4	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.4	"	"	"	"	"	"	
Dibromomethane	ND	4.4	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.4	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.4	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.4	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.4	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.4	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.4	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.4	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.4	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.4	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.4	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.4	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.4	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.4	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.4	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
trans-1,3-Dichloropropene	ND	4.4	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Ethylbenzene	ND	4.4	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.4	"	"	"	"	"	"	
Isopropylbenzene	ND	4.4	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.4	"	"	"	"	"	"	
Methylene chloride	ND	4.4	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.4	"	"	"	"	"	"	
Naphthalene	ND	4.4	"	"	"	"	"	"	
n-Propylbenzene	ND	4.4	"	"	"	"	"	"	
Styrene	ND	4.4	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.4	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.4	"	"	"	"	"	"	
Tetrachloroethene	ND	4.4	"	"	"	"	"	"	
Toluene	ND	4.4	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.4	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.4	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.4	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.4	"	"	"	"	"	"	
Trichloroethene	ND	4.4	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.4	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.4	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.4	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.4	"	"	"	"	"	"	
Vinyl chloride	ND	4.4	"	"	"	"	"	"	
m,p-Xylene	ND	4.4	"	"	"	"	"	"	
o-Xylene	ND	4.4	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*108 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*119 %*		*74-121*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Naphthalene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*117 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*74-121*		"	"	"	"	
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
1,2-Dibromo-3-chloropropane	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
m,p-Xylene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*		*80-120*		"	"	"	
Surrogate: Toluene-d8		*105 %*		*81-117*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.2 %*		*74-121*		"	"	"	
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
Benzene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.1	"	"	"	"	"	"	
Bromochloromethane	ND	4.1	"	"	"	"	"	"	
Bromodichloromethane	ND	4.1	"	"	"	"	"	"	
Bromoform	ND	4.1	"	"	"	"	"	"	
Bromomethane	ND	4.1	"	"	"	"	"	"	
n-Butylbenzene	ND	4.1	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.1	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.1	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.1	"	"	"	"	"	"	
Chlorobenzene	ND	4.1	"	"	"	"	"	"	
Chloroethane	ND	4.1	"	"	"	"	"	"	
Chloroform	ND	4.1	"	"	"	"	"	"	
Chloromethane	ND	4.1	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
Dibromochloromethane	ND	4.1	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	4.1	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.1	"	"	"	"	"	"	
Dibromomethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.1	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.1	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.1	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.1	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
trans-1,3-Dichloropropene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Ethylbenzene	ND	4.1	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.1	"	"	"	"	"	"	
Isopropylbenzene	ND	4.1	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.1	"	"	"	"	"	"	
Methylene chloride	ND	4.1	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.1	"	"	"	"	"	"	
Naphthalene	ND	4.1	"	"	"	"	"	"	
n-Propylbenzene	ND	4.1	"	"	"	"	"	"	
Styrene	ND	4.1	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
Tetrachloroethene	ND	4.1	"	"	"	"	"	"	
Toluene	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.1	"	"	"	"	"	"	
Trichloroethene	ND	4.1	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.1	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
Vinyl chloride	ND	4.1	"	"	"	"	"	"	
m,p-Xylene	ND	4.1	"	"	"	"	"	"	
o-Xylene	ND	4.1	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*116 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*106 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*		*74-121*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Naphthalene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*105 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*114 %*	*74-121*		"	"	"	"	
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
Benzene	ND	4.5	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.5	"	"	"	"	"	"	
Bromochloromethane	ND	4.5	"	"	"	"	"	"	
Bromodichloromethane	ND	4.5	"	"	"	"	"	"	
Bromoform	ND	4.5	"	"	"	"	"	"	
Bromomethane	ND	4.5	"	"	"	"	"	"	
n-Butylbenzene	ND	4.5	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.5	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.5	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.5	"	"	"	"	"	"	
Chlorobenzene	ND	4.5	"	"	"	"	"	"	
Chloroethane	ND	4.5	"	"	"	"	"	"	
Chloroform	ND	4.5	"	"	"	"	"	"	
Chloromethane	ND	4.5	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.5	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.5	"	"	"	"	"	"	
Dibromochloromethane	ND	4.5	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
1,2-Dibromo-3-chloropropane	ND	4.5	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	4.5	"	"	"	"	"	"	
Dibromomethane	ND	4.5	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.5	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.5	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.5	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.5	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.5	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.5	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.5	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.5	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.5	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.5	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.5	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.5	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.5	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.5	"	"	"	"	"	"	
Ethylbenzene	ND	4.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.5	"	"	"	"	"	"	
Isopropylbenzene	ND	4.5	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.5	"	"	"	"	"	"	
Methylene chloride	ND	4.5	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.5	"	"	"	"	"	"	
Naphthalene	ND	4.5	"	"	"	"	"	"	
n-Propylbenzene	ND	4.5	"	"	"	"	"	"	
Styrene	ND	4.5	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.5	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.5	"	"	"	"	"	"	
Tetrachloroethene	ND	4.5	"	"	"	"	"	"	
Toluene	ND	4.5	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.5	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.5	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.5	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.5	"	"	"	"	"	"	
Trichloroethene	ND	4.5	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.5	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.5	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.5	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.5	"	"	"	"	"	"	
Vinyl chloride	ND	4.5	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
m,p-Xylene	ND	4.5	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
o-Xylene	ND	4.5	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*105 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*74-121*		"	"	"	"	
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
Benzene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.1	"	"	"	"	"	"	
Bromochloromethane	ND	4.1	"	"	"	"	"	"	
Bromodichloromethane	ND	4.1	"	"	"	"	"	"	
Bromoform	ND	4.1	"	"	"	"	"	"	
Bromomethane	ND	4.1	"	"	"	"	"	"	
n-Butylbenzene	ND	4.1	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.1	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.1	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.1	"	"	"	"	"	"	
Chlorobenzene	ND	4.1	"	"	"	"	"	"	
Chloroethane	ND	4.1	"	"	"	"	"	"	
Chloroform	ND	4.1	"	"	"	"	"	"	
Chloromethane	ND	4.1	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
Dibromochloromethane	ND	4.1	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	4.1	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.1	"	"	"	"	"	"	
Dibromomethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.1	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.1	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.1	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.1	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
trans-1,3-Dichloropropene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Ethylbenzene	ND	4.1	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.1	"	"	"	"	"	"	
Isopropylbenzene	ND	4.1	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.1	"	"	"	"	"	"	
Methylene chloride	ND	4.1	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.1	"	"	"	"	"	"	
Naphthalene	ND	4.1	"	"	"	"	"	"	
n-Propylbenzene	ND	4.1	"	"	"	"	"	"	
Styrene	ND	4.1	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
Tetrachloroethene	ND	4.1	"	"	"	"	"	"	
Toluene	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.1	"	"	"	"	"	"	
Trichloroethene	ND	4.1	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.1	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
Vinyl chloride	ND	4.1	"	"	"	"	"	"	
m,p-Xylene	ND	4.1	"	"	"	"	"	"	
o-Xylene	ND	4.1	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*98.5 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*119 %*		*74-121*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*94.8 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*82.6 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*106 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*74.2 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*74.6 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*80.8 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*111 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*104 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*81.7 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*92.2 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*91.0 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*94.6 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*112 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*101 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*88.6 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*91.6 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*97.8 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*90.7 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*113 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*102 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*85.9 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*94.0 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*96.8 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*84.1 %*	*18-137*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*98.8 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*52.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*93.4 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*101 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*111 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*73.3 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*118 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*107 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*91.6 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*97.0 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*96.8 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*90.4 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*120 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*107 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*88.9 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*94.3 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*110 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*83.8 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*117 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*103 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*87.1 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*95.8 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*110 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*88.3 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*61.6 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*99.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*97.0 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*101 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*64.6 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*68.2 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*119 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*111 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*85.3 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*97.3 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*120 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*95.5 %*	*18-137*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*115 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*106 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*88.0 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*91.3 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*54.4 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*76.6 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*58.6 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*50.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*97.0 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*98.8 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*80.4 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*62.2 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	**0.67**	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	**0.65**	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	**0.53**	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	**0.70**	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	**1.1**	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	**0.63**	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	**2.5**	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*57.6 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*50.6 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*96.4 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*99.1 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*71.8 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*71.8 %*	*18-137*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*110 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*105 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*78.1 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*93.4 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*93.0 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*50.2 %*	*18-137*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*115 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*48.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*84.4 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*90.1 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*81.2 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*69.7 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*120 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*47.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*96.4 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*98.8 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*79.2 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*117 %*	*18-137*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*111 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*102 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*82.3 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*88.0 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*90.0 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*90.1 %*	*18-137*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*92.2 %*		*25-121*	"	"	"	"	
Surrogate: Phenol-d6		*94.0 %*		*24-113*	"	"	"	"	
Surrogate: Nitrobenzene-d5		*111 %*		*23-120*	"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*82.3 %*		*30-115*	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*92.6 %*		*19-122*	"	"	"	"	
Surrogate: Terphenyl-d14		*84.1 %*		*18-137*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B1911 - EPA 7471A										
Blank (B0B1911-BLK1)				Prepared & Analyzed: 02/19/20						
Mercury	ND	0.06	mg/kg							
LCS (B0B1911-BS1)				Prepared & Analyzed: 02/19/20						
Mercury	0.17	0.06	mg/kg	0.167		102	70-130			
Matrix Spike (B0B1911-MS1)		**Source: 2002212-01**		Prepared & Analyzed: 02/19/20						
Mercury	0.19	0.06	mg/kg	0.165	0.009	110	70-130			
Matrix Spike Dup (B0B1911-MSD1)		**Source: 2002212-01**		Prepared & Analyzed: 02/19/20						
Mercury	0.20	0.06	mg/kg	0.166	0.009	115	70-130	5.13	30	
Batch B0B1912 - EPA 3050B										
Blank (B0B1912-BLK1)				Prepared: 02/19/20 Analyzed: 02/21/20						
Antimony	ND	5.0	mg/kg							
Arsenic	ND	7.7	"							
Barium	ND	3.0	"							
Beryllium	ND	1.3	"							
Cadmium	ND	1.4	"							
Chromium	ND	3.1	"							
Cobalt	ND	1.5	"							
Copper	ND	7.0	"							
Lead	ND	2.6	"							
Molybdenum	ND	4.2	"							
Nickel	ND	6.8	"							
Selenium	ND	7.6	"							
Silver	ND	1.0	"							
Thallium	ND	2.5	"							
Vanadium	ND	3.0	"							
Zinc	ND	4.0	"							

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B1912 - EPA 3050B										
LCS (B0B1912-BS1)				Prepared: 02/19/20 Analyzed: 02/21/20						
Antimony	109	5.0	mg/kg	100		109	75-125			
Arsenic	97.3	7.7	"	100		97.3	78-122			
Barium	102	3.0	"	100		102	80-120			
Beryllium	106	1.3	"	100		106	80-120			
Cadmium	102	1.4	"	100		102	80-120			
Chromium	104	3.1	"	100		104	80-120			
Cobalt	104	1.5	"	100		104	80-120			
Copper	105	7.0	"	100		105	78-122			
Lead	99.4	2.6	"	100		99.4	80-120			
Molybdenum	97.3	4.2	"	100		97.3	80-120			
Nickel	99.4	6.8	"	100		99.4	80-120			
Selenium	101	7.6	"	100		101	76-124			
Silver	92.1	1.0	"	100		92.1	60-140			
Thallium	99.6	2.5	"	100		99.6	80-120			
Vanadium	102	3.0	"	100		102	80-120			
Zinc	100	4.0	"	100		100	80-120			
LCS Dup (B0B1912-BSD1)				Prepared: 02/19/20 Analyzed: 02/21/20						
Antimony	110	5.0	mg/kg	100		110	75-125	0.913	20	
Arsenic	98.4	7.7	"	100		98.4	78-122	1.12	20	
Barium	102	3.0	"	100		102	80-120	0.00	20	
Beryllium	106	1.3	"	100		106	80-120	0.00	20	
Cadmium	101	1.4	"	100		101	80-120	0.985	20	
Chromium	107	3.1	"	100		107	80-120	2.84	20	
Cobalt	104	1.5	"	100		104	80-120	0.00	20	
Copper	104	7.0	"	100		104	78-122	0.957	20	
Lead	100	2.6	"	100		100	80-120	0.602	20	
Molybdenum	105	4.2	"	100		105	80-120	7.61	20	
Nickel	100	6.8	"	100		100	80-120	0.602	20	
Selenium	101	7.6	"	100		101	76-124	0.00	20	
Silver	87.2	1.0	"	100		87.2	60-140	5.47	40	
Thallium	101	2.5	"	100		101	80-120	1.40	20	
Vanadium	102	3.0	"	100		102	80-120	0.00	20	
Zinc	99.4	4.0	"	100		99.4	80-120	0.602	20	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B1912 - EPA 3050B										
Matrix Spike (B0B1912-MS1)	**Source: 2002212-01**			Prepared: 02/19/20	Analyzed: 02/21/20					
Antimony	86.2	5.0	mg/kg	94.7	1.1	89.9	60-140			
Arsenic	90.3	7.7	"	94.7	ND	95.4	70-130			
Barium	163	3.0	"	94.7	66	102	70-130			
Beryllium	92.5	1.3	"	94.7	0.15	97.5	70-130			
Cadmium	91.3	1.4	"	94.7	0.17	96.2	70-130			
Chromium	111	3.1	"	94.7	15	101	70-130			
Cobalt	101	1.5	"	94.7	6.6	99.7	70-130			
Copper	113	7.0	"	94.7	12	107	70-130			
Lead	93.3	2.6	"	94.7	2.6	95.8	70-130			
Molybdenum	88.0	4.2	"	94.7	0.68	92.2	70-130			
Nickel	106	6.8	"	94.7	10	101	70-130			
Selenium	91.3	7.6	"	94.7	ND	96.4	70-130			
Silver	92.0	1.0	"	94.7	0.93	96.2	60-140			
Thallium	91.1	2.5	"	94.7	0.22	96.0	70-130			
Vanadium	115	3.0	"	94.7	22	98.2	70-130			
Zinc	114	4.0	"	94.7	26	92.9	70-130			
Matrix Spike Dup (B0B1912-MSD1)	**Source: 2002212-01**			Prepared: 02/19/20	Analyzed: 02/21/20					
Antimony	84.8	5.0	mg/kg	94.8	1.1	88.3	60-140	1.64	20	
Arsenic	88.1	7.7	"	94.8	ND	92.9	70-130	2.47	20	
Barium	158	3.0	"	94.8	66	97.0	70-130	3.12	20	
Beryllium	91.5	1.3	"	94.8	0.15	96.4	70-130	1.09	20	
Cadmium	88.4	1.4	"	94.8	0.17	93.1	70-130	3.23	20	
Chromium	108	3.1	"	94.8	15	98.1	70-130	2.74	20	
Cobalt	97.9	1.5	"	94.8	6.6	96.3	70-130	3.12	20	
Copper	108	7.0	"	94.8	12	101	70-130	4.52	30	
Lead	92.0	2.6	"	94.8	2.6	94.3	70-130	1.40	30	
Molybdenum	87.1	4.2	"	94.8	0.68	91.2	70-130	1.03	20	
Nickel	104	6.8	"	94.8	10	99.2	70-130	1.90	20	
Selenium	88.6	7.6	"	94.8	ND	93.5	70-130	3.00	20	
Silver	87.7	1.0	"	94.8	0.93	91.5	60-140	4.79	40	
Thallium	88.6	2.5	"	94.8	0.22	93.2	70-130	2.78	20	
Vanadium	112	3.0	"	94.8	22	94.9	70-130	2.64	20	
Zinc	109	4.0	"	94.8	26	87.6	70-130	4.48	20	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B1913 - EPA 3060A										
Blank (B0B1913-BLK1)				Prepared: 02/19/20		Analyzed: 02/20/20				
Hexavalent Chromium	ND	0.41	mg/kg							
LCS (B0B1913-BS1)				Prepared: 02/19/20		Analyzed: 02/20/20				
Hexavalent Chromium	0.162	0.41	mg/kg	0.150		108	80-120			
Matrix Spike (B0B1913-MS1)		**Source: 2002212-01**		Prepared: 02/19/20		Analyzed: 02/20/20				
Hexavalent Chromium	0.141	0.41	mg/kg	0.141	ND	100	75-125			
Matrix Spike Dup (B0B1913-MSD1)		**Source: 2002212-01**		Prepared: 02/19/20		Analyzed: 02/20/20				
Hexavalent Chromium	0.138	0.41	mg/kg	0.141	ND	97.9	75-125	2.15	20	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Volatile Petroleum Hydrocarbons (TVPH) by GC/FID - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2427 - EPA 5035 P & T										
Blank (B0B2427-BLK1)				Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg							
Surrogate: a,a,a-Trifluorotoluene	*0.0248*		*"*	*0.0200*		*124*	*35-130*			
LCS (B0B2427-BS1)				Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	0.588	0.050	mg/kg	0.600		98.0	85-115			
Matrix Spike (B0B2427-MS1)	**Source: 2002212-01**			Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	0.492	0.050	mg/kg	0.600	ND	82.0	50-150			
Matrix Spike Dup (B0B2427-MSD1)	**Source: 2002212-01**			Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	0.519	0.050	mg/kg	0.600	ND	86.5	50-150	5.34	30	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons (TPH) by GC/FID - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2440 - EPA 3550B Solid Ext										
Blank (B0B2440-BLK1)				Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg							
Oil Range Organics (C22-C36)	ND	5.0	"							
Surrogate: o-Terphenyl	*1.75*		*"*	*2.50*		*70.0*	*60-175*			
Surrogate: o-Terphenyl	*1.75*		*"*	*2.50*		*70.0*	*60-175*			
LCS (B0B2440-BS1)				Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	5.75	5.0	mg/kg	5.00		115	80-120			
Diesel Range Organics (C10-C24)	5.75	5.0	"	5.00		115	80-120			
Matrix Spike (B0B2440-MS1)		**Source: 2002212-01**		Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	5.50	5.0	mg/kg	5.00	ND	110	50-150			
Diesel Range Organics (C10-C24)	5.50	5.0	"	5.00	ND	110	50-150			
Matrix Spike Dup (B0B2440-MSD1)		**Source: 2002212-01**		Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	5.24	5.0	mg/kg	5.00	ND	105	50-150	4.84	30	
Diesel Range Organics (C10-C24)	5.24	5.0	"	5.00	ND	105	50-150	4.84	30	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2427 - EPA 5035 P & T										
Blank (B0B2427-BLK1)				Prepared: 02/24/20 Analyzed: 02/25/20						
C5 <= HC < C6	ND	0.010	mg/kg							
C6 <= HC < C7	ND	0.010	"							
C7 <= HC < C8	ND	0.010	"							
C8 <= HC < C9	ND	0.010	"							
C9 <= HC < C10	ND	0.010	"							
C10 <= HC < C11	ND	0.010	"							
C11 <= HC < C12	ND	0.010	"							
HC >= C12	ND	0.010	"							
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"							
Surrogate: a,a,a-Trifluorotoluene	*0.0248*		*"*	*0.0200*		*124*	*35-130*			
LCS (B0B2427-BS1)				Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	0.588	0.050	mg/kg	0.600		98.0	80-120			
Matrix Spike (B0B2427-MS1)	**Source: 2002212-01**			Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	0.492	0.050	mg/kg	0.600	ND	82.0	50-150			
Matrix Spike Dup (B0B2427-MSD1)	**Source: 2002212-01**			Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	0.519	0.050	mg/kg	0.600	ND	86.5	50-150	5.34	30	
Batch B0B2440 - EPA 3550B Solid Ext										
Blank (B0B2440-BLK1)				Prepared: 02/24/20 Analyzed: 02/25/20						
HC < C8	ND	1.0	mg/kg							
C8 <= HC < C9	ND	1.0	"							
C9 <= HC < C10	ND	1.0	"							
C10 <= HC < C11	ND	1.0	"							
C11 <= HC < C12	ND	1.0	"							
C12 <= HC < C14	ND	1.0	"							
C14 <= HC < C16	ND	1.0	"							
C16 <= HC < C18	ND	1.0	"							
C18 <= HC < C20	ND	1.0	"							
C20 <= HC < C24	ND	1.0	"							
C24 <= HC < C28	ND	1.0	"							
C28 <= HC < C32	ND	1.0	"							
HC >= C32	ND	1.0	"							
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"							
Surrogate: o-Terphenyl	*1.75*		*"*	*2.50*		*70.0*	*60-175*			

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2440 - EPA 3550B Solid Ext										
LCS (B0B2440-BS1)				Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	5.75	5.0	mg/kg	5.00		115	80-120			
Matrix Spike (B0B2440-MS1)	**Source: 2002212-01**			Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	5.50	5.0	mg/kg	5.00	ND	110	50-150			
Matrix Spike Dup (B0B2440-MSD1)	**Source: 2002212-01**			Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	5.24	5.0	mg/kg	5.00	ND	105	50-150	4.84	30	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2001 - EPA 5035 P & T										
Blank (B0B2001-BLK1)				Prepared: 02/20/20 Analyzed: 02/21/20						
Benzene	ND	5.0	µg/kg							
Bromobenzene	ND	5.0	"							
Bromochloromethane	ND	5.0	"							
Bromodichloromethane	ND	5.0	"							
Bromoform	ND	5.0	"							
Bromomethane	ND	5.0	"							
n-Butylbenzene	ND	5.0	"							
sec-Butylbenzene	ND	5.0	"							
tert-Butylbenzene	ND	5.0	"							
Carbon tetrachloride	ND	5.0	"							
Chlorobenzene	ND	5.0	"							
Chloroethane	ND	5.0	"							
Chloroform	ND	5.0	"							
Chloromethane	ND	5.0	"							
2-Chlorotoluene	ND	5.0	"							
4-Chlorotoluene	ND	5.0	"							
Dibromochloromethane	ND	5.0	"							
1,2-Dibromo-3-chloropropane	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	5.0	"							
Dibromomethane	ND	5.0	"							
1,2-Dichlorobenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	5.0	"							
1,4-Dichlorobenzene	ND	5.0	"							
Dichlorodifluoromethane	ND	5.0	"							
1,1-Dichloroethane	ND	5.0	"							
1,2-Dichloroethane	ND	5.0	"							
1,1-Dichloroethene	ND	5.0	"							
cis-1,2-Dichloroethene	ND	5.0	"							
trans-1,2-Dichloroethene	ND	5.0	"							
1,2-Dichloropropane	ND	5.0	"							
1,3-Dichloropropane	ND	5.0	"							
2,2-Dichloropropane	ND	5.0	"							
1,1-Dichloropropene	ND	5.0	"							
cis-1,3-Dichloropropene	ND	5.0	"							
trans-1,3-Dichloropropene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
Hexachlorobutadiene	ND	5.0	"							

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Mearns Consulting LLC	Project:	950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number:	[none]	**Reported:**
Santa Monica CA, 90405	Project Manager:	Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2001 - EPA 5035 P & T										
Blank (B0B2001-BLK1)				Prepared: 02/20/20 Analyzed: 02/21/20						
Isopropylbenzene	ND	5.0	µg/kg							
p-Isopropyltoluene	ND	5.0	"							
Methylene chloride	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Naphthalene	ND	5.0	"							
n-Propylbenzene	ND	5.0	"							
Styrene	ND	5.0	"							
1,1,1,2-Tetrachloroethane	ND	5.0	"							
1,1,2,2-Tetrachloroethane	ND	5.0	"							
Tetrachloroethene	ND	5.0	"							
Toluene	ND	5.0	"							
1,2,3-Trichlorobenzene	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	5.0	"							
1,1,1-Trichloroethane	ND	5.0	"							
1,1,2-Trichloroethane	ND	5.0	"							
Trichloroethene	ND	5.0	"							
Trichlorofluoromethane	ND	5.0	"							
1,2,3-Trichloropropane	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
1,3,5-Trimethylbenzene	ND	5.0	"							
Vinyl chloride	ND	5.0	"							
m,p-Xylene	ND	5.0	"							
o-Xylene	ND	5.0	"							
Surrogate: Dibromofluoromethane	*50.4*		*"*	*50.0*		*101*	*80-120*			
Surrogate: Toluene-d8	*47.7*		*"*	*50.0*		*95.4*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*57.7*		*"*	*50.0*		*115*	*74-121*			
LCS (B0B2001-BS1)				Prepared: 02/20/20 Analyzed: 02/21/20						
Benzene	51.2	5.0	µg/kg	50.0		102	80-120			
Chlorobenzene	57.6	5.0	"	50.0		115	80-120			
1,1-Dichloroethene	56.6	5.0	"	50.0		113	80-120			
Toluene	49.1	5.0	"	50.0		98.2	80-120			
Trichloroethene	55.0	5.0	"	50.0		110	80-120			

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2001 - EPA 5035 P & T										
Matrix Spike (B0B2001-MS1)	**Source: 2002212-18**			Prepared: 02/20/20	Analyzed: 02/21/20					
Benzene	51.1	5.0	µg/kg	50.0	ND	102	37-151			
Chlorobenzene	53.9	5.0	"	50.0	ND	108	37-160			
1,1-Dichloroethene	60.6	5.0	"	50.0	ND	121	50-150			
Toluene	47.0	5.0	"	50.0	ND	94.0	47-150			
Trichloroethene	49.6	5.0	"	50.0	ND	99.2	71-157			
Matrix Spike Dup (B0B2001-MSD1)	**Source: 2002212-18**			Prepared: 02/20/20	Analyzed: 02/21/20					
Benzene	58.7	5.0	µg/kg	50.0	ND	117	37-151	13.8	30	
Chlorobenzene	60.2	5.0	"	50.0	ND	120	37-160	11.0	30	
1,1-Dichloroethene	52.7	5.0	"	50.0	ND	105	50-150	13.9	30	
Toluene	44.6	5.0	"	50.0	ND	89.2	47-150	5.24	30	
Trichloroethene	50.2	5.0	"	50.0	ND	100	71-157	1.20	30	

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Mearns Consulting LLC	Project:	950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number:	[none]	**Reported:**
Santa Monica CA, 90405	Project Manager:	Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2102 - EPA 3550B Solid Ext										
Blank (B0B2102-BLK1)				Prepared: 02/21/20 Analyzed: 02/24/20						
Acenaphthene	ND	0.33	mg/kg							
Acenaphthylene	ND	0.33	"							
Anthracene	ND	0.33	"							
Benzidine	ND	0.33	"							
Benzo (a) anthracene	ND	0.33	"							
Benzo (b) fluoranthene	ND	0.33	"							
Benzo (k) fluoranthene	ND	0.33	"							
Benzo (a) pyrene	ND	0.33	"							
Benzo (g,h,i) perylene	ND	0.33	"							
Benzyl alcohol	ND	0.33	"							
Bis(2-chloroethyl)ether	ND	0.33	"							
Bis(2-chloroethoxy)methane	ND	0.33	"							
Bis(2-ethylhexyl)phthalate	ND	0.33	"							
Bis(2-chloroisopropyl)ether	ND	0.33	"							
4-Bromophenyl phenyl ether	ND	0.33	"							
Butyl benzyl phthalate	ND	0.33	"							
4-Chloroaniline	ND	0.33	"							
2-Chlorophenol	ND	0.33	"							
4-Chloro-3-methylphenol	ND	0.33	"							
2-Chloronaphthalene	ND	0.33	"							
4-Chlorophenyl phenyl ether	ND	0.33	"							
Chrysene	ND	0.33	"							
Dibenz (a,h) anthracene	ND	0.33	"							
Dibenzofuran	ND	0.33	"							
1,3-Dichlorobenzene	ND	0.33	"							
1,2-Dichlorobenzene	ND	0.33	"							
1,4-Dichlorobenzene	ND	0.33	"							
3,3´-Dichlorobenzidine	ND	0.33	"							
2,4-Dichlorophenol	ND	0.33	"							
Diethyl phthalate	ND	0.33	"							
2,4-Dimethylphenol	ND	0.33	"							
Dimethyl phthalate	ND	0.33	"							
Di-n-butyl phthalate	ND	0.33	"							
2,4-Dinitrophenol	ND	0.33	"							
4,6-Dinitro-2-methylphenol	ND	0.33	"							
2,4-Dinitrotoluene	ND	0.33	"							
2,6-Dinitrotoluene	ND	0.33	"							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2102 - EPA 3550B Solid Ext										
Blank (B0B2102-BLK1)				Prepared: 02/21/20 Analyzed: 02/24/20						
Di-n-octyl phthalate	ND	0.33	mg/kg							
1,2-Diphenylhydrazine	ND	0.33	"							
Fluoranthene	ND	0.33	"							
Fluorene	ND	0.33	"							
Hexachlorobenzene	ND	0.33	"							
Hexachlorobutadiene	ND	0.33	"							
Hexachlorocyclopentadiene	ND	0.33	"							
Hexachloroethane	ND	0.33	"							
Indeno (1,2,3-cd) pyrene	ND	0.33	"							
Isophorone	ND	0.33	"							
2-Methylnaphthalene	ND	0.33	"							
2-Methylphenol	ND	0.33	"							
4-Methylphenol	ND	0.33	"							
Naphthalene	ND	0.33	"							
2-Nitroaniline	ND	0.33	"							
3-Nitroaniline	ND	0.33	"							
4-Nitroaniline	ND	0.33	"							
Nitrobenzene	ND	0.33	"							
2-Nitrophenol	ND	0.33	"							
4-Nitrophenol	ND	0.33	"							
N-Nitrosodimethylamine	ND	0.33	"							
Diphenylamine	ND	0.33	"							
N-Nitrosodi-n-propylamine	ND	0.33	"							
Pentachlorophenol	ND	0.33	"							
Phenanthrene	ND	0.33	"							
Phenol	ND	0.33	"							
Pyrene	ND	0.33	"							
1,2,4-Trichlorobenzene	ND	0.33	"							
2,4,5-Trichlorophenol	ND	0.33	"							
2,4,6-Trichlorophenol	ND	0.33	"							
Surrogate: 2-Fluorophenol	*0.410*		"	*0.500*		*82.0*	*25-121*			
Surrogate: Phenol-d6	*0.367*		"	*0.500*		*73.4*	*24-113*			
Surrogate: Nitrobenzene-d5	*0.333*		"	*0.333*		*100*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*0.235*		"	*0.333*		*70.6*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*0.368*		"	*0.500*		*73.6*	*19-122*			
Surrogate: Terphenyl-d14	*0.294*		"	*0.333*		*88.3*	*18-137*			

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2102 - EPA 3550B Solid Ext										
LCS (B0B2102-BS1)				Prepared: 02/21/20 Analyzed: 02/24/20						
Acenaphthene	0.270	0.33	mg/kg	0.333		81.1	47-145			
2-Chlorophenol	0.838	0.33	"	0.667		126	23-134			
4-Chloro-3-methylphenol	0.791	0.33	"	0.667		119	22-147			
1,4-Dichlorobenzene	0.357	0.33	"	0.333		107	20-124			
2,4-Dinitrotoluene	0.335	0.33	"	0.333		101	39-139			
4-Nitrophenol	0.772	0.33	"	0.667		116	0-132			
N-Nitrosodi-n-propylamine	0.470	0.33	"	0.333		141	0-230			
Pentachlorophenol	0.526	0.33	"	0.667		78.9	14-176			
Phenol	0.578	0.33	"	0.667		86.7	5-112			
Pyrene	0.283	0.33	"	0.333		85.0	52-115			
1,2,4-Trichlorobenzene	0.369	0.33	"	0.333		111	44-142			
Matrix Spike (B0B2102-MS1)		**Source: 2002212-01**		Prepared: 02/21/20 Analyzed: 02/24/20						
Acenaphthene	0.255	0.33	mg/kg	0.333	ND	76.6	47-145			
2-Chlorophenol	0.810	0.33	"	0.667	ND	121	23-134			
4-Chloro-3-methylphenol	0.756	0.33	"	0.667	ND	113	22-147			
1,4-Dichlorobenzene	0.314	0.33	"	0.333	ND	94.3	20-124			
2,4-Dinitrotoluene	0.145	0.33	"	0.333	ND	43.5	39-139			
4-Nitrophenol	0.595	0.33	"	0.667	ND	89.2	0-132			
N-Nitrosodi-n-propylamine	0.421	0.33	"	0.333	ND	126	0-230			
Pentachlorophenol	0.361	0.33	"	0.667	ND	54.1	14-176			
Phenol	0.537	0.33	"	0.667	ND	80.5	5-112			
Pyrene	0.318	0.33	"	0.333	ND	95.5	52-115			
1,2,4-Trichlorobenzene	0.318	0.33	"	0.333	ND	95.5	44-142			
Matrix Spike Dup (B0B2102-MSD1)		**Source: 2002212-01**		Prepared: 02/21/20 Analyzed: 02/24/20						
Acenaphthene	0.292	0.33	mg/kg	0.333	ND	87.7	47-145	13.5	30	
2-Chlorophenol	0.808	0.33	"	0.667	ND	121	23-134	0.247	30	
4-Chloro-3-methylphenol	0.707	0.33	"	0.667	ND	106	22-147	6.70	30	
1,4-Dichlorobenzene	0.347	0.33	"	0.333	ND	104	20-124	9.98	30	
2,4-Dinitrotoluene	0.175	0.33	"	0.333	ND	52.6	39-139	18.8	30	
4-Nitrophenol	0.773	0.33	"	0.667	ND	116	0-132	26.0	30	
N-Nitrosodi-n-propylamine	0.480	0.33	"	0.333	ND	144	0-230	13.1	30	
Pentachlorophenol	0.309	0.33	"	0.667	ND	46.3	14-176	15.5	30	
Phenol	0.555	0.33	"	0.667	ND	83.2	5-112	3.30	30	
Pyrene	0.349	0.33	"	0.333	ND	105	52-115	9.30	30	
1,2,4-Trichlorobenzene	0.356	0.33	"	0.333	ND	107	44-142	11.3	30	

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Mearns Consulting LLC	Project:	950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number:	[none]	**Reported:**
Santa Monica CA, 90405	Project Manager:	Susan Mearns	02/26/20 11:36

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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SIERRA ANALYTICAL
TEL: 949 • 348 • 9389
FAX: 949 • 348 • 9115
26052 Merit Circle • Suite 104 • Laguna Hills, CA • 92653

CHAIN OF CUSTODY RECORD

Date: 2 / 18 / 20 Page: 1 of 2

Lab Work Order No.: 2002212

Client: MEARNS CONSULTING CORP
Client Address: 738 ASHLAND AVE
SANTA MONICA CA 90405

Client Tel. No.: 310 403 1921
Client Fax. No.: 310 396 6878
Client Proj. Mgr.: SUSAN L MEARNS PHD

Client Project ID: 950 E 33rd & 3477 CALIFORNIA AVE

Turn Around Time Requested: ☐ Immediate ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4 Day ☐ 5 Day ☒ Normal ☐ Mobile

Analyses Requested

Geotracker EDD Info:
Client LOGCODE
Site Global ID

Client Sample ID.	Sierra No.	Date	Time	Matrix	Preservative	Container Type	No. of Containers	TPHg 8015B	TPHd 8015B	TPHo 8015B	SPECIATED CARBON CHAINS 8015B	VOCs 5035B / 8260B	SVOCs 8270	TTLC METALS 6000/7000	Cr+6					Field Point Names / Comments
SB1-5	01	2-18-20	0817	SOIL	10E	6" SLV 4 VOA VIALS	1/4	X	X	X	X	X	X	X	X					
SB1-10	02	↓	0817	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB2-5	03		0917					X	X	X	X	X	X	X	X					
SB2-10	04		0924					X	X	X	X	X	X	X	X					
SB3-5	05		1014					X	X	X	X	X	X	X	X					
SB3-10	06		1021					X	X	X	X	X	X	X	X					
SB4-5	07		1109					X	X	X	X	X	X	X	X					
SB4-10	08		1116					X	X	X	X	X	X	X	X					
SB5-5	09		1142					X	X	X	X	X	X	X	X					
SB5-10	10	↓	1149	↓	↓	↓	↓	X	X	X	X	X	X	X	X					

1 Sampler Signature: [signature] Scott Fagan
Printed Name: SUSAN MEARNS Scott Fagan
Shipped Via: HAND DELIVERED
(Carrier/Waybill No.)

50/80 Total Number of Containers Submitted to Laboratory

2 Relinquished By: [signature] Date: 2-18-20 Received By: [signature] Date: 2/18/20
Company: MEARNS CONSULTING Time: 1610 Company: SIERRA Time: 1610

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under SIERRA's Terms and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT.
* - Samples determined to be hazardous by SIERRA will be returned to CLIENT.

3 Relinquished By: Date: Received By: Date:
Company: Time: Company: Time:

50/80 Total Number of Containers Received by Laboratory

4 Relinquished By: Date: Received By: Date:
Company: Time: Company: Time:

Special Instructions:

Sample Disposal:
☐ Return to Client
☐ Lab Disposal *
☐ Archive ____ mos.
☐ Other ____

FOR LABORATORY USE ONLY - Sample Receipt Conditions:
☑ Intact ☑ Chilled - Temp (°C) 40°
☐ Sample Seals ☐ Preservatives - Verified By
☑ Properly Labelled ☐ Other
☑ Appropriate Sample Container ☑ Storage Location R5 - R1A2

Rev: 120321

DISTRIBUTION: White - To Accompany Samples, Yellow - Laboratory Copy, Pink - Field Personnel Copy

SIERRA ANALYTICAL
TEL: 949 • 348 • 9389
FAX: 949 • 348 • 9115
26052 Merit Circle • Suite 104 • Laguna Hills, CA • 92653

CHAIN OF CUSTODY RECORD

Date: 2 / 18 / 20 Page: 2 of 2

Lab Work Order No.: 2002212

Client: MEARNS CONSULTING CORP
Client Address: 738 ASHLAND AVE
SANTA MONICA CA 90405

Client Tel. No.: 310 403 1921
Client Fax. No.: 310 396 6878
Client Proj. Mgr.: SUSAN L MEARNS PHD

Client Project ID: 950 E33rd & 3177 CALIFORNIA

Turn Around Time Requested: ☐ Immediate ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4 Day ☐ 5 Day ☒ Normal ☐ Mobile

Analyses Requested

Geotracker EDD Info:
Client LOGCODE
Site Global ID

Client Sample ID.	Sierra No.	Date	Time	Matrix	Preservative	Container Type	No. of Containers	TPHg 8015B	TPHd 8015B	TPHo 8015B	Speciated Carbon Chains 8015B	VOCs 5035B/8260B	SVOCs 8270	TLC Metals 6000/7000	Cr+6					Field Point Names / Comments
SB6-5	11	2-18-20	1301	SOIL	ICE	6" SDV VOA VIALS	1/4	X	X	X	X	X	X	X	X					
SB6-10	12	↓	1310	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB7-5	13	↓	1341	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB7-10	14	↓	1348	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB8-5	15	↓	1422	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB8-10	16	↓	1435	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB9-5	17	↓	1508	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB9-10	18	↓	1519	↓	↓	↓	↓	X	X	X	X	X	X	X	X					

1 Sampler Signature: [signature] Scott Fagan
Printed Name: SUSAN MEARNS Scott Fagan
Shipped Via: HAND DELIVERED
(Carrier/Waybill No.)

2 Relinquished By: [signature] Date: 2-18-20 Received By: [signature] Date: 2/18/20
Company: MEARNS CONSULTING Time: 1610 Company: Scott Fagan Time: 1610

3 Relinquished By: Date: Received By: Date:
Company: Time: Company: Time:

4 Relinquished By: Date: Received By: Date:
Company: Time: Company: Time:

Special Instructions:

40/80 Total Number of Containers Submitted to Laboratory

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under SIERRA's Terms and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT.
* Samples determined to be hazardous by SIERRA will be returned to CLIENT.

40/80 Total Number of Containers Received by Laboratory

Sample Disposal:
☐ Return to Client
☐ Lab Disposal *
☐ Archive ____ mos.
☐ Other ____

FOR LABORATORY USE ONLY - Sample Receipt Conditions:
☑ Intact ☑ Chilled - Temp (°C) 40
☐ Sample Seals ☐ Preservatives - Verified By
☑ Properly Labelled ☐ Other
☑ Appropriate Sample Container ☑ Storage Location (RS-[illegible])

Rev: 120321

DISTRIBUTION: White - To Accompany Samples, Yellow - Laboratory Copy, Pink - Field Personnel Copy

APPENDIX B

Jones Environmental Inc.
Soil Vapor Analytical Results
February 21, 2020

JONES ENVIRONMENTAL, INC.

714-449-9937
562-646-1611
805-399-0060

11007 FOREST PLACE
SANTA FE SPRINGS, CA 90670
WWW.JONESENV.COM

JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

ANALYSES REQUESTED

1. EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sampling – Soil Gas samples were collected in glass gas-tight syringes equipped with Teflon plungers.

A tracer gas mixture of n-pentane, n-hexane, and n-heptane was placed at the tubing-surface interface before sampling. These compounds were analyzed during the 8260B analytical run to determine if there were surface leaks into the subsurface due to improper installation of the probe. No tracer was detected in any of the samples reported herein.

The sampling rate was approximately 200 cc/min, except when noted differently on the chain of custody record, using a glass gas-tight syringe. Purging was completed using a pump set at approximately 200 cc/min, except when noted differently on the chain of custody record. A default of 3 purge volumes was used as recommended by July 2015 DTSC/RWQCB guidance documents.

Prior to purging and sampling of soil gas at each point, a shut-in test was conducted to check for leaks in the above ground fittings. The shut-in test was performed on the above ground apparatus by evacuating the line to a vacuum of 100 inches of water, sealing the entire system and watching the vacuum for at least one minute. A vacuum gauge attached in parallel to the apparatus measured the vacuum. If there was any observable loss of vacuum, the fittings were adjusted as needed until the vacuum did not change noticeably. The soil gas sample was then taken.

No flow conditions occur when a sampling rate greater than 10 mL/min cannot be maintained without applying a vacuum greater than 100 inches of water to the sampling train. The sampling train is left at a vacuum for no less than three minutes. If the vacuum does not subside appreciably after three minutes, the sample location is determined to be a no flow sample.

Analytical – Soil Gas samples were analyzed using EPA Method 8260 that includes extra compounds required by DTSC/RWQCB (such as Freon 113). Instrument Continuing Calibration Verification, QC Reference Standards, Instrument Blanks and Sampling Blanks were analyzed every 12 hours as prescribed by the method. In addition, a Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were analyzed with each batch of Soil Gas samples. A duplicate/replicate sample was analyzed each day of the sampling activity. All samples were injected into the GC/MS system within 30 minutes of collection.

Approval:

Colby Wakeman
QA/QC Manager

JONES ENVIRONMENTAL, INC.
714-449-9937
562-646-1611
805-399-0060
11007 FOREST PLACE
SANTA FE SPRINGS, CA 90670
WWW.JONESENV.COM

JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV1-5'**	**SV1-10'**	**SV2-5'**	**SV2-10'**	**SV3-5'**		
Jones ID:	**G-0094-01**	**G-0094-02**	**G-0094-03**	**G-0094-04**	**G-0094-05**	**Reporting Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	8	µg/m3
Bromobenzene	ND	ND	ND	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	ND	ND	ND	8	µg/m3
Bromoform	ND	ND	ND	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
sec-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
tert-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
Carbon tetrachloride	ND	ND	ND	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	ND	ND	ND	8	µg/m3
Chloroform	**12**	ND	ND	ND	ND	8	µg/m3
2-Chlorotoluene	ND	ND	ND	ND	ND	12	µg/m3
4-Chlorotoluene	ND	ND	ND	ND	ND	12	µg/m3
Dibromochloromethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	8	µg/m3
Dibromomethane	ND	ND	ND	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
Dichlorodifluoromethane	ND	ND	ND	ND	ND	16	µg/m3
1,1-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	ND	ND	ND	16	µg/m3
1,1-Dichloropropene	ND	ND	ND	ND	ND	10	µg/m3

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV1-5'**	**SV1-10'**	**SV2-5'**	**SV2-10'**	**SV3-5'**		
Jones ID:	**G-0094-01**	**G-0094-02**	**G-0094-03**	**G-0094-04**	**G-0094-05**	**Reporting Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
Ethylbenzene	**18**	ND	ND	ND	ND	8	µg/m3
Freon 113	ND	ND	ND	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	ND	ND	ND	24	µg/m3
Isopropylbenzene	ND	ND	ND	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	ND	ND	ND	8	µg/m3
Methylene chloride	ND	ND	ND	ND	ND	8	µg/m3
Naphthalene	ND	ND	ND	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	ND	ND	ND	8	µg/m3
Styrene	ND	ND	ND	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	16	µg/m3
Tetrachloroethene	ND	ND	**8**	ND	ND	8	µg/m3
Toluene	**21**	ND	**33**	**11**	**32**	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
Trichloroethene	ND	ND	ND	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	ND	ND	ND	16	µg/m3
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	**8**	ND	**11**	ND	**11**	8	µg/m3
1,3,5-Trimethylbenzene	**9**	ND	ND	ND	ND	8	µg/m3
Vinyl chloride	ND	ND	ND	ND	ND	8	µg/m3
m,p-Xylene	**100**	ND	ND	ND	ND	16	µg/m3
o-Xylene	**34**	ND	ND	ND	ND	8	µg/m3
MTBE	ND	ND	ND	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	ND	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	ND	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	ND	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	ND	ND	ND	400	µg/m3
Gasoline Range Organics (C4-C12)	ND	ND	ND	ND	ND	2000	µg/m3
Tracer:							
n-Pentane	ND	ND	ND	ND	ND	80	µg/m3
n-Hexane	ND	ND	ND	ND	ND	80	µg/m3
n-Heptane	ND	ND	ND	ND	ND	80	µg/m3
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	112%	110%	113%	116%	113%	60 - 140	
Toluene-d_8	95%	103%	97%	98%	98%	60 - 140	
4-Bromofluorobenzene	99%	102%	101%	100%	103%	60 - 140	
Batch ID:	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01		

ND = Value below reporting limit

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV3-10'**	**SV4-5'**	**SV4-10'**	**SV4-10' REP**	**SV5-5'**		
Jones ID:	**G-0094-06**	**G-0094-07**	**G-0094-08**	**G-0094-09**	**G-0094-10**	**Reporting Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	8	µg/m3
Bromobenzene	ND	ND	ND	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	ND	ND	ND	8	µg/m3
Bromoform	ND	ND	ND	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
sec-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
tert-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
Carbon tetrachloride	ND	ND	ND	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	ND	ND	ND	8	µg/m3
Chloroform	ND	ND	ND	ND	**8**	8	µg/m3
2-Chlorotoluene	ND	ND	ND	ND	ND	12	µg/m3
4-Chlorotoluene	ND	ND	ND	ND	ND	12	µg/m3
Dibromochloromethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	8	µg/m3
Dibromomethane	ND	ND	ND	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
Dichlorodifluoromethane	ND	ND	ND	ND	ND	16	µg/m3
1,1-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	ND	ND	ND	16	µg/m3
1,1-Dichloropropene	ND	ND	ND	ND	ND	10	µg/m3

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV3-10'**	**SV4-5'**	**SV4-10'**	**SV4-10' REP**	**SV5-5'**		
Jones ID:	**G-0094-06**	**G-0094-07**	**G-0094-08**	**G-0094-09**	**G-0094-10**	**Reporting Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
Ethylbenzene	ND	ND	ND	ND	ND	8	µg/m3
Freon 113	ND	ND	ND	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	ND	ND	ND	24	µg/m3
Isopropylbenzene	ND	ND	ND	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	ND	ND	ND	8	µg/m3
Methylene chloride	ND	ND	ND	ND	ND	8	µg/m3
Naphthalene	ND	ND	ND	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	ND	ND	ND	8	µg/m3
Styrene	ND	ND	ND	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	16	µg/m3
Tetrachloroethene	ND	ND	ND	ND	ND	8	µg/m3
Toluene	ND	**10**	ND	ND	ND	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
Trichloroethene	ND	ND	ND	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	ND	ND	ND	16	µg/m3
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	ND	**16**	ND	ND	**13**	8	µg/m3
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	8	µg/m3
Vinyl chloride	ND	ND	ND	ND	ND	8	µg/m3
m,p-Xylene	ND	ND	ND	ND	**19**	16	µg/m3
o-Xylene	ND	ND	ND	ND	**9**	8	µg/m3
MTBE	ND	ND	ND	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	ND	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	ND	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	ND	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	ND	ND	ND	400	µg/m3
Gasoline Range Organics (C4-C12)	ND	ND	ND	ND	ND	2000	µg/m3
Tracer:							
n-Pentane	ND	ND	ND	ND	ND	80	µg/m3
n-Hexane	ND	ND	ND	ND	ND	80	µg/m3
n-Heptane	ND	ND	ND	ND	ND	80	µg/m3
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	113%	107%	115%	115%	110%	60 - 140	
Toluene-d_8	98%	99%	98%	97%	98%	60 - 140	
4-Bromofluorobenzene	104%	101%	100%	97%	100%	60 - 140	
Batch ID:	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01		

ND = Value below reporting limit

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV5-10'**	**SV6-5'**	**SV6-5' REP**	**SV7-5'**	**SV7-10'**		
Jones ID:	**G-0094-11**	**G-0094-12**	**G-0094-13**	**G-0094-15**	**G-0094-16**	**Reporting Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	**19**	8	µg/m3
Bromobenzene	ND	ND	ND	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	ND	ND	ND	8	µg/m3
Bromoform	ND	ND	ND	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
sec-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
tert-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
Carbon tetrachloride	ND	ND	ND	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	ND	ND	ND	8	µg/m3
Chloroform	ND	ND	ND	ND	**11**	8	µg/m3
2-Chlorotoluene	ND	ND	ND	ND	ND	12	µg/m3
4-Chlorotoluene	ND	ND	ND	ND	ND	12	µg/m3
Dibromochloromethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	8	µg/m3
Dibromomethane	ND	ND	ND	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
Dichlorodifluoromethane	ND	ND	ND	ND	ND	16	µg/m3
1,1-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	ND	ND	ND	16	µg/m3
1,1-Dichloropropene	ND	ND	ND	ND	ND	10	µg/m3

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV5-10'**	**SV6-5'**	**SV6-5' REP**	**SV7-5'**	**SV7-10'**		
Jones ID:	**G-0094-11**	**G-0094-12**	**G-0094-13**	**G-0094-15**	**G-0094-16**	**Reporting Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
Ethylbenzene	ND	ND	ND	ND	**23**	8	µg/m3
Freon 113	ND	ND	ND	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	ND	ND	ND	24	µg/m3
Isopropylbenzene	ND	ND	ND	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	ND	ND	ND	8	µg/m3
Methylene chloride	ND	ND	ND	ND	ND	8	µg/m3
Naphthalene	ND	ND	ND	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	ND	ND	**20**	8	µg/m3
Styrene	ND	ND	ND	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	16	µg/m3
Tetrachloroethene	ND	ND	ND	ND	ND	8	µg/m3
Toluene	ND	ND	ND	ND	**45**	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
Trichloroethene	ND	ND	ND	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	ND	ND	ND	16	µg/m3
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	ND	ND	ND	ND	**123**	8	µg/m3
1,3,5-Trimethylbenzene	ND	ND	ND	ND	**40**	8	µg/m3
Vinyl chloride	ND	ND	ND	ND	ND	8	µg/m3
m,p-Xylene	ND	ND	ND	ND	**76**	16	µg/m3
o-Xylene	ND	ND	ND	ND	**40**	8	µg/m3
MTBE	ND	ND	ND	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	ND	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	ND	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	ND	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	ND	ND	ND	400	µg/m3
Gasoline Range Organics (C4-C12)	ND	ND	ND	ND	ND	2000	µg/m3
Tracer:							
n-Pentane	ND	ND	ND	ND	ND	80	µg/m3
n-Hexane	ND	ND	ND	ND	ND	80	µg/m3
n-Heptane	ND	ND	ND	ND	ND	80	µg/m3
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	113%	113%	109%	108%	111%	60 - 140	
Toluene-d_8	98%	100%	98%	98%	97%	60 - 140	
4-Bromofluorobenzene	99%	101%	104%	102%	101%	60 - 140	
Batch ID:	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01		

ND = Value below reporting limit

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV8-5'**	**SV8-10'**	**SV9-5'**	**SV9-10'**		
Jones ID:	**G-0094-17**	**G-0094-18**	**G-0094-19**	**G-0094-20**	**Reporting Limit**	**Units**
Analytes:						
Benzene	ND	ND	ND	**19**	8	µg/m3
Bromobenzene	ND	ND	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	ND	ND	8	µg/m3
Bromoform	ND	ND	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	ND	ND	12	µg/m3
sec-Butylbenzene	ND	ND	ND	ND	12	µg/m3
tert-Butylbenzene	ND	ND	ND	ND	12	µg/m3
Carbon tetrachloride	ND	ND	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	ND	ND	8	µg/m3
Chloroform	**34**	ND	ND	**20**	8	µg/m3
2-Chlorotoluene	ND	ND	ND	ND	12	µg/m3
4-Chlorotoluene	ND	ND	ND	ND	12	µg/m3
Dibromochloromethane	ND	ND	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	8	µg/m3
Dibromomethane	ND	ND	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	ND	ND	16	µg/m3
1,3-Dichlorobenzene	ND	ND	ND	ND	16	µg/m3
1,4-Dichlorobenzene	ND	ND	ND	ND	16	µg/m3
Dichlorodifluoromethane	ND	ND	ND	ND	16	µg/m3
1,1-Dichloroethane	ND	ND	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	ND	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	ND	ND	16	µg/m3
1,1-Dichloropropene	ND	ND	ND	ND	10	µg/m3

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV8-5'**	**SV8-10'**	**SV9-5'**	**SV9-10'**		
Jones ID:	**G-0094-17**	**G-0094-18**	**G-0094-19**	**G-0094-20**	**Reporting Limit**	**Units**
Analytes:						
cis-1,3-Dichloropropene	ND	ND	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	ND	ND	8	µg/m3
Ethylbenzene	ND	ND	ND	**99**	8	µg/m3
Freon 113	ND	ND	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	ND	ND	24	µg/m3
Isopropylbenzene	ND	ND	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	ND	ND	8	µg/m3
Methylene chloride	ND	ND	ND	ND	8	µg/m3
Naphthalene	ND	ND	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	ND	ND	8	µg/m3
Styrene	ND	ND	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	16	µg/m3
Tetrachloroethene	ND	ND	ND	ND	8	µg/m3
Toluene	ND	ND	ND	**27**	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	ND	ND	8	µg/m3
Trichloroethene	ND	ND	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	ND	ND	16	µg/m3
1,2,3-Trichloropropane	ND	ND	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	ND	ND	ND	ND	8	µg/m3
1,3,5-Trimethylbenzene	ND	ND	ND	ND	8	µg/m3
Vinyl chloride	ND	ND	ND	ND	8	µg/m3
m,p-Xylene	ND	ND	ND	**322**	16	µg/m3
o-Xylene	ND	ND	ND	**151**	8	µg/m3
MTBE	ND	ND	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	ND	ND	400	µg/m3
Gasoline Range Organics (C4-C12)	ND	ND	ND	ND	2000	µg/m3
Tracer:						
n-Pentane	ND	ND	ND	ND	80	µg/m3
n-Hexane	ND	ND	ND	ND	80	µg/m3
n-Heptane	ND	ND	ND	ND	80	µg/m3
Dilution Factor	1	1	1	1		
Surrogate Recoveries:					**QC Limits**	
Dibromofluoromethane	108%	109%	113%	112%	60 - 140	
Toluene-d_8	99%	96%	95%	96%	60 - 140	
4-Bromofluorobenzene	101%	100%	99%	100%	60 - 140	
Batch ID:	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01		

ND = Value below reporting limit

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**METHOD BLANK**	**SAMPLING BLANK**		
Jones ID:	**022120-G1MB1**	**022120-G1SB1**	**Reporting Limit**	**Units**
Analytes:				
Benzene	ND	ND	8	µg/m3
Bromobenzene	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	8	µg/m3
Bromoform	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	12	µg/m3
sec-Butylbenzene	ND	ND	12	µg/m3
tert-Butylbenzene	ND	ND	12	µg/m3
Carbon tetrachloride	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	8	µg/m3
Chloroform	ND	ND	8	µg/m3
2-Chlorotoluene	ND	ND	12	µg/m3
4-Chlorotoluene	ND	ND	12	µg/m3
Dibromochloromethane	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	8	µg/m3
Dibromomethane	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	16	µg/m3
1,3-Dichlorobenzene	ND	ND	16	µg/m3
1,4-Dichlorobenzene	ND	ND	16	µg/m3
Dichlorodifluoromethane	ND	ND	16	µg/m3
1,1-Dichloroethane	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	16	µg/m3
1,1-Dichloropropene	ND	ND	10	µg/m3

JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**METHOD BLANK**	**SAMPLING BLANK**		
Jones ID:	**022120-G1MB1**	**022120-G1SB1**	**Reporting Limit**	**Units**
Analytes:				
cis-1,3-Dichloropropene	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	8	µg/m3
Ethylbenzene	ND	ND	8	µg/m3
Freon 113	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	24	µg/m3
Isopropylbenzene	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	8	µg/m3
Methylene chloride	ND	ND	8	µg/m3
Naphthalene	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	8	µg/m3
Styrene	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	16	µg/m3
Tetrachloroethene	ND	ND	8	µg/m3
Toluene	ND	ND	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	8	µg/m3
Trichloroethene	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	16	µg/m3
1,2,3-Trichloropropane	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	ND	ND	8	µg/m3
1,3,5-Trimethylbenzene	ND	ND	8	µg/m3
Vinyl chloride	ND	ND	8	µg/m3
m,p-Xylene	ND	ND	16	µg/m3
o-Xylene	ND	ND	8	µg/m3
MTBE	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	400	µg/m3
Gasoline Range Organics (C4-C12)	ND	ND	2000	µg/m3
Tracer:				
n-Pentane	ND	ND	80	µg/m3
n-Hexane	ND	ND	80	µg/m3
n-Heptane	ND	ND	80	µg/m3
Dilution Factor	1	1		
Surrogate Recoveries:			**QC Limits**	
Dibromofluoromethane	114%	110%	60 - 140	
Toluene-d_8	97%	92%	60 - 140	
4-Bromofluorobenzene	105%	97%	60 - 140	
Batch ID:	G1-022120-01	G1-022120-01		

ND = Value below reporting limit

JONES ENVIRONMENTAL, INC.
714-449-9937
562-646-1611
805-399-0060
11007 FOREST PLACE
SANTA FE SPRINGS, CA 90670
WWW.JONESENV.COM

JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Batch ID: G1-022120-01

Jones ID:	**022120-G1LCS1**	**022120-G1LCSD1**			**022120-G1CCV1**	
Parameter	LCS Recovery (%)	LCSD Recovery (%)	RPD	Acceptability Range (%)	CCV	Acceptability Range (%)
Vinyl chloride	58%	58%	0.3%	60 - 140	80%	80 - 120
1,1-Dichloroethene	78%	81%	2.8%	60 - 140	98%	80 - 120
Cis-1,2-Dichloroethene	104%	102%	2.4%	70 - 130	100%	80 - 120
1,1,1-Trichloroethane	100%	93%	6.9%	70 - 130	107%	80 - 120
Benzene	102%	98%	3.4%	70 - 130	103%	80 - 120
Trichloroethene	93%	96%	3.0%	70 - 130	98%	80 - 120
Toluene	105%	100%	5.0%	70 - 130	105%	80 - 120
Tetrachloroethene	97%	95%	2.3%	70 - 130	109%	80 - 120
Chlorobenzene	107%	101%	6.3%	70 - 130	102%	80 - 120
Ethylbenzene	116%	110%	5.0%	70 - 130	112%	80 - 120
1,2,4 Trimethylbenzene	127%	119%	6.8%	70 - 130	107%	80 - 120
Gasoline Range Organics (C4-C12)	113%	107%	5.1%	70 - 130	107%	80 - 120
Surrogate Recovery:						
Dibromofluoromethane	111%	109%		60 - 140	104%	60 - 140
Toluene-d_8	96%	96%		60 - 140	102%	60 - 140
4-Bromofluorobenzene	100%	101%		60 - 140	106%	60 - 140

LCS = Laboratory Control Sample
LCSD = Laboratory Control Sample Duplicate
CCV = Continuing Calibration Verification
RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 20%

JONES ENVIRONMENTAL, INC.
11007 Forest Pl.
Santa Fe Springs, CA 90670
(714) 449-9937
Fax (714) 449-9685
www.jonesenv.com

Soil-Gas Chain-of-Custody Record

Client: Mearns Consulting Corp
Project Name: 950 E 33rd & 3177 California Ave
Project Address: 950 E 33rd & 3177 California Ave
Signal Hill, CA 90755
Email:
Phone: 310-403-1921
Report To: Susan L Mearns
Sampler: Casey Ellis

Date: 2/21/2020
Client Project #:

Purge Number: ☐ 1P ☒ 3P ☐ 7P ☐ 10P
Shut-In Test: (Y) / N

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project # G-0094
Page 1 of 2
Sample Container: GASTIGHT GLASS SYRINGE
If different than above, see Notes.

Turn Around Requested
☐ Immediate Attention
☐ Rush 24 Hours
☐ Rush 48 Hours
☐ Rush 72 Hours
☐ Normal
☒ Mobile Lab

Tracer
☒ n-pentane
☒ n-hexane
☒ n-heptane
☐ Isopropyl Alchohol
☐ 1,1-DFA
☐ _____

Reporting Limits
☒ Standard ☐ Low Level* ☐ MDL*
*surcharge for these limits
Units ug/m³

Analysis Requested

Sample ID	Purge Number	Purge Volume (mL)	Date	Sample Collection Time	Sample Analysis Time	Laboratory Sample ID	Purge Rate (mL/min)	Pump Used	Magnehelic	Sample Matrix: Soil Gas (SG), Air (A), Material (M)	EPA 8260B (VOCs)	Gasoline Range Organics			Magnehelic Vacuum (In/H_2O)	Number of Containers	Notes & Special Instructions
SV1-5'	3	1310	2/21/20	07:52	07:52	G-0094-01	200	CASEY.1	118007	SG	X	X			<2	1	
SV1-10'	3	1390	2/21/20	08:09	08:09	G-0094-02	200	JOEL.1	M100.102	SG	X	X			<2	1	
SV2-5'	3	1310	2/21/20	08:28	08:28	G-0094-03	200	CASEY.1	M100.107	SG	X	X			<2	1	
SV2-10'	3	1390	2/21/20	08:43	08:44	G-0094-04	200	JOEL.1	M100.155	SG	X	X			<2	1	
SV3-5'	3	1,310	2/21/20	09:02	09:05	G-0094-05	200	CASEY.1	118007	SG	X	X			<2	1	
SV3-10'	3	1,390	2/21/20	9:17	09:20	G-0094-06	200	JOEL.1	M100.102	SG	X	X			<2	1	
SV4-5'	3	1,310	2/21/20	9:37	09:38	G-0094-07	200	CASEY.1	M100.107	SG	X	X			<2	1	
SV4-10'	3	1390	2/21/20	09:56	09:57	G-0094-08	200	JOEL.1	M100.155	SG	X	X			<2	1	
SV4-10' REP	3	1390	2/21/20	10:06	10:12	G-0094-09	200	JOEL.1	M100.155	SG	X	X			<2	1	
SV5-5'	3	1310	2/21/20	10:28	10:30	G-0094-10	200	CASEY.1	118007	SG	X	X			<2	1	

Representative Signature	Printed Name	Laboratory Signature	Printed Name		
[signature]	SUSAN MEARNS	[signature]	CASEY ELLIS	10	Total Number of Containers
Company	**Date** / **Time**	**Company**	**Date** / **Time**		
MEARNS CONSULTING CORP	2/21/2020 13:40	JONES ENVIRONMENTAL, INC.	2/21/2020 13:40		
Representative Signature	**Printed Name**	**Laboratory Signature**	**Printed Name**		
Company	**Date** / **Time**	**Company**	**Date** / **Time**		

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

JONES ENVIRONMENTAL, INC.

11007 Forest Pl.
Santa Fe Springs, CA 90670
(714) 449-9937
Fax (714) 449-9685
www.jonesenv.com

Soil-Gas Chain-of-Custody Record

Client: Mearns Consulting Corp

Project Name: 950 E 33rd & 3177 California Ave

Project Address: 950 E 33rd & 3177 California Ave

Signal Hill, CA 90755

Email:

Phone: 310-403-1921

Report To: Susan L Mearns

Sampler: Casey Ellis

Date: 2/21/2020

Client Project #: 0

Purge Number: □ 1P ☒ 3P □ 7P □ 10P

Shut-In Test: (Y) / N

Report Options: EDD ____ EDF* - 10% Surcharge____ *Global ID _____

Turn Around Requested:
- □ Immediate Attention
- □ Rush 24 Hours
- □ Rush 48 Hours
- □ Rush 72 Hours
- □ Normal
- ☒ Mobile Lab

Tracer:
- ☒ n-pentane
- ☒ n-hexane
- ☒ n-heptane
- □ Isopropyl Alchohol
- □ 1,1-DFA
- □ _____

Reporting Limits: ☒ Standard □ Low Level* □ MDL* (*surcharge for these limits)

Units: ug/m3

Analysis Requested

LAB USE ONLY

Jones Project #: G-0094

Page 2 of 2

Sample Container: GASTIGHT GLASS SYRINGE

If different than above, see Notes.

Sample ID	Purge Number	Purge Volume (mL)	Date	Sample Collection Time	Sample Analysis Time	Laboratory Sample ID	Purge Rate (mL/min)	Pump Used	Magnehelic	Sample Matrix: Soil Gas (SG), Air (A), Material (M)	EPA 8260B (VOCs)	Gasoline Range Organics			Magnehelic Vacuum (In/H_2O)	Number of Containers	Notes & Special Instructions
SV5-10'	3	1390	2/21/20	10:43	10:47	G-0094-11	200	JOEL.1	M100.102	SG	X	X			<2	1	
SV6-5'	3	1310	2/21/20	11:05	11:06	G-0094-12	200	CASEY.1	M100.107	SG	X	X			<2	1	
SV6-5' REP	3	1310	2/21/20	11:12	11:21	G-0094-13	200	CASEY.1	M100.107	SG	X	X			<2	1	
SV7-5'	3	1310	2/21/20	11:45	11:45	G-0094-15	200	CASEY.1	118007	SG	X	X			<2	1	
SV7-10'	3	1,390	2/21/20	11:53	12:00	G-0094-16	200	JOEL.1	M100.102	SG	X	X			40	1	
SV8-5'	3	1,310	2/21/20	12:10	12:17	G-0094-17	200	CASEY.1	M100.107	SG	X	X			20	1	
SV8-10'	3	1,390	2/21/20	12:36	12:39	G-0094-18	200	JOEL.1	M100.155	SG	X	X			<2	1	
SV9-5'	3	1310	2/21/20	12:55	12:57	G-0094-19	200	JOEL.1	118007	SG	X	X			<2	1	
SV9-10'	3	1390	2/21/20	13:09	13:14	G-0094-20	100	CASEY.1	M100.102	SG	X	X			50	1	LOW FLOW
SV6-10'	-	-	2/21/20	11:30	-	-	-	-	M100.102	-	-	-			>100	-	NO FLOW

9 Total Number of Containers

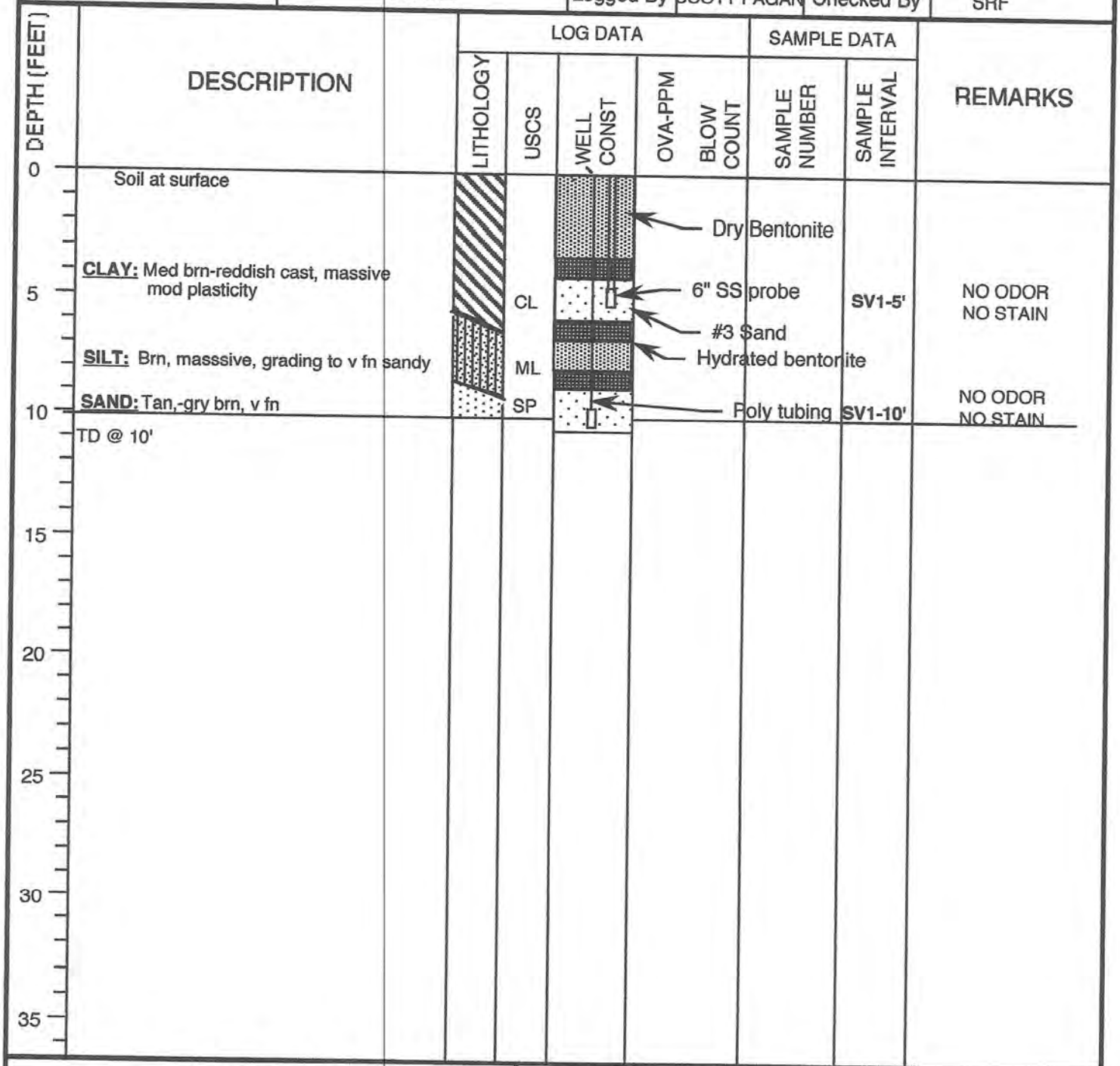
Representative Signature	**Printed Name** SUSAN MEARNS	**Laboratory Signature**	**Printed Name** CASEY ELLIS
Company MEARNS CONSULTING CORP	**Date** 2/21/2020 **Time** 13:40	**Company** JONES ENVIRONMENTAL, INC.	**Date** 2/21/2020 **Time** 13:40
Representative Signature	**Printed Name**	**Laboratory Signature**	**Printed Name**
Company	**Date** **Time**	**Company**	**Date** **Time**

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

APPENDIX C

Boring Logs

Boring Location	SV1	Elevation or Datum	grade		
Drilling Company	Gregg Drilling	Completion Depth	10 FEET		
Drilling Equipment	Marl 25 DP	Number of Samples	2		
Type/Diameter of Casing	NA	Water Depth at Date of Installation	NA		
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled	NA		
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

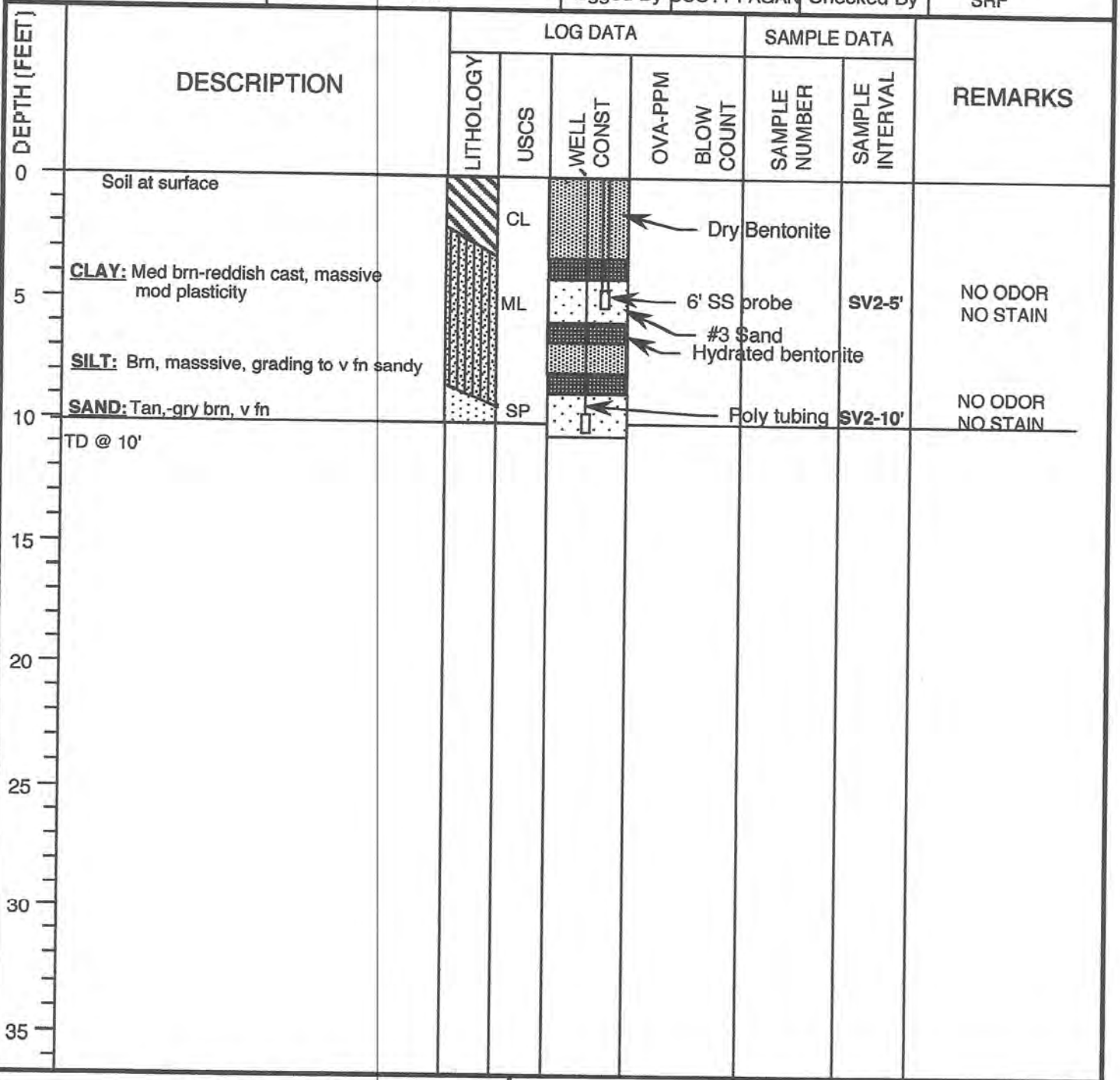


MEARNS CONSULTING CORP.

BORING LOG SV1
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV2	Elevation or Datum	grade		
Drilling Company	Gregg Drilling	Completion Depth	10 FEET		
Drilling Equipment	Marl 25 DP	Number of Samples	2		
Type/Diameter of Casing	NA	Water Depth at Date of Installation	NA		
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled	NA		
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

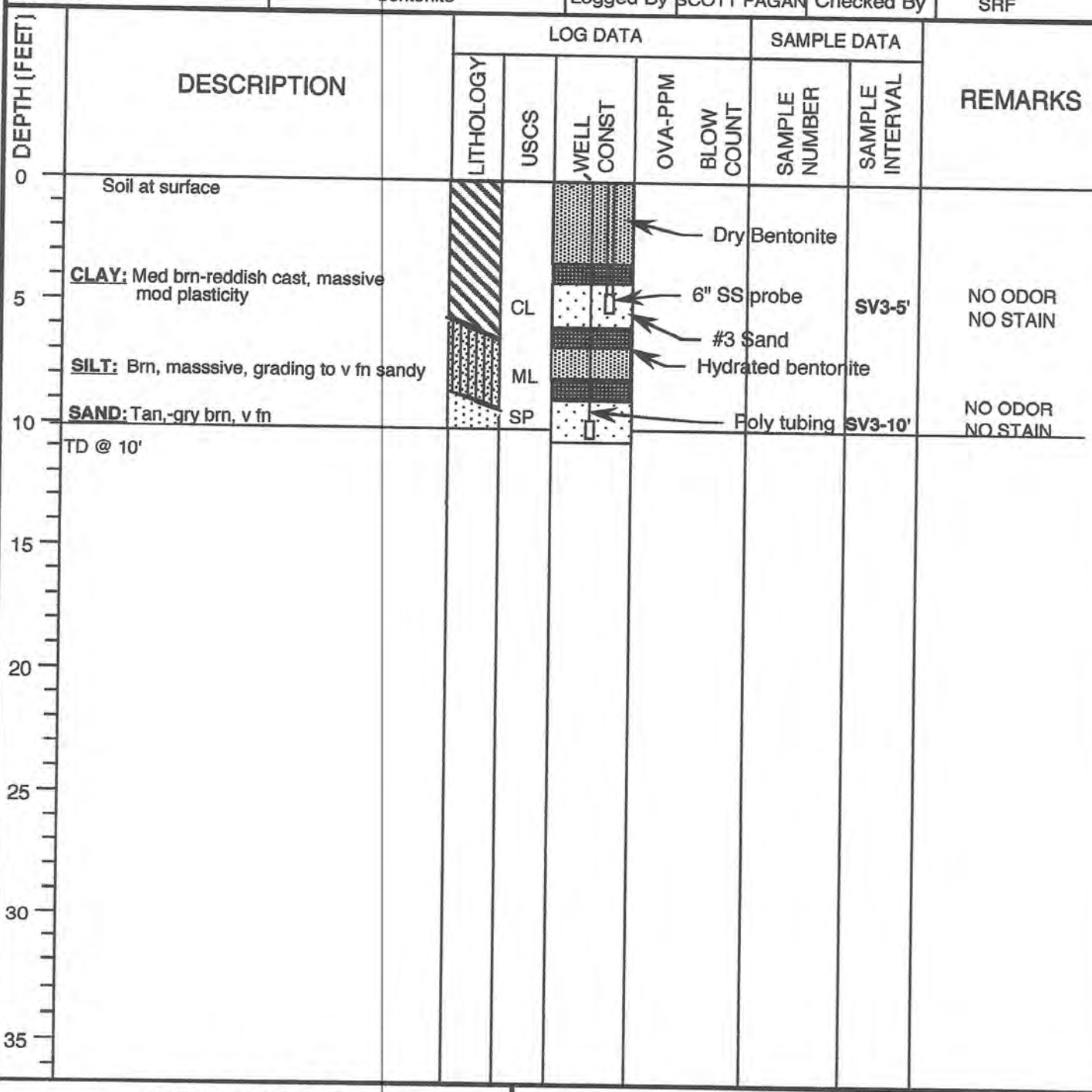


MEARNS CONSULTING CORP.

BORING LOG SV2
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV3	Elevation or Datum	grade		
Drilling Company	Gregg Drilling	Completion Depth	10 FEET		
Drilling Equipment	Marl 25 DP	Number of Samples	2		
Type/Diameter of Casing	NA	Water Depth at Date of Installation	NA		
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled	NA		
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

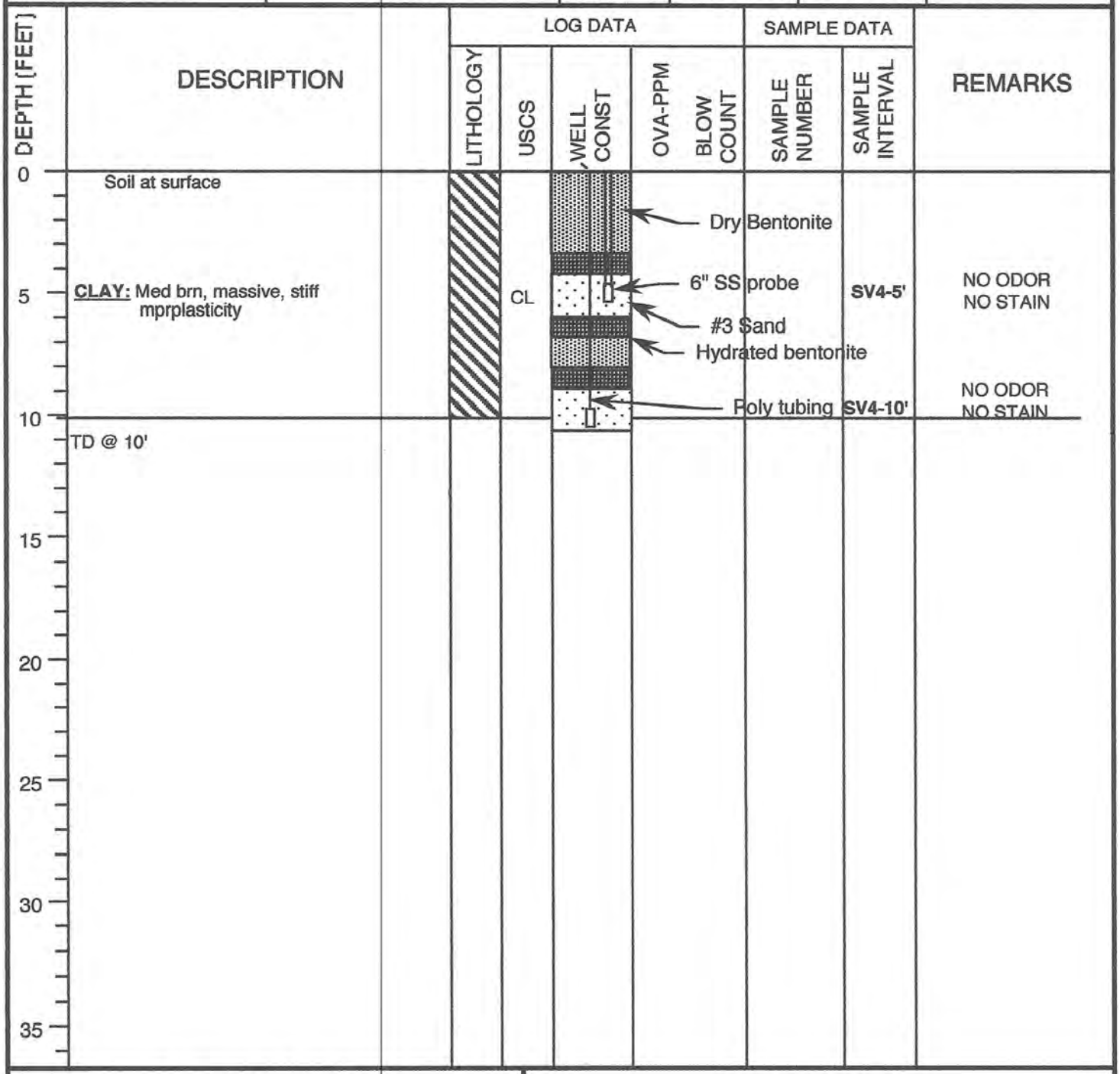


MEARNS CONSULTING CORP.

BORING LOG SV3
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV4	Elevation or Datum	grade		
Drilling Company	Gregg Drilling	Completion Depth	10 FEET		
Drilling Equipment	Marl 25 DP	Number of Samples	2		
Type/Diameter of Casing	NA	Water Depth at Date of Installation	NA		
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled	NA		
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

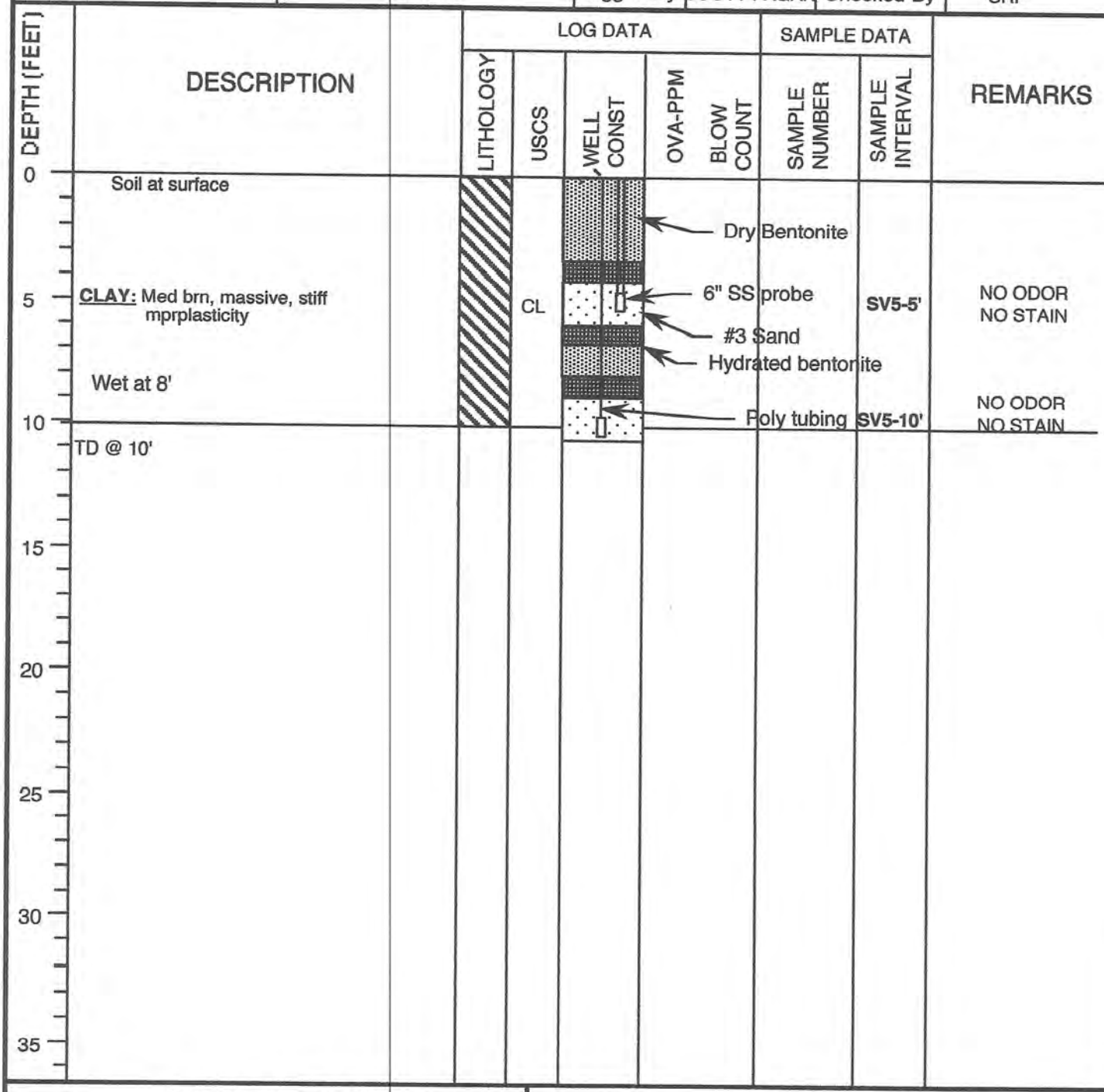


MEARNS CONSULTING CORP.

BORING LOG SV4
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV5	Elevation or Datum		grade	
Drilling Company	Gregg Drilling	Completion Depth		10 FEET	
Drilling Equipment	Marl 25 DP	Number of Samples		2	
Type/Diameter of Casing	NA	Water Depth at Date of Installation		NA	
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled		NA	
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

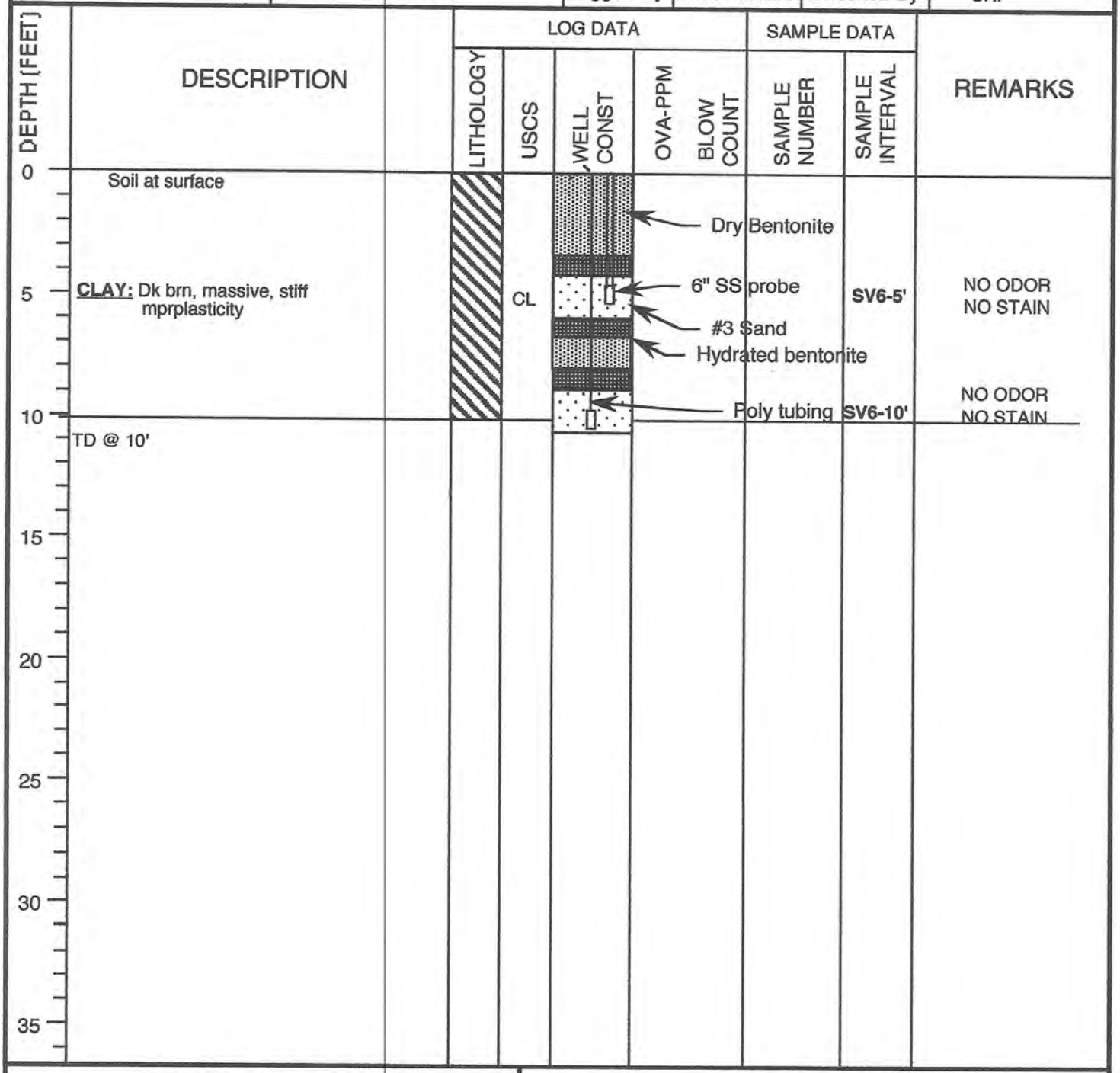


MEARNS CONSULTING CORP.

BORING LOG SV5
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV6	Elevation or Datum		grade	
Drilling Company	Gregg Drilling	Completion Depth		10 FEET	
Drilling Equipment	Marl 25 DP	Number of Samples		2	
Type/Diameter of Casing	NA	Water Depth at Date of Installation		NA	
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled		NA	
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

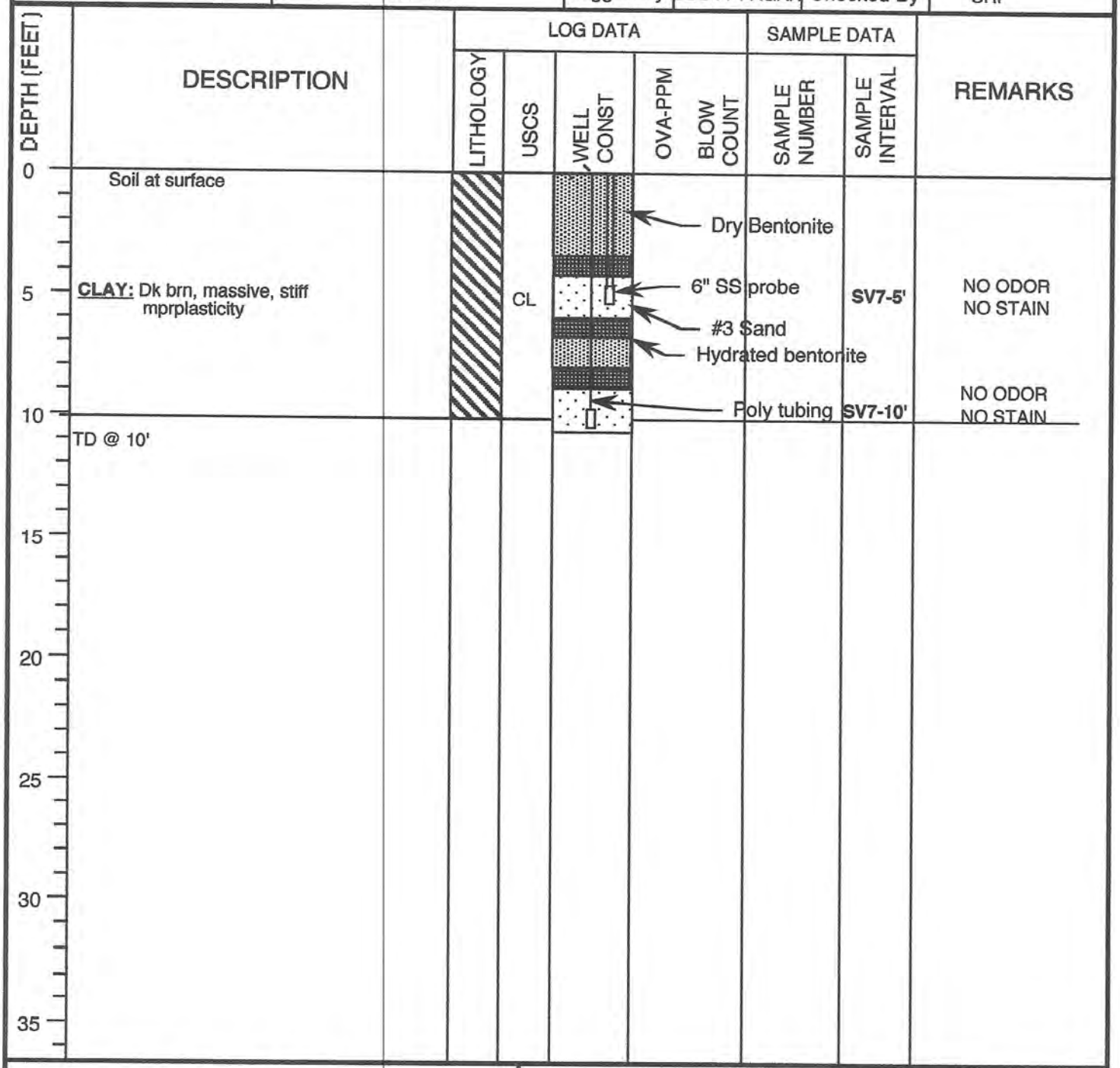


MEARNS CONSULTING CORP.

BORING LOG SV6
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV7	Elevation or Datum	grade		
Drilling Company	Gregg Drilling	Completion Depth	10 FEET		
Drilling Equipment	Marl 25 DP	Number of Samples	2		
Type/Diameter of Casing	NA	Water Depth at Date of Installation	NA		
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled	NA		
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

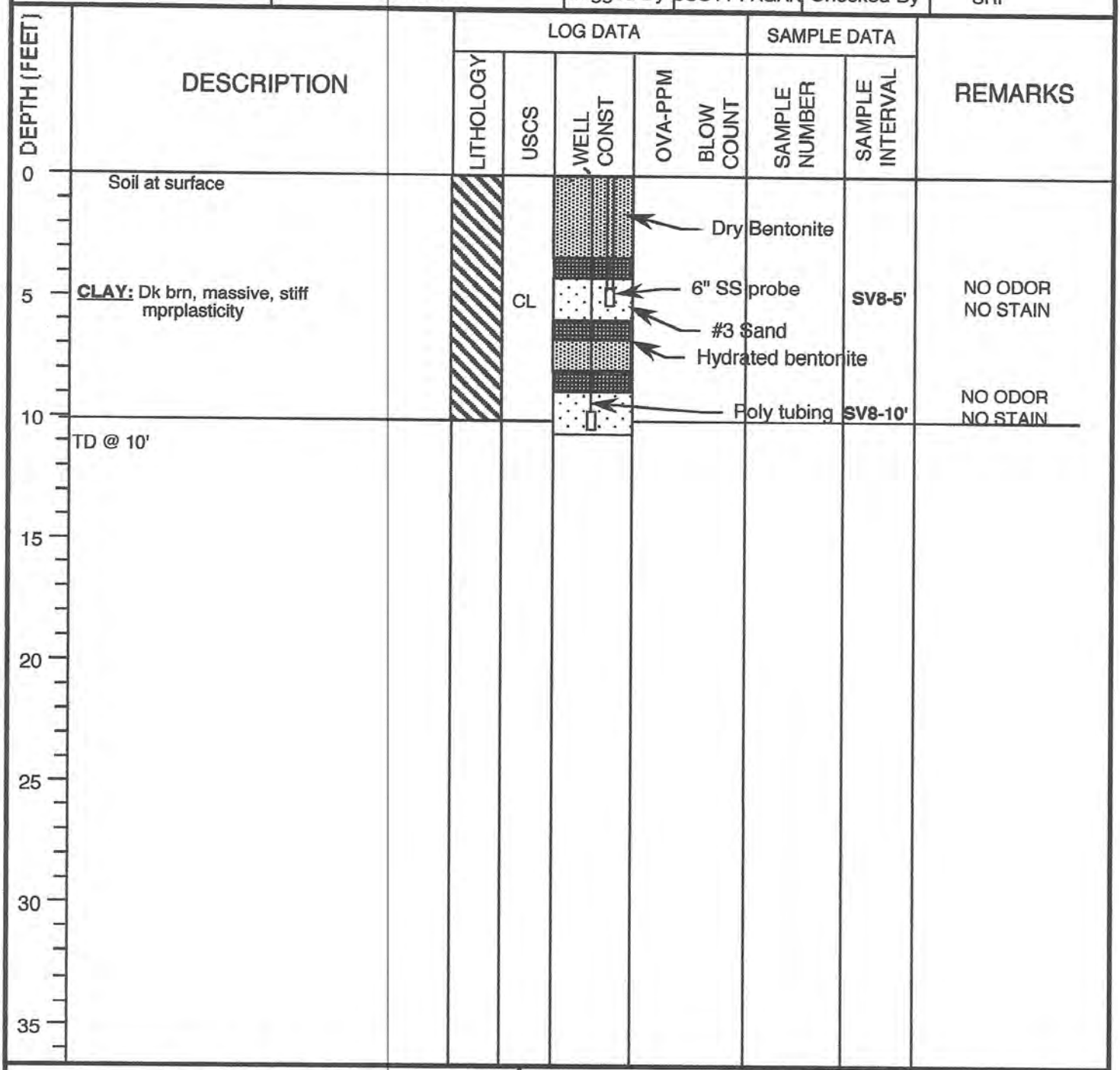


MEARNS CONSULTING CORP.

BORING LOG SV7
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV8	Elevation or Datum	grade		
Drilling Company	Gregg Drilling	Completion Depth	10 FEET		
Drilling Equipment	Marl 25 DP	Number of Samples	2		
Type/Diameter of Casing	NA	Water Depth at Date of Installation	NA		
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled	NA		
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

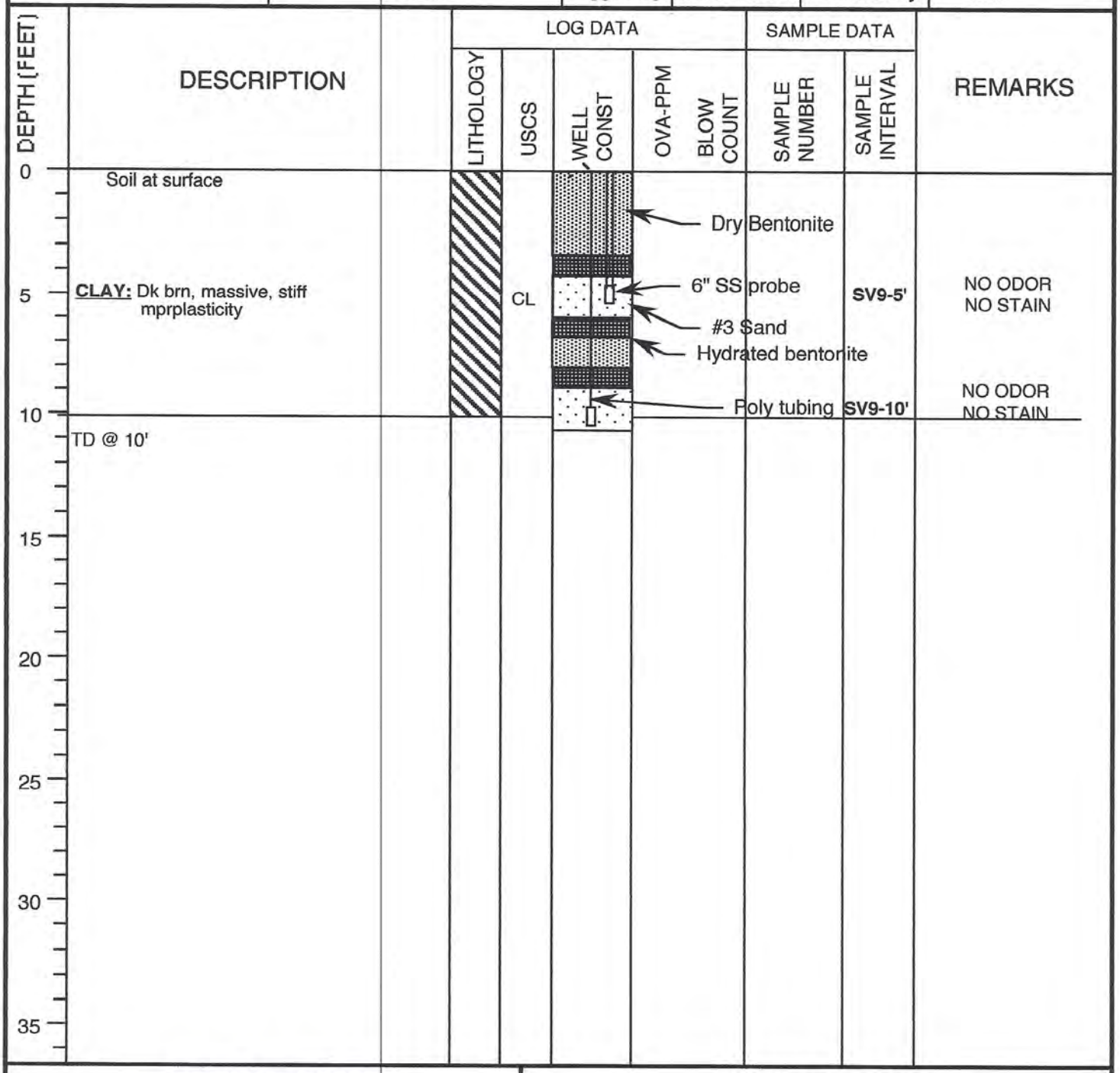


MEARNS CONSULTING CORP.

BORING LOG SV8
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV9	Elevation or Datum		grade	
Drilling Company	Gregg Drilling	Completion Depth		10 FEET	
Drilling Equipment	Marl 25 DP	Number of Samples		2	
Type/Diameter of Casing	NA	Water Depth at Date of Installation		NA	
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled		NA	
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF



MEARNS CONSULTING CORP.

BORING LOG SV9
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Human Health Risk Assessment

MEARNS CONSULTING LLC
ENVIRONMENTAL CONSULTANTS
RISK ASSESSORS

738 Ashland Avenue, Santa Monica, California 90405
Cell 310.403.1921
Tel 310.396.9606 Fax 310.396.6878
Mearns.Consulting@verizon.net
www.MearnsConsulting.com

Human Health Risk Assessment
950 East 33rdth Street
3177 California Avenue
Signal Hill, California 90755

April 21, 2020

Prepared for:

Signal Hill Petroleum Inc.
2633 Cherry Avenue
Signal Hill, California 90755

Venture Point Inc.
4685 MacArthur Court
Newport Beach, California 92660

Prepared by:

Mearns Consulting LLC
738 Ashland Avenue
Santa Monica, California 90405

MEARNS CONSULTING LLC
ENVIRONMENTAL CONSULTANTS
RISK ASSESSORS

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April 21, 2020

via email

Mr. Kevin Laney
Signal Hill Petroleum, Inc.
2633 Cherry Avenue
Signal Hill, California 90755

Messrs. Tom Lee and John Clement
Venture Point, Inc.
2865 MacArthur Court
Newport Beach, California 92660

RE: **Human Health Risk Assessment**
950 East 33rd Street and 3177 California Avenue, Signal Hill, California 90755

Dear Messrs. Laney, Lee and Clement:

This Human Health Risk Assessment has been prepared for the property located at 950 East 33rd Street and 3177 California Avenue in Signal Hill California 90755 (the site) pursuant to the City of Signal Hill Project Development Guide (February 28, 2019).

The 13.367-acre property consists of a 9.067-acre parcel occupied by a Target store and a 4.3-acre vacant undeveloped property. Historically the 13.367-acre property was an oil field and has four operating and five previously abandoned oil wells onsite in addition to the 135,911 square foot Target store.

The site is being redeveloped as a commercial development, including an addition to the existing 135,911 square foot retail store, a 5,000 square foot shop, a 5,000 square foot drive-through restaurant and a 59,115 square foot storage facility.

This baseline human health risk assessment followed the guidance in the Department of Toxic Substances Control (DTSC) Preliminary Endangerment Assessment (PEA) guidance manual (DTSC 2015), U.S. Environmental Protection Agency Risk Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual (RAGs) (USEPA 2004), the U.S. Environmental Protection Agency Risk Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment) (USEPA 2009), the DTSC Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (DTSC, October 2011), the DTSC LeadSpread 8.0 Model, the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESL) model and the Virginia Department of Environmental Quality Virginia Unified Risk Assessment Model (VURAM).

The results of the human health risk assessment indicate the summed risk of the carcinogenic constituents in soil and soil vapor did exceed the target threshold of 1×10^{-6} for the residential scenario and did not exceed the target threshold of $1x10^{-5}$ for the commercial worker or construction worker scenarios.

The results of the human health risk assessment indicate that the estimated summed hazard index of the noncarcinogenic constituents in soil and soil vapor did not exceed the target hazard threshold for the residential, commercial worker and construction workers scenarios.

It is unlikely that site will be redeveloped for residential occupancy as it is zoned commercial/industrial and its current use is commercial. The estimated risks and hazards due to exposure to constituents detected in the soil matrix and soil vapor underlying the site for commercial and construction workers indicate the site can be safely redeveloped for commercial use.

Should you have any questions or desire additional information, please contact me at your earliest convenience at 310.403.1921.

Sincerely,

x Susan Mearns

Susan L. Mearns, Ph.D.

Mearns Consulting LLC

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EXECUTIVE SUMMARY

The 13.367-acre property consists of a 9.067-acre parcel occupied by a Target store and a 4.3-acre vacant undeveloped property. Historically the 13.367-acre property was an oil field and has four operating and five previously abandoned oil wells onsite in addition to the 135,911 square foot Target store.

The objectives of this baseline human health risk assessment are: (1) to evaluate potential health risks to human receptors posed by concentrations of constituents detected at least one time in the soil matrix and soil vapor underlying the site and (2) to satisfy the City of Signal Hill's requirement under the California Environmental Quality Act.

This baseline human health risk assessment followed the guidance in the Department of Toxic Substances Control (DTSC) *Preliminary Endangerment Assessment* (PEA) guidance manual (DTSC 2015), U.S. Environmental Protection Agency *Risk Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual* (RAGs) (USEPA 2004), the U.S. Environmental Protection Agency *Risk Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual* (Part F, Supplemental Guidance for Inhalation Risk Assessment) (USEPA 2009), the DTSC *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (DTSC, October 2011), the DTSC LeadSpread 8.0 Model, the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESL) model and the Virginia Department of Environmental Quality Virginia Unified Risk Assessment Model (VURAM).

The planned redevelopment is to construct an 11,500 square foot addition onto the south of the existing Target store, a 5,000 square foot drive through store, a 5,000 square foot standalone retail shop and a 59,115 ground level square foot storage building.

Due to the presence of four operating and five previously abandoned oil wells onsite in accordance with the City of Signal Hill's Oil and Gas Code §16.24.080, the City's Project Development Guide (February 28, 2019) and Methane Assessment Minimum Requirements Standard a Methane Assessment was performed in March 2020 (DL Science, Inc. March 25, 2020). The Methane Assessment concluded that a passive methane mitigation system subslab proposed buildings was warranted.

The passive methane mitigation system shall consist of a subslab impervious membrane placed inbetween geotextile or geocloth to protect it from sand above and the minimum 2" thick gravel blanket below. Perforated horizontal vent pipes should be placed in the 2" thick gravel blanket and tied into vertical vent risers (typically cast iron) placed inbetween the interior and exterior walls, less than 100-feet apart, extending a minimum of 3-feet above the roof line and should not terminate less than 100-feet from any opening.

Methane mitigation underneath paved areas greater than 5,000 square feet within 15-feet of the proposed buildings shall consist of a minimum 12-inch square vents with ¾ inch rock placed on the exposed soil at a minimum depth of 1-foot, protected by traffic rated grates.

Although designed to capture and vent methane to the atmosphere, other volatile organic compounds in the subsurface (in the soil matrix and soil vapor) also will be captured and vented by this system.

The results of the human health risk assessment indicate the summed risk of the carcinogenic constituents in soil and soil vapor did exceed the target threshold of 1×10^{-6} for the residential scenario and did not exceed the target threshold of 1×10^{-5} for the commercial worker or construction worker scenarios.

The results of the human health risk assessment indicate that the estimated summed hazard index of the noncarcinogenic constituents in soil and soil vapor did not exceed the target hazard threshold for the residential, commercial worker and construction workers scenarios.

Conclusions and Recommendations – Although the human health risk assessment assessed the potential risks and hazards to residential receptors the current and planned future use of the site is commercial/industrial and the property is zoned commercial/industrial. The residual concentrations of constituents detected in the soil matrix and soil vapor underlying the site do not pose an adverse impact to the health of the future construction workers or the commercial workers.

Institutional controls, i.e., the required methane mitigation system to be installed subslab of the proposed buildings and paved areas greater than 5,000 square feet, and paving of surface soils for parking also mitigates exposure by future commercial workers.

Mitigation measures during grading activities such as monitoring under the Air Quality Management District (AQMD) Rule 1166 permit/compliance plan and the application of Simple Green mixed with water applied as a dust suppressant mitigates exposure to the construction worker.

1.0 INTRODUCTION

This report presents the results of a human health risk assessment for the 13.367 -acre commercial/industrial property located at 950 East 33rd Street and 3177 California Avenue in Signal Hill, California (the site) (Figures 1 and 2).

The purpose of this human health risk assessment is to evaluate the potential adverse health impacts due to exposure to concentrations of constituents detected in the soil matrix and soil vapor underlying the site. If a constituent was detected one time in soil sampled, and/or one time in soil vapor, it was retained and quantitatively assessed in this human health risk assessment. This human health risk assessment assessed the potential risk and hazard attributable to exposure to five carcinogenic constituents and 24 noncarcinogenic constituents, including lead, detected in the soil matrix and soil vapor underlying the site.

This human health risk assessment followed the guidance in the Department of Toxic Substances Control (DTSC) *Preliminary Endangerment Assessment* (PEA) guidance manual (DTSC 2015), U.S. Environmental Protection Agency *Risk Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual* (RAGs) (USEPA 2004), the U.S. Environmental Protection Agency *Risk Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual* (Part F, Supplemental Guidance for Inhalation Risk Assessment) (USEPA 2009), the DTSC *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (DTSC, October 2011), the DTSC LeadSpread 8.0 Model, the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Level (ESL) Model (2019, Rev. 2) and the Virginia Department of Environmental Quality Virginia Unified Risk Assessment Model (VURAM) (October 2018) .

2.0 SITE BACKGROUND

SCS Engineers (SCS) completed a Phase I Environmental Site Assessment in June 2000 and a limited Phase II Environmental Site Assessment for the entire 30-acre oil production parcel of which the site was a part (Global Solutions, Inc. 2000).

Global Solutions, Inc. prepared a Remedial Action Plan (RAP) for the 30-acre oil production parcel bounded by Atlantic Avenue to the west, California Avenue to the east, 33rd Street to the north and Spring Street to the south of which the site was a part in October 2000 (Global Solutions, Inc. 2000). The RAP was approved by the Los Angeles Regional Water Quality Control Board in May 2001 (LARWQCB 2001). The RAP summarized the analytical results from the sampling conducted by SCS and concluded the primary constituents of concern were total petroleum hydrocarbons (TPH) in carbon chain lengths C18-C40 at concentrations of 1,000 parts per million (ppm) to 46,000ppm (Global Solutions, Inc. 2000). Global Solutions reported that concentrations of benzene, toluene, ethylbenzene and total xylenes were usually less than detection limits and metals although detected were generally less than hazardous levels.

Global Solutions, Inc. proposed to clean-up soil impacted with crude oil using the LARWQCB's soil screening levels as a guide and proposed the following clean-up goals: (1) C6-C12 1,000 milligrams per kilogram (mg/kg), (2) C13-C22 5,000mg/kg and (3) C23-C44 15,000mg/kg. Global Solutions also proposed clean-up goals of total threshold limit concentrations for metals detected in soil (Global Solutions, Inc. 2000). Global Solutions proposed bioremediation in an onsite land farm as the remedial strategy (Global Solutions, Inc. 2000).

2.1 950 East 33rd Street Background - The 9.067-acre site was an oil field since at least 1924; there are two previously abandoned oil wells onsite. Historically, the site had these two oil wells, aboveground storage tanks and oil field activities that visually impacted the land. The Tesoro Service Station formerly located at the northwestern corner of the site has caused soil matrix, soil vapor and groundwater contamination. The 135,911 square foot retail store occupied by Target and CVS Pharmacy was previously occupied by Van de Kamp's, a retail bakery in 1971, and Dorman's Inc., doing business as (dba) Gemco Automotive Center #527 in 1974. Additions to the Target Store were constructed in 1998 and in 2007.

2.2 950 East 33rd Street Previous Environmental Investigations - The following information is from *Remedial Action Plan for Impacted Soil, 950 East 33rd Street, Signal Hill, California, Target T-Store 292, RWQCB File No. I-11132* (Orion Environmental, Inc. August 28, 2006). The northwestern corner of the site was originally developed as a service station between 1970 and 1974. Three 12,000-gallon gasoline underground storage tanks (USTs) and one 1,500-gallon waste oil UST were removed from the site in November 1991. Subsequent investigations detected gasoline-impacted soil at the site. Soil is impacted by total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, and xylenes (BTEX); and oxygenates including methyl tert-butyl ether (MTBE) and tert-butyl alcohol (TBA).

The area of impacted soil was delineated by soil investigations conducted between February 1993 and September 1994. The initial soil investigation was followed up with two step-out soil boring investigations to define where TPHg and benzene concentrations were above 100 milligrams per kilogram (mg/kg) and 0.3 mg/kg, respectively (McLaren/Hart, 1994). The impacted unsaturated zone soil spans an approximately 100-foot-diameter circular area, to a maximum depth of approximately 120 feet below grade.

One groundwater monitoring well (designated as well MW-1) was installed onsite in February 1993. The depth to groundwater measured in February 1993 was approximately 141 feet below grade. During the May 1995 groundwater monitoring event, groundwater was encountered approximately 131 feet below grade and approximately 3 feet of free product was observed in the monitoring well (Orion, 1995).

In May 1996, a site assessment was conducted to investigate the extent of gasoline-impacted groundwater and free product detected in well MW-1. Three groundwater wells (MW-2 through MW-4) were installed. In 1996 and 1997, a free product removal program was conducted in well MW-1 and approximately 5 gallons of free product was removed.

Between 1997 and 2001, wells MW-5 through MW-8 were installed to evaluate offsite downgradient groundwater conditions. The well installations are described in several reports (Orion, 1996, 1997, 2000, 2001a).

Free product was detected again in well MW-1 intermittently between October 2004 and February 2005. Approximately 1 gallon of free product was removed until free product was no longer detected in March 2005.

In June 2005, wells M-1A and MW-9 were installed on site. Groundwater well MW-1A was installed to replace well M-1 whose screen interval was submerged beneath the water table due to rapidly rising groundwater levels at the site. Downgradient well MW-9 was installed to assess and monitor the downgradient extent of impacted groundwater at the former service garage. Groundwater analytical results for downgradient well MW-9 indicated the presence of petroleum hydrocarbon-impacted groundwater beneath the former service garage.

Groundwater monitoring well MW-10 was installed in February 2006 to assess the extent of gasoline-impacted groundwater directly south of the former service garage.

Groundwater analytical results for well MW-10 confirmed the presence of low TPHg, BTEX, MTBE, and TBA concentrations at the property boundary.

The site is listed on GeoTracker as Target Store #T-292 (T0603701871) and indicates 57,000 pounds of soil vapor (presumably volatile organic compounds) have been removed using soil vapor extraction from July 1, 2007 to September 13, 2016 and 71 gallons of free product have been removed from August 11, 2005 to September 6, 2018.

2.3 3177 California Avenue Background - The 4.3-acre site located north of the I-405 Freeway, south of a Target store, west of California Avenue and east of Atlantic Avenue was part of a larger oil producing parcel that extended from Atlantic Avenue to California Avenue and from 33rd Street to Spring Street. The site has been used for oil and gas production since the 1920s and contains three previously abandoned and four operating oil wells. Prior to the 1920s the site was open space (Global Solutions 2001). Texaco, Inc. was the oil operator from the 1920s through the 1990s; since 1994 Signal Hill Petroleum, Inc. is the current oil operator (Global Solutions 2001). Prior to 2001 the site contained six aboveground storage tanks, three horizontal heater treater vessels and other facilities to support oil production.

2.4 3177 California Avenue Previous Environmental Investigations - Global Solutions, Inc. prepared a Phase II Environmental Site assessment of the 4.3-acre site in May 2001. Global Solutions performed 20 backhoe trenches to a maximum depth of 15-feet below ground surface (bgs), 20 soil

samples were collected and submitted for analysis of TPH, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) and total threshold metals. Global Solutions reported that VOCs and SVOCs were less than their respective detection limits and although metals were detected the concentrations were less than hazardous levels. Global Solutions reported the concentrations of TPH ranged from non-detect to 9,000mg/kg (Global Solutions, Inc. 2001). Global Solutions concluded that 5,500 cubic yards of non-hazardous petroleum impacted soils were present on the 4.3-acre Fields Lease North site and could be remediated by following the procedures outlined in the RAP (Global Solutions, Inc. 2000).

Brycon LLC (Brycon) provided oversight to Global Industrial Cleaning under contract to Signal Hill Petroleum to demolish the aboveground storage tanks and associated structures and transport 600 cubic yards of material to the Fields Lease South Biocell area (Brycon LLC 2001). Additionally Brycon directed Global Industrial Cleaning to remove the 5,500 cubic yards of petroleum impacted soil identified by Global Solutions, Inc. Brycon collected 12 confirmation soil samples from the base and sidewalls of the excavations and submitted these samples for analysis of TPH, two soil samples were submitted for analysis of VOCs, SVOCs and total threshold limit metals. Brycon concluded the soil remaining in the base and sidewalls met the criteria in the RAP (Brycon LLC 2001).

Brycon performed six trenches and collected two soil samples from each trench, one at 2.5-feet below ground surface (bgs) and one from 6-feet bgs onsite in 2004 (Brycon LLC 2004). These 12 soil samples were submitted for analysis of TPH only (Figure 4); Brycon concluded that all petroleum impacted soil had been removed from the site (Brycon LLC 2004).

Brycon LLC performed a Phase I Environmental Site Assessment of the 4.3-acre site in 2004 and concluded there were no recognized environmental conditions (Brycon 2004).

Brycon LLC provided oversight of site grading in 2004, 2005 and 2007. During site grading and post-grading Brycon collected random soil samples from the top 2-feet and submitted 23 samples for analysis of TPH, two for analysis of VOCs, SVOCs, pesticides, polychlorinated biphenyls (PCBs) and total threshold limit metals (Brycon 2008). Brycon concluded that during site grading there were no substances or concentrations of substances that could be classified as hazardous waste (Brycon LLC 2008). Analytical data collected by Brycon was used in this human health risk assessment and is Appendix A.

2.5 Proposed Development - The proposed development for the portion of the site currently occupied by Target includes an 11,500 square feet extension to the existing Target building, a 5,000 square feet drive-through establishment and a 5,000 square feet free standing retail shop.

The proposed development for the portion of the site currently vacant includes a 59,115 ground level square feet storage facility.

2.6 Intent of Human Health Risk Assessment - The City of Signal Hill requires environmental assessments, investigations, remedial strategies and a baseline human health risk assessment in order to assess the feasibility of a project under California Environmental Quality Act (CEQA) guidelines. This baseline human health risk assessment satisfies the City's requirement.

3.0 SUMMARY OF FIELD ACTIVITIES

Based on the conclusions, including the identification of Recognized Environmental Conditions, of the Phase I ESA (Mearns Consulting LLC, February 12, 2020), Mearns Consulting LLC conducted a Phase II ESA (March 11, 2020).

Mearns Consulting LLC delineated the work areas with white spray paint and notified Underground Service Alert to clear public utility lines as required by law on February 11, 2020, at least two business days prior to boring activities conducted on February 18, 2020 (ticket numbers B200420334-00B and B200420342-00B).

Prior to drilling, all locations were excavated to a minimum depth of 5-feet bgs using a hand auger to prevent damage to possible unidentified subsurface utilities.

Gregg Drilling, LLC advanced the borings using a track mounted direct push rig. The sampling system was appropriately cleaned between each borehole. Rinsate generated from cleaning was appropriately disposed.

Mearns Consulting LLC collected soil matrix samples pursuant to SW846 from nine locations (SV1-SV9) at depths of 5-feet below ground surface (bgs) and 10-feet bgs. Soil samples were collected in acetate sleeves with Teflon liners and end caps with minimal headspace, logged onto a chain-of-custody form and stored in a cooler at 4oC until delivered under chain of custody to Sierra Analytical Labs (a State of California Department of Health Services ELAP accredited laboratory; ELAP No. 2320). Analyses requested were total hydrocarbons-gasoline range (TPH-g), TPH-diesel range (TPH-d), TPH-oil range (TPH-o), speciated carbon chains via USEPA method GC/FID 8015B, total threshold limit concentration (TTLC) metals including hexavalent chromium via USEPA methods 6000/7000, volatile organic compounds (VOCs) via USEPA 8260B, collected via USEPA 5035B in the field by placing 5g of soil into volatile organic analyte (VOA) vials to which preservative had been added and semi-volatile organic compounds (SVOCs) via USEPA 8270C. Soil matrix analytical results are included as Appendix B.

These soil borings were then developed as dual-nested soil vapor probes at 5-feet and 10-feet bgs (SV1-SV9) in accordance with *Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, DTSC, October 2011 and the *Advisory Active Soil Gas Investigations*, DTSC, LARWQCB, SFRWQCB, June 2015.

A new section of ¼-inch diameter nylaflow tubing with a new 6-inch stainless steel probe tip at the terminal end was inserted into the borehole to the desired sampling depth. One-inch diameter polyvinyl chloride (PVC) casing was used as a guide for the tubing to ensure that the desired sampling depth was achieved. Sand was poured into the boring annulus to form an approximately one-foot long sand pack around the probe tip, at which time the PVC piping was withdrawn. Approximately one foot of dry, granular bentonite was placed atop the sand pack and the remainder of the borehole was backfilled with hydrated bentonite to the ground surface to form a seal. The sampling end of the tubing was fitted with a three-way valve and the probe was labeled for identification.

Soil gas samples were collected in general accordance with the July 2015 *Department of Toxic Substances Control (DTSC) and Los Angeles Regional Water Quality Control Board (LARWQCB) "Advisory – Active Soil Gas Investigations."*

Each probe was allowed to equilibrate for a minimum of 48-hours after installation prior to sampling by a mobile laboratory. Soil vapor samples were collected in glass gas-tight syringes equipped with Teflon plungers. A tracer gas mixture of n-pentane, n-hexane, and n-heptane was placed at the tubing-surface interface before sampling. These compounds were analyzed during the 8260B analytical run to determine if there were surface leaks into the subsurface due to improper installation of the probe. The sampling rate was approximately 200 cc/min, except when noted differently on the chain of custody record, using a glass gas-tight syringe. Purging was completed using a pump set at approximately 200 cc/min, except when noted differently on the chain of custody record. A default of three purge volumes was used as recommended by July 2015 DTSC/RWQCB guidance documents. Prior to purging and sampling of soil vapor at each location, a shut-in test was conducted to check for leaks in the aboveground fittings. The shut-in test was performed on the aboveground apparatus by evacuating the line to a vacuum of 100 inches of water, sealing the entire system and watching the vacuum for at least one minute. A vacuum gauge attached in parallel to the apparatus measured the vacuum. If there is any observable loss of vacuum, the fittings were adjusted as needed until the vacuum did not change noticeably. The soil gas sample was then collected. No flow conditions occur when a sampling rate greater than 10 mL/min cannot be maintained without applying a vacuum greater than 100 inches of water to the sampling train. The sampling train is left at a vacuum for no less than three minutes. If the vacuum does not subside appreciably after three minutes, the sample location is determined to be a no flow sample.

Twenty soil vapor samples were collected from these soil vapor probes by a Jones Environmental, Inc. (ELAP 2882) chemist and analyzed in a mobile laboratory on February 21, 2020. Two duplicates, one per 10 soil vapor samples, were collected and analyzed by the chemist. Soil vapor analytical results are included as Appendix C.

All drilling, logging and sampling activities were conducted by or under the direct supervision of a California-Professional Geologist, and in accordance with California Well Standards presented in the Department of Water Resources (DWR) Bulletins 74-81 and 74-90. The Site Geology section and boring logs were prepared by Mr. Scott R. Fagan, a State of California Professional Geologist PG #4289. Boring logs are included as Appendix D.

3.1 Site Geology - The site is located in the Los Angeles Coastal Plain near the northwest side of the Signal Hill uplift in Signal Hill, California. The Signal Hill Uplift is the surface expression of the east-west trending Newport- Inglewood fault zone. The site is just north of the Cherry Hill Fault, the fault with the largest vertical offset in the Newport Inglewood fault complex.

Surface sediments in this area are characterized as sand, silt, gravel and clays of the Lakewood Formation within the Upper Pleistocene Series of the Quaternary System. Sediments encountered during the investigation were silt and clay.

The closest aquifer is the Gage aquifer at approximately 50-75 feet from the surface. Groundwater was not encountered during this investigation at 10-feet bgs.

3.2 Soil Vapor Analytical Results - The following VOCs were detected in soil vapor: benzene, chloroform, ethylbenzene, n-propylbenzene, tetrachloroethene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, m,p-xylenes and o-xylene. Detected concentrations of benzene, chloroform and ethylbenzene did exceed their respective San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (ESLs) (Table 1 and Figure 3). Detected concentrations of the remaining VOCs in soil vapor did not exceed their respective ESLs.

3.3 Soil Matrix Analytical Results – The following metals were detected in concentrations greater than their respective reporting limits and less than their respective ESLs, barium, cobalt, trivalent chromium, copper, mercury, nickel, silver and zinc. The following metals were detected at concentrations greater than their respective ESLs, lead and vanadium (Table 2 and Figure 4). Although arsenic was not detected in concentrations greater than its reporting limit, the reporting limit of 7.7 is greater than the ESL, 0.67 milligrams per kilogram (mg/kg). However the reporting limit is less than the regulatory accepted background concentration of arsenic in Southern California soils, 10 mg/kg (Table 2).

Total volatile petroleum hydrocarbons - diesel range (TPH-d) and TPH-oil range (TPH-o) were detected in two soil borings at depths of 5-feet bgs at concentrations greater than their respective reporting limits and less than their respective ESLs. Seven SVOCs: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, fluoranthene, phenanthrene and pyrene were detected once in the soil matrix (SV7-5'). Benzo(a)pyrene and fluoranthene were detected at concentrations greater than their respective ESLs, the remaining SVOCs were detected at concentrations less than their respective ESLs (Table 3 and Figure 4).

3.4 Conclusions - Total petroleum hydrocarbons, carbon chains and SVOCs were detected in the soil matrix, and fuel related VOCs, were detected in the soil vapor (Figures 3 and 4).

Benzene, chloroform and ethylbenzene were detected in soil vapor at concentrations greater than their respective ESLs (Figure 3).

The metals, lead and vanadium, and the SVOCs, benzo(a)pyrene and fluoranthene were detected at concentrations greater than their respective ESLs (Figure 4).

4.0 CONCEPTUAL SITE MODEL

A conceptual site model was developed to identify the potential complete exposure pathways by which constituents detected in soil could impact human health (Figure 5).

The conceptual site model identifies potential sources, environmental release mechanisms, potential migration pathways, potential exposure pathways, potential exposure routes and potential human receptors onsite.

The conceptual site model identified the following potential complete exposure pathways:

- Future commercial building occupant
    1. ingestion/dermal contact with surface soil
    2. inhalation of constituents from surface soil entrained in dust
    3. inhalation of VOCs from soil vapor in surface and subsurface soil that have migrated to indoor air

- Future construction worker
    1. ingestion/dermal contact with surface soil
    2. inhalation of constituents from surface and subsurface soil entrained in dust
    3. inhalation of VOCs from soil vapor in surface and subsurface soil that have migrated to outdoor air, including trenches

Consumption of fruit or vegetables grown in soil is not considered to be a complete potential exposure pathway under future site conditions as the 13.367-acre commercial/industrial zoned site will be developed as a commercial/industrial property.

Potential direct exposures (ingestion and dermal contact) to groundwater are not complete pathways as drinking water is provided by a remote municipal water supply, so there is little chance of incidental exposure. Discharge of groundwater to surface water also is not considered to be a complete migration pathway since there are no surface water bodies that are recharged by artesian flow or groundwater seepage in the vicinity of the site.

The potential for chemicals in soil to leach to underlying groundwater used as a drinking water source is considered very low as several aquitards or aquicludes exist below the maximum depth of impacted soils and groundwater used as a drinking water source.

There is very limited ecological habitat at and near the site. Wetlands were not observed onsite or at adjacent sites. There are no natural or undisturbed areas onsite. Based on the lack of viable ecological habitat at and near the site, there are no complete ecological pathways onsite.

5.0 IDENTIFYING CHEMICALS OF CONCERN

All constituents detected at least one time in the soil matrix and in soil vapor underlying the site were quantitatively assessed using the appropriate exposure pathway in this risk assessment.

Pursuant to the following guidance documents, *Selecting Inorganic Constituents as Chemicals of Concern for Risk Assessments at Hazardous Waste Sites and Permitted Facilities* (DTSC 1997), *Background Metals at Los Angeles Unified School Sites – Arsenic* (DTSC 2005) and *Arsenic Strategies, Determination of Arsenic Remediation, Development of Arsenic Cleanup Goals* (DTSC 2009) the following statistical tests: (a) Wilcoxon-Mann-Whitney, (b) Gehan, (c) Tarone-Ware, (d) Multiple Box Plots, (e) Multiple Histograms and (f) Q-Q Plots, were used to determine whether detected concentrations of metals in the soil matrix onsite were within background concentrations. The results of these statistical analyses are included as Appendix E.

These two sample hypotheses tests with non-detects are based on the null hypothesis. The Null hypothesis tests whether the mean and median of the concentrations of each metal detected in onsite soils are less than or equal to the mean and median concentrations of the concentrations of the same metal detected in offsite or background soil samples.

The alternative hypothesis tested was whether the mean and median of the concentrations of detected metals in soils onsite are greater than the mean and median concentrations of the concentrations of the same metals in offsite or background soil samples.

The graphs (1) Multiple Box Plots, (2) Multiple Histograms and (3) Q-Q Plots with non-detects visually indicate whether the detected concentrations of metals in onsite soils are within the population of background metals.

The conclusion based on these quantitative statistical tests was mercury and silver were not within the background population. Therefore these two metals were quantitatively assessed in the human health risk assessment via the ingestion, dermal contact and inhalation routes of exposure.

Constituents of concern quantitatively assessed include: (a) soil matrix – TPHd, TPHo, aliphatic C5-C8, aliphatic C9-C18, Aliphatic C19-C32, aromatic C9-C18, aromatic C19-C32, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, 2-methylnaphthalene, naphthalene, phenanthrene, n-propylbenzene, pyrene, lead, mercury and silver; (b) soil vapor – benzene, chloroform, ethylbenzene, n-propylbenzene, tetrachloroethene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, m,p-xylenes and o-xylene.

6.0 TOXICITY ASSESSMENT

Toxicity values are combined with exposure factors to estimate noncancer adverse health effects and cancer risks. Toxicity values include reference doses (RfDs), reference concentrations (RfCs), unit risk factors (URFs) and slope factors (SFs) that are used to evaluate noncancer adverse health effects and cancer risks. USEPA (1989) has developed the following hierarchical toxicity identification protocol:

- Integrated Risk Information System (IRIS, USEPA 1999)
- Health Effects Assessment Summary Tables (HEAST, USEPA 1997)
- National Center for Environmental Assessment (NCEA)

The State of California Office of Environmental Health Hazard Assessment (OEHHA) and the State of California Department of Toxic Substances Control (DTSC) Office of Human and Ecological Risk (HERO) have developed URFs SFs, RfCs and RfDs. Pursuant to regulatory agency guidance OEHHA's and HERO's values are preferentially used instead of USEPA's when available, as OEHHA's and HERO's values are generally more conservative than USEPA's (DTSC 2015, USEPA 2004).

If a constituent had both a risk factor and a reference concentration it was assessed as a carcinogen and as a noncarcinogen. The unit risk factors and reference concentrations were obtained from DTSC HERO (DTSC 2019), ATSDR, IRIS, OEHHA, PPRTV as listed in USEPA's Regional Screening Levels (November 2019) and DTSC's Screening Levels for residential soils (April 2019).

The exposure point concentrations, the slope factors and reference doses for the constituents detected in the soil matrix and soil vapor and quantitatively assessed are presented in Table 4.

7.0 EXPOSURE ASSESSMENT

The exposure assessment provides a scientifically defensible basis for the identification of potentially exposed human receptors and the most likely ways they might be exposed to chemicals of concern at the site. As defined by USEPA (1989), the following four components are necessary for chemical exposure to occur:

- A chemical source and a mechanism of chemical release to the environment
- An environmental transport medium (e.g., soil) for the released chemical
- A point of contact between the contaminated medium and the receptor (i.e., the exposure point)
- An exposure route (e.g., ingesting chemically-impacted soil) at the exposure point

All four of these elements must be present for an exposure pathway to be considered complete and for chemical exposure to occur (USEPA 1989).

This human health risk assessment evaluated the potential for receptors to be exposed to the maximum detected concentrations or the upper confidence level (UCL), whichever value was less, pursuant to the ProUCL User's Guide (USEPA 2004) of the constituents detected in the top 10-ft of soil. The ProUCL model output for constituents detected in the soil matrix and soil vapor is included as Appendix F.

The maximum detected concentrations or upper confidence levels of the volatile organic compounds detected in soil vapor in shallow soil (10-feet bgs or less) was used as the exposure point concentrations in the ESL and VURAM models.

7.1 Average and Reasonable Maximum Exposures - Typically two types of exposure scenarios are evaluated in a risk assessment; an average exposure scenario, and a reasonable maximum exposure (RME) scenario. The average exposure scenario represents a more typical exposure, believed to be most likely to occur, while the reasonable maximum exposure scenario represents a plausible worst case situation - one that is not very likely to occur. USEPA guidance (1989) recommends evaluating a reasonable maximum exposure scenario. The reasonable maximum exposure scenario estimates the exposure a receptor might receive using highly conservative intake assumptions (e.g., 90th or 95th percentile for most intake assumptions) and the upper confidence limit (UCL) on the mean of the chemical concentrations. It is assumed that by evaluating a reasonable maximum exposure scenario potential health risks to extremely sensitive individuals within a particular receptor population will be adequately addressed. As an added measure of conservatism, only a reasonable maximum exposure scenario was evaluated in this human health risk assessment.

The DTSC PEA and USEPA guidance contain formulae that incorporate default values which were selected to be health protective. Some of these default values, such as, the exposure frequency, exposure time and exposure duration, were modified when evaluating the construction worker scenarios (DTSC 2015, USEPA 2004).

8.0 RISK CHARACTERIZATION

The risk characterization process incorporates data from the exposure and toxicity assessments. The exposure assessment information necessary to estimate risks and hazards includes the estimated chemical intakes, exposure modeling assumptions, and the exposure pathways assumed to contribute to the majority of exposure for each receptor over a given time period (USEPA 1989a). The exposure parameters for assessing the constituents detected in the soil matrix are included as Table 5.

The method by which chemicals with carcinogenic and/or noncarcinogenic effects are evaluated to determine whether they pose a risk or an adverse impact to human health is discussed below, relative to the exposure pathways by which the receptors may be exposed to the exposure point concentrations of the chemicals of concern.

8.1 Ingestion and Dermal Contact Pathways - To provide an evaluation of chronic risk along the ingestion and dermal contact pathways the following equations for risk and hazard were used consistent with PEA guidance (DTSC 2015).

$$Risk_{soil} = \frac{SF_o \times C_s \times IR_{s,\,adult} \times EF \times ED_{adult} \times 10^{-6}\ kg/mg}{BW_{adult} \times AT \times EF}$$

$$+ \frac{SF_o \times C_s \times SA_{adult} \times AF \times ABS \times EF \times ED_{adult} \times 10^{-6}\ kg/mg}{BW_{adult} \times AT \times EF}$$

$$+ \frac{SF_o \times C_s \times IR_{s,\,child} \times EF \times ED_{child} \times 10^{-6}\ kg/mg}{BW_{child} \times AT \times EF}$$

$$+ \frac{SF_o \times C_s \times SA_{child} \times AF \times ABS \times EF \times ED_{child} \times 10^{-6}\ kg/mg}{BW_{child} \times AT \times EF}$$

$$Hazard_{soil} = \frac{(1/RfD_o) \times C_s \times IR_{s,child} \times EF \times ED_{child} \times 10^{-6}\ kg/mg}{BW_{child} \times AT}$$

$$+ \frac{(1/RfD_o) \times C_s \times SA_{child} \times AF \times ABS \times EF_{child} \times ED_{child} \times 10^{-6}\ kg/mg}{BW_{child} \times AT}$$

$$+ \frac{(1/RfD_o) \times C_s \times IR_{s,adult} \times EF \times ED_{adult} \times 10^{-6}\ kg/mg}{BW_{adult} \times AT}$$

$$+ \frac{(1/RfD_o) \times C_s \times SA_{adult} \times AF \times ABS \times EF_{adult} \times ED_{adult} \times 10^{-6}\ kg/mg}{BW_{adult} \times AT}$$

Where:

SF_o = cancer slope factor (mg/kg-day) $^{-1}$
C_s = concentration in soil (mg/kg)
RfD_o = oral reference dose (mg/kg-day)
ABS = absorption fraction (dimensionless)
ED = exposure duration (years)
EF = exposure frequency (days/year)
BW = body weight (kg)
IRs = incidental soil ingestion rate (mg/day)
SA = skin surface area (cm^2/event)
AF = soil to skin adherence factor (mg/cm^2)
AT = averaging time (days)

Chemical specific values for the absorption fractions (ABS) parameter were obtained from USEPA and DTSC (USEPA November 2019; DTSC April 2019). Toxicity and exposure point concentrations are found in Table 4. Exposure parameters for assessing constituents detected in the soil matrix are presented in Table 5. The maximum concentration or the upper confidence level, whichever was less, of the constituents detected in the top 10-ft of soils were evaluated in this risk assessment for the residential, commercial and construction worker scenarios.

Analyte	EPC mg/kg
TPHd	69
TPHo	45
Aliphatic C5-C8	0.54
Aliphatic C9-C18	114.6
Aliphatic C19-C32	264.9
Aromatic C9-C18	2.053
Aromatic C19-C32	2.638
Naphthalene	0.062
n-Propylbenzene	0.005
Benzo(b)fluoranthene	0.67
Benzo(k)fluoranthene	0.65
Benzo(a)pyrene	0.53
Chrysene	0.7
Fluoranthene	1.1
Fluorene	0.057
2-Methylnaphthalene	0.29
Pyrene	2.5
Mercury	0.2
Lead	33
Silver	1.5

The exposure factors presented in Tables 4 and 5 provide a conservative estimate of chronic risk and hazard to human health due to exposure to the chemicals of concern detected in the soil matrix via the ingestion and dermal contact routes of exposure. The calculated estimates of risk and hazard due to exposure to constituents detected in the soil matrix are provided in Tables 6-8.

8.2 Inhalation Pathway Soil Matrix - To provide an evaluation of chronic risk along the inhalation pathway the following equations (DTSC 2015, USEPA 2009) for estimating risk and hazard due to exposure to constituents of concern detected in the soil matrix were used consistent with PEA guidance (DTSC 2015, USEPA 2009).

Semi-volatile organic compounds and metals in soil are evaluated in outdoor air using particulate emission factors (PEFs) to obtain concentrations of chemicals in dust. PEFs are used to develop an estimate of the concentration of a chemical in dust based on its concentration in soil. It assumes that the dust from the site is caused by the wind and not created by mechanical means (e.g. construction activities, tilling, automobile traffic, etc.) (DTSC 2015).

A default PEF of 1.36E+09 (m^3/kg) is used for the residential and commercial worker scenarios, and a PEF of 1.00E+06 is used for the construction worker scenario (DTSC 2015, USEPA 2009). It assumes an infinite source of chemicals, a vegetative cover of 50%, and a mean annual wind speed of 4.69 m/s. This is equivalent to a dust concentration of 0.76 g/m^3 at the receptor. The default dispersion term (Q/C) of 90.80 (g/m2-s per kg/m3) is based on a site of 0.5 acres and dispersion modeling runs of 29 sites across the United States. The default Q/C provides a conservative estimate of the long-term exposure to dust (DTSC 2015).

$$C_a = (C_s/PEF) \times 1000\mu g/mg$$

Where:

C_a = concentration in air, µg/m^3
C_s = concentration in soil, mg/kg
PEF = particulate emission factor

$$Risk_{air} = IUR \times C_a \times \frac{ET \times EF \times ED}{AT}$$

$$Hazard_{air} = (1/RfC \times 1000\mu g/mg) \times C_a \times \frac{ET \times EF \times ED}{AT}$$

Where:

IUR = inhalation unit risk factor (µg/m^3)$^{-1}$
RfC = reference concentration (µg/m^3)
C_a = contaminant concentration in air (µg/m^3)
ET = exposure time (hours/day)
EF = exposure frequency (days/year)
ED = exposure duration (years)
AT = averaging time (hours)

The risk and hazard for the air pathway are based on either the exposure to volatile emissions for VOCs or the exposure to fugitive dust emissions for non-VOCs. The Office of Scientific Affairs defines a VOC as a chemical with a vapor pressure of 0.001 mm mercury or higher and a Henry's Law Constant of 1 x 10^{-5} or higher. Exposure to a chemical via the air pathway can be adequately performed using either volatilization or fugitive dust scenarios; it is not necessary to do both (DTSC 2015).

For this risk assessment exposure to non-VOCs detected in the soil matrix via the inhalation pathway was performed using the fugitive dust scenario.

8.3 SFRWQCB ESL Vapor Intrusion Model - The SFRWQCB Environmental Screening Levels vapor intrusion model (2019, Rev. 2) was used to estimate potential risk and hazard due to exposure to volatiles in soil vapor in shallow soil (10-feet bgs or less) and deep soil (greater than 10-feet bgs).

The maximum detected concentration was used as the exposure point concentration in this vapor intrusion model. Those chemicals of concern that had both reference doses and slope factors available were assessed as both noncarcinogenic and carcinogenic compounds.

Constituents detected in the soil vapor: tetrachloroethene and gasoline range organics were assessed via the inhalation route of exposure for residential land use.

The exposure point concentrations (EPC) of the constituents detected in soil vapor at 5-feet and 10-feet are presented below and were input into the SFRWQCB ESL model.

VOC	EPC Soil Vapor 5-ft & 10-ft bgs µg/m^3
Benzene	19
Chloroform	12.89
Ethylbenzene	23.23
tetrachloroethene	8
Toluene	18.68
xylenes	101.52

The results of the vapor intrusion risk assessment for detected concentrations of the constituents of concern in soil vapor at 5-feet and 10-feet (shallow soil) for a residential land use scenario estimated using the SFRWQCB ESL model are presented below and included as Appendix G:

Residential Scenario VOCs in Shallow Soil (5-ft & 10-ft bgs)

VOC	$Risk_r$ Shallow Soil	$Hazard_r$ Shallow Soil	$Risk_r$ Shallow Soil	$Hazard_r$ Shallow Soil
	AF 0.03	AF 0.03	AF 0.001	AF 0.001
Benzene	5.9E-06	1.8E-01	2.0E-07	6.1E-03
Chloroform	3.2E-06	3.8E-03	1.1E-07	1.3E-04
Ethylbenzene	6.2E-07	6.7E-04	2.1E-08	2.2E-05
tetrachloroethene	5.2E-07	5.8E-03	1.7E-08	1.9E-04
Toluene		1.8E-03		6.0E-05
xylenes		2.9E-02	2.6E-08	9.7E-04
SUM	1E-05	0.219	3.4E-07	0.007

Notes: $Risk_r$ = estimated risk value for carcinogenic constituents for residential land use
$Hazard_r$ = estimated hazard value for noncarcinogenic constituents for residential land use
AF = attenuation factor; AF = 0.03 (SWRCB), AF = 0.001 (USEPA)

Shallow Soil - The individual estimated risk values for benzene and chloroform and the summed estimated risk values derived using the attenuation factor 0.03 are greater than the threshold of 1 x 10^{-6}. The individual and summed estimated hazard values for all volatile organic compounds derived using the attenuation factor 0.03 are less than the threshold of 1.

The individual and summed estimated risk and hazard values derived using the attenuation factor 0.001

are less than the thresholds of 1 x 10^{-6} and 1.

The results of the vapor intrusion risk assessment for detected concentrations of the constituents of concern in soil vapor at 5-feet and 10-feet (shallow soil) for a commercial or industrial land use scenario estimated using the SFRWQCB ESL model are presented below and included as Appendix H:

Commercial Scenario VOCs in Shallow Soil (5-ft & 10-ft bgs)

VOC	$Risk_c$ Shallow Soil	$Hazard_c$ Shallow Soil	$Risk_c$ Shallow Soil	$Hazard_c$ Shallow Soil
	AF 0.03	AF 0.03	AF 0.001	AF 0.001
Benzene	1.3E-06	4.3E-02	4.5E-08	1.4E-03
Chloroform	7.3E-07	9.0E-04	2.4E-08	3.0E-05
Ethylbenzene	1.4E-07	1.6E-04	4.7E-09	5.3E-06
tetrachloroethene	1.2E-07	1.4E-03	4.0E-09	4.6E-05
Toluene		4.3E-04		1.4E-05
xylenes		7.0E-03	2.6E-08	2.3E-04
SUM	2.3E-06	0.053	7.8E-08	0.002

Notes: $Risk_c$ = estimated risk value for carcinogenic constituents for commercial or industrial land use
$Hazard_c$ = estimated hazard value for noncarcinogenic constituents for commercial or industrial land use
AF = attenuation factor; AF = 0.03 (SWRCB), AF = 0.001 (USEPA)

Shallow Soil - The individual and summed estimated risk values derived using the attenuation factor 0.03 are less than the threshold of 1 x 10^{-5}. The individual and summed estimated hazard values derived using the attenuation factor 0.03 are less than the threshold of 1.

The individual and summed estimated risk and hazard values derived using the attenuation factor 0.001 are less than the thresholds of 1 x 10^{-5} and 1.

8.4 VURAM - The Virginia Unified Risk Assessment Model (VURAM) was used to estimate the potential risks and hazards due to inhalation of VOCs by construction workers while working in a trench.

The exposure point concentrations of the constituents detected in soil vapor and assessed using the VURAM model are presented below.

VOC	Exposure Point Concentration in Soil Vapor µg/m^3
benzene	19
chloroform	12.89
ethylbenzene	23.23
n-propylbenzene	20
tetrachloroethene	8
toluene	18.68
1,2,4-trimethylbenzene	41.32
1,3,5-trimethylbenzene	19.25
xylenes	101.52

The results of the vapor intrusion risk assessment for the constituents of concern in soil vapor for construction workers estimated using the VURAM model are presented below and included as Appendix I:

Construction Worker Scenario VURAM

VOC	$Risk_i$	$Hazard_i$
benzene	2.17E-09	2.53E-04
chloroform	3.72E-09	4.84E-05
ethylbenzene	6.49E-10	2.11E-06
n-propylbenzene		1.43E-05
tetrachloroethene	1.71E-11	1.20E-04
toluene		3.46E-06
1,2,4-trimethylbenzene		4.74E-04
1,3,5-trimethylbenzene		1.38E-03
xylenes		2.07E-04
SUM	6.56E-09	0.003

Neither the individual nor summed estimated risk values exceed the threshold of 1 x 10^{-5} for all carcinogenic VOCs for construction workers working in a trench. Neither the individual nor summed estimated hazard values exceed the threshold of 1 for construction workers working in a trench.

8.5 DTSC's LeadSpread 8.0 Model - DTSC's LeadSpread 8.0 Model estimates the hazard due to exposure to lead in air and onsite soils/dust for adults and children within a residential exposure scenario. Typically, lead concentrations in air are not measured onsite. Therefore the model extrapolates these concentrations from the measured concentrations of lead in onsite soils.

DTSC's LeadSpread 8.0 Model results indicate that lead does not pose an unacceptable hazard to adults or children exposed to either the maximum detected concentration (33mg/kg) or the 95UCL concentration (10.54mg/kg) of lead in site soils used in the model as the exposure point concentration. These results are provided in Appendix J.

8.6 Noncancer Adverse Health Effects - Noncarcinogenic effects or hazards are typically evaluated by comparing an exposure level over a specified time period (e.g., a lifetime or 25 years), with a reference dose based on a similar time period. Hazard quotient values less than 1 indicate that potential exposures to noncarcinogenic constituents of concern are not expected to result in toxicity (USEPA 1989). Summing the hazard quotient values to derive a hazard index (HI) provides an estimation of the total potential hazard due to a simultaneous exposure to all the noncarcinogenic constituents of concern. However, summing hazard quotient values is not necessary when the chemicals of concern target different organs within the body (USEPA 1989, DTSC 2015). Although the noncarcinogenic chemicals of concern quantitatively assessed in this risk assessment target different organs within the body, the estimated hazard quotients were summed to derive a hazard index.

8.7 Lifetime Excess Cancer Risk - Slope factors are used to estimate the potential risk associated with exposure to individual constituents of concern. The slope factor is multiplied by the chronic daily intake averaged over 70 years to estimate lifetime excess cancer risk. "Excess" or "incremental" cancer risk represents the probability of an individual developing cancer over a lifetime as a result of chemical exposure, over and above the baseline or "background" cancer risk in the general population. Cancer risks and noncancer health hazards estimated in the human health risk assessment are regarded as estimated or theoretical results developed on the basis of the toxicity factors, chemical fate and transport, exposure assumption, and other inputs previously described. Cancer risks do not represent actual cancer cases in actual people. Rather, risks are calculated on the basis of an entirely hypothetical set of conditions. This assumed "exposure scenario" is developed to protect human health, and is based on

standard USEPA and Cal-EPA methods and assumptions.

USEPA characterizes theoretical excess lifetime cancer risks below one in one million (10^{-6}) as not of concern and has stated that risks between 10^{-6} and one in 10,000 (10^{-4}) are "safe and protective of public health" (Federal Register 56(20):3535, 1991). Remedial action is not generally required by USEPA for sites with a theoretical lifetime excess risk of less than 10^{-4}; whereas the State of California uses a risk-management approach (DTSC 2011).

The more stringent target risk of 10^{-6} is typically applied to residential receptors. To provide perspective, a total theoretical lifetime excess cancer risk of one in 100,000 (10^{-5}) is frequently accepted by Cal-EPA for worker receptors at California sites, and the target risk for chemicals evaluated under State Proposition 65 regulations is 10^{-5} (22CCR 12703).

8.8 Multipathway Cancer Risk - Based on regulatory guidelines, it is appropriate to combine risk estimates across exposure pathways for a given receptor. At the same time, exposure to multiple carcinogenic constituents of concern is also typically considered to be additive. For exposures to multiple pathways and chemicals, the following equation was used to estimate total theoretical lifetime excess carcinogenic risks:

$$\text{Total Risk} = \sum_{p=1}^{m} \sum_{i=1}^{n} CR_{i,p}$$

Where:

Total Risk	=	Excess cancer risk from exposure to n chemicals via m pathways
m	=	Number of exposure pathways
n	=	Number of chemicals
$CR_{i,p}$	=	Potential cancer risk from exposure to chemical i via pathway p

This equation was used to estimate the total potential cancer risks due to exposure to the carcinogenic constituents of concern via the ingestion, dermal contact and inhalation routes of exposure. The estimated risks, total risk, estimated hazards and hazard index are presented in Tables 6-9 .

8.9 Estimation of Risks and Hazards

Residential Scenario

Estimated Risk Soil Ingestion and Dermal contact - The estimated risk due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes is 1.3×10^{-6} slightly greater than the target threshold 1×10^{-6}.

Estimated Risk Soil & Soil Vapor Inhalation - The estimated risk due to exposure to constituents detected in the soil matrix via the inhalation exposure route and due to exposure to volatile organic compounds in the vapor phase is 1.02×10^{-5} (using the AF 0.03) greater than the target threshold 1×10^{-6} or 3.48×10^{-7} (using the AF 0.001) less than the target threshold 1×10^{-6}.

Hazard Quotients Soil Ingestion and Dermal Contact - The sum of the estimated hazard quotients due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes is 0.57, less than 1, the target hazard value.

Hazard Quotients Soil & Soil Vapor Inhalation - The sum of the estimated hazard quotients due to

exposure to constituents detected in the soil matrix via the inhalation exposure route and to volatile organic compounds in the vapor phase is 0.22 (using the AF 0.03) or 0.007 (using the AF 0.001) both less than the threshold value 1.

Summed Risk - The total risk, summed across all exposure pathways for all carcinogenic constituents of concern in the soil matrix and soil vapor is 1.15×10^{-5} (using the AF 0.03) or 1.65×10^{-6} (using the AF 0.001), both greater than the target risk.

Hazard Index – The total hazard, summed across all exposure pathways for all noncarcinogenic constituents of concern in the soil matrix and soil vapor is 0.79 (using the AF 0.03) or 0.58 (using the AF 0.001) both are less than the target hazard value. These estimated risk and hazards values are presented in Tables 6 and 9.

Commercial Worker Scenario

Estimated Risk Soil Ingestion and Dermal contact - The estimated risk due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes is 5.24×10^{-7} less than the target threshold 1×10^{-5}.

Estimated Risk Soil & Soil Vapor Inhalation - The estimated risk due to exposure to constituents detected in the soil matrix via the inhalation exposure route and due to exposure to volatile organic compounds in the vapor phase is 2.29×10^{-6} (using the AF 0.03) or 7.77×10^{-8} (using the AF 0.001), both are less than the target threshold 1×10^{-5}.

Hazard Quotients Soil Ingestion and Dermal Contact - The sum of the estimated hazard quotients due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes is 0.06, less than 1, the target hazard value.

Hazard Quotients Soil & Soil Vapor Inhalation - The sum of the estimated hazard quotients due to exposure to constituents detected in the soil matrix via the inhalation exposure route and to volatile organic compounds in the vapor phase is 0.05 (using the AF 0.03) or 0.003 (using the AF 0.001) both less than the threshold value 1.

Summed Risk - The total risk, summed across all exposure pathways for all carcinogenic constituents of concern in the soil matrix and soil vapor is 2.8×10^{-6} (using the AF 0.03) or 6×10^{-7} (using the AF 0.001), both less than the target risk.

Hazard Index – The total hazard, summed across all exposure pathways for all noncarcinogenic constituents of concern in the soil matrix and soil vapor is 0.11 (using the AF 0.03) or 0.06 (using the AF 0.001) both are less than the target hazard value. These estimated risk and hazards values are presented in Tables 7 and 9.

Construction Worker Scenario

Estimated Risk Soil Ingestion and Dermal contact - The estimated risk due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes is 7.87×10^{-8} less than the target threshold 1×10^{-5}.

Estimated Risk Inhalation - The estimated risk due to exposure to constituents detected in the soil matrix via the inhalation exposure route is 2.65×10^{-12} less than the target threshold 1×10^{-5}.

Hazard Quotients Ingestion and Dermal Contact - The estimated hazard quotients due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes is 0.3, less than 1, the target hazard value.

Hazard Quotients Inhalation - The estimated hazard quotients due to exposure to constituents detected in the soil matrix via the inhalation exposure route is 0.0009, less than the target hazard value.

Summed Risk - The total risk, summed across all exposure pathways for all carcinogenic constituents of concern in the soil matrix and soil vapor underlying the site, is 8.5×10^{-8}, less than the target threshold 1×10^{-5}.

Hazard Index – The total hazard, summed across all exposure pathways for all noncarcinogenic constituents of concern in the soil matrix and soil vapor underlying the site is 0.3, less than the target hazard value. These estimated risk and hazards values are presented in Tables 8 and 9.

Conclusions and Recommendations – It is unlikely that site will be redeveloped for residential occupancy as it is zoned commercial/industrial and its current use is commercial. The estimated risks and hazards due to exposure to constituents detected in the soil matrix and soil vapor underlying the site for commercial and construction workers indicate the site can be safely redeveloped for commercial use.

Institutional controls, i.e., the required passive methane mitigation system to be installed subslab of the proposed buildings and paved areas greater than 5,000 square feet, and paving of surface soils for parking mitigates exposure by future commercial workers.

Mitigation measures during grading activities such as monitoring under the Air Quality Management District (AQMD) Rule 1166 permit/compliance plan and the application of Simple Green mixed with water applied as a dust suppressant may result in decreased concentrations of constituents in soils and soil vapor that protect the construction worker.

9.0 UNCERTAINTY ANALYSIS

The uncertainty analysis characterizes the propagated uncertainty in human health risk assessments. These uncertainties are driven by variability in:

- The chemical data selection and assumptions used in the models with which concentrations at receptor locations were estimated.
- The variability of receptor intake parameters.
- The accuracy of toxicity values used to characterize exposure, hazards and cancer risks.

Additionally, uncertainties are introduced in the risk assessment when exposures to several substances across multiple pathways are summed.

Quantifying uncertainty is an essential element of the risk assessment process. According to USEPA's Guidance on Risk Characterization for Risk Managers and Risk Assessors, point estimates of risk "do not fully convey the range of information considered and used in developing the assessment" (USEPA 1992). The following components of the risk assessment process can introduce uncertainties:

- Data Collection and Evaluation
- Exposure Assessment
- Toxicity Assessment
- Risk Characterization

9.1 Data Collection and Evaluation - The techniques used for data sampling and analysis and the methods used for identifying chemicals for evaluation in this risk assessment, may result in a number of uncertainties. These uncertainties are itemized below in the form of assumptions.

- It was assumed that the nature and extent of chemical impacts on and near the site have been adequately characterized. If this assumption is not valid, then potential health impacts may be over- or underestimated.

- Systematic or random errors in the chemical analyses may yield erroneous data. These types of errors may result in a slight over- or underestimation of risk.

9.2 Exposure Assessment - A number of uncertainties are associated with the exposure assessment, including estimation of exposure point concentrations and assumptions used to estimate chemical intakes. Key uncertainties associated with these components of the human health risk assessment are summarized below.

9.2.1 Exposure Pathways - The exposure pathways evaluated in this human health risk assessment are expected to represent the primary pathways of exposure, based on the results of the chemical analyses, and the expected fate and transport of these chemicals in the environment. Minor or secondary pathways may also exist, but often cannot be identified or evaluated using the available data. The contribution of secondary pathways to the overall risk from the site is not likely to be significant. In addition, intake assumptions are reflective of trends (usually for the most sensitive individual within an entire population), and as such are subject to intrinsic variability. In both cases, their presence introduces a level of uncertainty to this risk assessment process.

9.3 Toxicity Assessment - Toxicity information for many chemicals is often limited. Consequently, there are varying degrees of uncertainty with the calculated toxicity values. Sources of uncertainty associated with toxicity values include:

- Using dose-response information from effects observed at high doses to predict the adverse health effects that may occur following exposure to the low levels expected from human contact with the agent in the environment.
- Using dose-response information from short-term exposures to predict the effects of long-term exposures.
- Using dose-response information from animal studies to predict effects in humans.
- Using dose-response information from homogeneous animal populations or human populations to predict the effects likely to be observed in the general population consisting of individuals with a wide range of sensitivities.

To compensate for these uncertainties, USEPA typically applies a margin of safety when promulgating human toxicity values. Therefore, use of USEPA toxicity values likely results in an overestimation of potential hazard and risk.

9.4 Risk Characterization - The reasonable maximum exposure scenario risk characterization represents an over-estimation of risk. Site-specific information regarding depth below ground at which the constituents of concern were detected was not used in the equations. The reasonable maximum exposure scenario estimated the risk to the receptors based on the maximum detected concentrations or the UCLs for the constituents quantitatively assessed in this risk assessment.

9.5 Summary of Risk Assessment Uncertainties - The analysis of the uncertainties associated with this risk assessment indicates that the estimated risks and hazards derived from the equations in the PEA Manual (DTSC 2015), the RAGs Manual (USEPA 2009), the LeadSpread Model (DTSC) and the ESL and VURAM Models for the reasonable maximum exposure scenario represent an over-estimation of risk. Although as outlined in the sections above, many factors can contribute to the over- or underestimation of risk, in general, a mixture of conservative and upper-bound input values were identified to estimate potential exposures. Compounding conservative and upper-bound input values in the risk assessment process are intended to lead to reasonable, maximum, health-conservative estimates. The actual impacts to human health are most likely less than those estimated in this human health risk assessment for the evaluated receptors and pathways.

10.0 REFERENCES

Brycon, LLC (Brycon). October 25, 2001. Soil Sampling Results for Excavations at the Fields Lease North Site, Long Beach, California

Brycon. June 29, 2004. Fields Lease North, Environmental Site Assessment.

Brycon. June 30, 2004. Phase I Environmental Site Assessment, Fields Lease North, Signal Hill, California.

Brycon. February 12, 2008. Final Environmental Closure Report, Fields Lease North Site, Commercial Development, Signal Hill, California.

California Environmental Protection Agency (Cal-EPA). 1992. Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities.

California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC). 1997. Selecting Inorganic Constituents as Chemicals of Potential Concern at Risk Assessments at Hazardous Waste Sites and Permitted Facilities. February 1997.

California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC). 2005. Final Report, Background Metals at Los Angeles Unified School Sites – Arsenic. June 6, 2005.

California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC). 2007. Arsenic Strategies, Determination of Arsenic Remediation, Development of Arsenic Cleanup Goals for Proposed and Existing School Sites. March 21, 2007.

California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC). 2011. Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air October 2011.

California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC). 2015. Preliminary Endangerment Assessment Guidance Manual.

DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note Number 1. September 30, 2014. Recommended DTSC Default Exposure Factors for use in Risk Assessment at California Permitted Waste Sites and Permitted Facilities.

Chernoff, G., W. Bosan and D. Oudiz. Determination of a Southern California Regional Background Arsenic Concentration in Soil.

DTSC HERO Human Health Risk Assessment Note Number 3. April 2019.

DTSC's LeadSpread 8.0 Model.

Global Solutions, Inc. October 9, 2000. Remedial Action Plan, Fields Lease.

Global Solutions, Inc. May 5, 2001. Fields Lease North, Phase II Environmental Site Assessment.

Los Angeles Regional Water Quality Control Board (LARWQCB). May 7, 2001. Approval of Remedial Action Plan – Fields Lease North located at California and Spring Street, Signal Hill, California (File No. 100.315) SLIC #1029.

McLaren/Hart Environmental Engineering Corporation, October 13, 1994. Site Assessment Report for Soil Investigation, Target Store T-292, 700 East 33rd Street, Signal Hill, California (LACDPW File #I011132).

Mearns Consulting LLC. February 12, 2020. Phase I Environmental Site Assessment, 950 East 33rd Street, Signal Hill, California 90755.

Mearns Consulting LLC. March 11, 2020. Phase II Environmental Site Assessment, 950 East 33rd Street and 3177 California Avenue, Signal Hill, California 90755.

Mearns Consulting LLC. April 13, 2020. Methane Gas Leak Test Report, 950 East 33rd Street and 3177 California Avenue, Signal Hill, California 90755.

Office of Environmental Health Hazard Assessment (OEHHA). Unit Risk Factors and Reference Concentrations.

Orion Environmental Inc., June 21, 1995. Results of Groundwater Monitoring for May 1995 at 700 East 33rd Street in Signal Hill, California, prepared for Tesoro Refining, Marketing & Supply Company, Portland, Oregon.

Orion Environmental Inc., August 22, 1996. Site Assessment Report, Target Store T-292, 950 East 33rd Street, Signal Hill, California, prepared for Tesoro Refining, Marketing & Supply Company, Portland, Oregon.

Orion Environmental Inc., May 30, 1997. Downgradient Well Installation Report, Target Store T-292, 950 East 33rd Street in Signal Hill, California, prepared for Tesoro Refining, Marketing & Supply Company, Portland, Oregon.

Orion Environmental Inc., June 7, 2000. Groundwater Monitoring Results, Fourth Quarter 1999 and First Quarter 2000 and Installation of Free Product Monitoring Well, 700 East 33rd Street, Signal Hill, California, prepared for Tesoro Petroleum Companies, Inc., Auburn, Washington.

Orion Environmental Inc., March 27, 2001a. Groundwater Monitoring Results and Well Installation Report, Fourth Quarter 2000 and First Quarter 2001, 950 East 33rd Street in Signal Hill California, Target Store T-292, prepared for Tesoro Petroleum Companies, Inc., Auburn, Washington.

Orion Environmental, Inc., July 18, 2001b. File Review Summary for Nearby Property and Summary of Local Geology and Hydrogeology, Target Store T-292, 700 East 33rd Street, Signal Hill, California.

Orion Environmental, Inc., October 28, 2005. Groundwater, Soil Vapor Extraction, and Vapor Monitoring Well Installation Work Plan, Target Store T-292, 700 East 33rd Street, Signal Hill, California.

Orion Environmental, Inc., August 2006. Remedial Action Plan for Impacted Soil, Target Store T-292, 950 East 33rd Street, Signal Hill, California.

Orion Environmental, Inc., January 31, 2017. Alternative Groundwater Remediation Work Plan, 950 East

33rd Street, Signal Hill, California, Target Store T-292, RWQCB File #I-11132.

United States Environmental Protection Agency (USEPA). September 24, 1986. Guidelines for Health Risk Assessment of Chemical Mixtures. 51 FR 34014-34025.

United States Environmental Protection Agency (USEPA). January, 1992(a). Dermal Exposure Assessment: Principles and Applications. Office of Research and Development Response. EPA/600/8-91/011B.

United States Environmental Protection Agency (USEPA). February, 1992(b). Guidance on Risk Characterization for Risk Managers and Risk Assessors.

United States Environmental Protection Agency (USEPA). July, 1996. Soil Screening Guidance: User's Guide. Office of Solid Waste and Emergency Response. Publication 9355.4-23.

United States Environmental Protection Agency (USEPA). August, 1997(a). Exposure Factors Handbook, Volumes I, II and III. Office of Research and Development. EPA/600/P-95/002F.

United States Environmental Protection Agency (USEPA). July, 1997(b). Health Effects Assessment Summary Tables (HEAST). Office of Solid Waste and Emergency Response. EPA-540-R-97-036.

United States Environmental Protection Agency (USEPA). December, 2004. Risk Assessment Guidance for Superfund (RAGs), Office of Emergency and Remedial Response. EPA/540/1-9/002.

United States Environmental Protection Agency (USEPA). 2004. Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals). Office of Emergency and Remedial Response. Publication 9285.7-01B.

United States Environmental Protection Agency (USEPA). 2009. Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment).

United States Environmental Protection Agency (USEPA). April, 2004. ProUCL Guidance.

United States Environmental Protection Agency (USEPA). ProUCL version 5.1.02

United States Environmental Protection Agency (USEPA). November 2019. Regional Screening Levels.

TABLES

Table 1 - Soil Vapor Analytical Results

SAMPLE ID	DATE SAMPLED	Benzene µg/m³	Chloroform µg/m³	Ethylbenzene µg/m³	n-Propylbenzene µg/m³	Tetrachloroethene µg/m³	Toluene µg/m³	1,2,4-Trimethylbenzene µg/m³	1,3,5-Trimethylbenzene µg/m³	m,p-xylenes µg/m³	o-xylene µg/m³
ESL		3.2	4.1	37		15	10,000			3,500	3,500
SV1-5'	2/21/20	<8	**12**	18	<8	<8	21	8	9	100	34
SV1-10'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV2-5'	2/21/20	<8	<8	<8	<8	8	33	11	<8	<16	<8
SV2-10'	2/21/20	<8	<8	<8	<8	<8	11	<8	<8	<16	<8
SV3-5'	2/21/20	<8	<8	<8	<8	<8	32	11	<8	<16	<8
SV3-10'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV4-5'	2/21/20	<8	<8	<8	<8	<8	10	16	<8	<16	<8
SV4-10'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV4-10' REP	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV5-5'	2/21/20	<8	8	<8	<8	<8	<8	13	<8	19	9
SV5-10'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV6-5'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV6-5' REP	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV6-10	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV7-5'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV7-10'	2/21/20	**19**	**11**	23	20	<8	45	123	40	76	40
SV8-5'	2/21/20	<8	**34**	<8	<8	<8	<8	<8	<8	<16	<8
SV8-10'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV9-5'	2/21/20	<8	<8	<8	<8	<8	<8	<8	<8	<16	<8
SV9-10'	2/21/20	**19**	**20**	**99**	<8	<8	27	<8	<8	322	151

Notes:

µg/m³ = micrograms per cubic meter

<8 = concentration is less than the Reporting Limit (8), i.e., not detected (ND)

SV1-5' = Soil Vapor Probe 1, 5' bgs

BOLD = detected concentration exceeds ESL

Analytical results are included as Appendix A

Only detected concentrations of VOCs are presented in this table. All other VOCs were ND.

ESL = San Francisco Regional Water Quality Control Board Environmental Screening Level 2019 (Rev. 2)

Blank Cell = ESL Not Available

Table 2 - Metals Analytical Results in Soil Matrix

SAMPLE ID	DATE SAMPLED	As mg/kg	Ba mg/kg	Co mg/kg	Cr^{+3} mg/kg	Cu mg/kg	Hg mg/kg	Ni mg/kg	Pb mg/kg	Ag mg/kg	V mg/kg	Zn mg/kg
ESL		0.67	390	23	120,000	180	13	86	32	25	18	340
SV1-5	2/18/20	**<7.7**	66	6.6	15	12	<0.05	10	2.6	<1	**22**	26
SV1-10	2/18/20	**<7.7**	44	4.7	10	<7	<0.06	<6.8	<2.6	<1	16	23
SV2-5	2/18/20	**<7.7**	42	5	16	7.3	<0.06	7.5	3	<1	**34**	21
SV2-10	2/18/20	**<7.7**	35	4.1	7.6	<7	<0.05	7.4	<2.6	<1	13	19
SV3-5	2/18/20	**<7.7**	53	7.9	21	11	<0.06	16	3.5	<1	**28**	35
SV3-10	2/18/20	**<7.7**	30	3.8	6.9	<7	<0.05	<6.8	<2.6	<1	11	17
SV4-5	2/18/20	**<7.7**	110	7	14	27	0.2	10	**33**	1.1	**23**	110
SV4-10	2/18/20	**<7.7**	33	5.5	14	8.8	<0.06	9.2	<2.6	1	**23**	29
SV5-5	2/18/20	**<7.7**	130	8.3	17	15	0.06	12	13	1.2	**28**	76
SV5-10	2/18/20	**<7.7**	63	7.6	19	12	<0.05	15	3.5	1.1	**26**	41
SV6-5	2/18/20	**<7.7**	110	5	11	7.8	<0.06	7.1	6.9	<1	18	30
SV6-10	2/18/20	**<7.7**	74	7.7	24	11	<0.06	11	5.4	1.5	**32**	44
SV7-5	2/18/20	**<7.7**	85	4.5	9.8	7	0.09	<6.8	8.4	<1	17	36
SV7-10	2/18/20	**<7.7**	240	6.5	27	11	<0.06	10	3.7	1.1	**25**	35
SV8-5	2/18/20	**<7.7**	86	5.8	12	8.4	<0.06	8.2	6.8	<1	**20**	32
SV8-10	2/18/20	**<7.7**	87	10	28	19	<0.05	22	5.7	1.1	**34**	57
SV9-5	2/18/20	**<7.7**	130	6.3	14	9.7	0.09	9.1	7.1	<1	**24**	38
SV9-10	2/18/20	**<7.7**	64	7	25	11	<0.06	14	4.6	1	**38**	39

Notes:
mg/kg = milligram per kilogram
As = arsenic, Ba = barium, Co = cobalt, Cr^{+3} = trivalent chromium, Cu = copper, Hg = mercury, Ni = nickel, Pb = lead, Ag = silver, V = vanadium
Zn = zinc
<7.7 = concentration is less than the Reporting Limit (7.7), i.e., not detected (ND)
SV1-5 = Soil Boring1, 5-feet below ground surface (bgs).
BOLD = value exceeds the ESL
Analytical results are included as Appendix B
Soil was collected from 5-feet bgs and 10-feet bgs from the same boring.
Only detected concentrations of metals are presented in this table. All other metals were ND.
ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels 2019 (Rev. 2)

Table 3 - Total Petroleum Hydrocarbons and SemiVolatile Organic Compounds Analytical Results in Soil Matrix

Sample ID	Date Sampled	TPHd mg/kg	TPHo mg/kg	<C8 mg/kg	C8-C9 mg/kg	C9-C10 mg/kg	C10-C11 mg/kg	C11-C12 mg/kg	C12-C14 mg/kg	C14-C16 mg/kg	C16-C18 mg/kg	C18-C20 mg/kg	C20-C24 mg/kg	C24-C28 mg/kg	C28-C32 mg/kg	C>32 mg/kg	C7-C36 mg/kg	Benzo(b)fluoranthene mg/kg	Benzo(k)fluoranthene mg/kg	Benzo(a)pyrene mg/kg	Chrysene mg/kg	Fluoranthene mg/kg	Phenanthrene mg/kg	Pyrene mg/kg
RSL*r Aromatic*		97	2,400																					
ESL																		1.1	2.8	0.11	2.2	0.69	7.8	45
SV1-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV1-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV2-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV2-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV3-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV3-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV4-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV4-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV5-5	2/18/20	48	45	<1	<1	<1	<1	<1	<1	<1	8	9.9	19	15	8.3	3.9	64	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV5-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV6-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV6-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV7-5	2/18/20	69	33	<1	<1	<1	<1	<1	<1	33	8.2	9.5	16	12	5.8	2.3	87	0.67	0.65	**0.53**	0.7	**1.1**	0.63	2.5
SV7-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV8-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV8-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV9-5	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SV9-10	2/18/20	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33

Notes:

TPH-d = Total Petroleum Hydrocarbons-diesel range C10-C24

TPH-o = Total Petroleum Hydrocarbons-oil range C22-C36

mg/kg = milligram per kilogram

<1 = concentration is less than the Reporting Limit (1), i.e., not detected (ND)

SV1-5 = Soil Boring1, 5-feet below ground surface (bgs).

Analytical results are included as Appendix B

BOLD = detected concentrations exceeded the respective ESL

Soil was collected from 5-feet bgs and 10-feet bgs from the same boring

RSL*r* = USEPA Regional Screening Level for residential soils (November 2019)

ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels 2019 (Rev. 2)

Table 4 Exposure Point Concentrations, Slope Factors and Reference Doses

SOIL MATRIX ANALYTE	MAX mg/kg	95UCL mg/kg	SFo	IUR	RfDo	RfCi
TPHd	69	13.62			4.00E-03	3.00E-03
TPHo	45	10.84			4.00E-02	
Aliphatic C5-C8	0.54					6.00E-01
Aliphatic C9-C18	2720	114.6			1.00E-02	1.00E-01
Aliphatic C19-C32	1390	264.9			3.00E+00	
Aromatic C9-C18	33	2.053			4.00E-03	3.00E-03
Aromatic C19-C32	19	2.638			4.00E-02	
naphthalene	0.062		1.20E-01	3.40E-05		
n-propylbenzene	0.005				1.00E-01	1.00E+00
benzo(b)fluoranthene	0.67		1.00E-01	1.10E-04		
benzo(k)fluoranthene	0.65		1.00E-02	1.10E-04		
benzo(a)pyrene	0.53		1.00E+00	1.10E-03		
chrysene	0.7		1.00E-03	1.10E-05		
fluoranthene	1.1				4.00E-02	
fluorene	0.057				4.00E-02	1.60E+02
2-methylnaphthalene	0.29				4.00E-03	
phenanthrene	0.63					
pyrene	2.5				3.00E-02	1.20E-01
mercury	0.2	0.0656			1.60E-04	3.00E-05
lead	33	10.54	LeadSpread	LeadSpread	LeadSpread	LeadSpread
silver	1.5	1.106			5.00E-03	
SOIL VAPOR ANALYTE	**MAX µg/m³**	**95UCL µg/m3**				
benzene	19			ESL & VURAM models		ESL & VURAM models
chloroform	34	12.89		ESL & VURAM models		ESL & VURAM models
ethylbenzene	99	23.23		ESL & VURAM models		ESL & VURAM models
n-propylbenzene	20			ESL & VURAM models		ESL & VURAM models
tetrachloroethylene	8			ESL & VURAM models		ESL & VURAM models
toluene	45	18.68		ESL & VURAM models		ESL & VURAM models
1,2,4-trimethylbenzene	123	41.32		ESL & VURAM models		ESL & VURAM models
1,3,5-trimethylbenzene	40	19.25		ESL & VURAM models		ESL & VURAM models
m,p-xylenes	322	69.26		ESL & VURAM models		ESL & VURAM models
o-xylene	151	32.26		ESL & VURAM models		ESL & VURAM models

Notes:

95UCL calculated using ProUCL version 5.1.02 for constituents detected in top 10-feet of soil matrix

EPCs are highlighted

SFo = Slope Factor, oral route of exposure $(mg/kg\text{-}day)^{-1}$

IUR = inhalation unit risk factor, inhalation route of exposure $(\mu g/m3)^{-1}$

RfDo = Reference Dose, oral route of exposure (mg/kg-day)

RfCi = Reference Concentration, inhalation route of exposure (mg/m^3)

DTSC HERO Note 3 (April 2019), USEPA RSL tables (November 2019)

Table 5 - Exposure Parameters

Exposure Parameter	Notation	Receptor Populations				Units	Reference
		Commercial Worker	Construction Worker	Residential User			
				Adult	Child		
General Parameters							
Body Weight	BW	80	80	80	15	kg	DTSC
Exposure Duration	ED	25	1	20	6	years	DTSC
Exposure Frequency	EF	250	250	350	350	days/year	DTSC
Exposure Time	ET	8	8	24	24	hours/day	DTSC
Soil Ingestion Pathway							
Soil Ingestion Rate	IR	100	330	100	200	mg/day	DTSC
Averaging Time carcinogens 70dx365d/yr	Atc	25550	25550	25550	25550	days	DTSC
Averaging Time noncarcinogens EDx365d/yr	Atnc	9125	365	7300	2190	days	DTSC
Dermal Contact with Soil							
Skin Surface Area	SA	6,032	6,032	6,032	2,900	cm^2/event	OEHHA
Soil-to-Skin Adherence factor	AF	0.2	0.8	0.07	0.2	mg/cm^2	OEHHA
Fraction of Chemical Dermally Absorbed	ABS	chem specific	chem specific	ch sp	ch sp	unitless	DTSC
Averaging Time carcinogens 70dx365d/yr	Atc	25550	25550	25550	25550	days	DTSC
Averaging Time noncarcinogens EDx365d/yr	Atnc	9125	365	7300	2190	days	DTSC
Inhalation of Outdoor Air							
Particulate Emission Factor	PEF	1.36E+09	1.00E+06	1.36E+09	1.36E+09	m^3/kg	DTSC
Exposure Time (site visit duration)	ET	6	12	6	6	hours/day	USEPA
Averaging Time carcinogens 70dx365d/yrx24hr/d	Atc	613200	613200	613200	613200	hours	DTSC
Averaging Time noncarcinogens EDx365d/yrx24h/d	Atnc	219000	8760	175200	52560	hours	DTSC

Notes:

ABS = 0.1 for VOCs, 0.13 for naphthalene, 0.01 for most metals (DTSC 2019; USEPA RSL November 2019)

Table 6
Estimated Risks and Hazards - Residential

ANALYTE	RISKo	RISKi	HAZARDo	HAZARDi
soil				
TPHd			3.14E-01	1.62E-05
TPHo			2.05E-02	
Aliphatic C5-C8				6.35E-10
Aliphatic C9-C18			2.09E-01	8.08E-07
Aliphatic C19-C32			1.59E-03	
Aromatic C9-C18			9.34E-03	4.82E-07
Aromatic C19-C32			1.20E-03	
naphthalene	1.41E-08	3.18E-14		
n-propylbenzene			9.10E-07	3.53E-12
benzo(b)fluoranthene	1.43E-07	1.11E-12		
benzo(k)fluoranthene	1.39E-08	1.08E-12		
benzo(a)pyrene	1.13E-06	8.81E-12		
chrysene	1.49E-09	1.16E-13		
fluoranthene			5.58E-04	
fluorene			2.89E-05	2.51E-13
2-methylnaphthalene			1.47E-03	
pyrene			1.68E-03	1.47E-08
mercury			5.91E-03	1.54E-06
silver			3.19E-03	
Sum Risk = 1.30E-06	1.30E-06	1.12E-11		
Sum Hazard = 0.57			5.68E-01	1.90E-05
soil vapor AF 0.03				
benzene		5.90E-06		1.80E-01
chloroform		3.20E-06		3.80E-03
ethylbenzene		6.20E-07		6.70E-04
tetrachloroethene		5.20E-07		5.80E-03
toluene				1.80E-03
xylenes				2.90E-02
Sum Risk & Hazard		1.02E-05		2.21E-01
soil vapor AF 0.001				
benzene		2.00E-07		6.10E-03
chloroform		1.10E-07		1.30E-04
ethylbenzene		2.10E-08		2.20E-05
tetrachloroethene		1.70E-08		1.90E-04
toluene				6.00E-05
xylenes				9.70E-04
Sum Risk & Hazard		3.48E-07		7.47E-03

Table 7
Estimated Risks and Hazards - Commercial

ANALYTE	RISKo	RISKi	HAZARDo	HAZARDi
soil				
TPHd			3.26E-02	2.893E-06
TPHo			2.13E-03	
Aliphatic C5-C8				1.133E-10
Aliphatic C9-C18			2.16E-02	1.443E-07
Aliphatic C19-C32			1.65E-04	
Aromatic C9-C18			9.70E-04	8.608E-08
Aromatic C19-C32			1.25E-04	
naphthalene	5.02E-09	9.48E-14		
n-propylbenzene			9.45E-08	6.30E-13
benzo(b)fluoranthene	5.76E-08	3.31E-12		
benzo(k)fluoranthene	5.58E-09	3.22E-12		
benzo(a)pyrene	4.55E-07	2.62E-11		
chrysene	6.01E-10	3.46E-13		
fluoranthene			6.61E-05	
fluorene			3.43E-06	4.49E-14
2-methylnaphthalene			1.74E-04	
pyrene			1.98E-04	9.07E-04
mercury			3.93E-04	2.75E-07
silver			2.12E-04	
Sum Risk = 5.24E-07	5.24E-07	3.32E-11		
Sum Hazard = 0.06			5.87E-02	9.10E-04
soil vapor AF 0.03				
benzene		1.30E-06		4.30E-02
chloroform		7.30E-07		9.00E-04
ethylbenzene		1.40E-07		1.60E-04
tetrachloroethene		1.20E-07		1.40E-03
toluene				4.30E-04
xylenes				7.00E-03
Sum Risk & Hazard		2.29E-06		5.29E-02
soil vapor AF 0.001				
benzene		4.50E-08		1.40E-03
chloroform		2.40E-08		3.00E-05
ethylbenzene		4.70E-09		5.30E-06
tetrachloroethene		4.00E-09		4.60E-05
toluene				1.40E-05
xylenes				2.30E-04
Sum Risk & Hazard		7.77E-08		1.73E-03

Table 8
Estimated Risks and Hazards - Construction Worker

ANALYTE	RISKo	RISKi	HAZARDo	HAZARDi
soil				
TPHd			1.68E-01	5.786E-06
TPHo			1.10E-02	
Aliphatic C5-C8				2.266E-10
Aliphatic C9-C18			1.12E-01	2.886E-07
Aliphatic C19-C32			8.51E-04	
Aromatic C9-C18			5.00E-03	1.722E-07
Aromatic C19-C32			6.42E-04	
naphthalene	7.37E-10	7.58E-15		
n-propylbenzene			6.32E-07	1.26E-12
benzo(b)fluoranthene	8.64E-09	2.65E-13		
benzo(k)fluoranthene	8.39E-10	2.57E-13		
benzo(a)pyrene	6.84E-08	2.10E-12		
chrysene	9.03E-11	2.77E-14		
fluoranthene			3.47E-04	
fluorene			1.80E-05	
2-methylnaphthalene			9.16E-04	8.97E-14
pyrene			1.04E-03	9.07E-04
mercury			1.86E-03	5.51E-07
silver			1.00E-03	
Sum Risk = 7.87E-08	7.87E-08	2.65E-12		
Sum Hazard = 0.3			3.02E-01	9.14E-04
soil vapor VURAM				
benzene		2.17E-09		2.53E-04
chloroform		3.72E-09		4.84E-05
ethylbenzene		6.49E-10		2.11E-06
n-propylbenzene				1.43E-05
tetrachloroethene		1.71E-11		1.20E-04
toluene				3.46E-06
1,2,4-trimethylbenzene				4.27E-04
1,3,5-trimethylbenzene				1.38E-03
xylenes				2.07E-04
Sum Risk & Hazard		6.56E-09		2.46E-03

Table 9
Summary of Risks and Hazards

	Receptor Population				
	Residential	Residential	Commercial	Commercial	Construction
	AF 0.03	AF 0.001	AF 0.03	AF 0.001	
∑ **Risk**	1.15E-05	1.65E-06	2.80E-06	6.00E-07	8.50E-08
Hazard Index	0.79	0.58	0.11	0.06	0.3

Notes:
AF = attenuation factor; AF 0.03 = SWRCB, AF 0.001 = USEPA SFRWQCB ESL model
∑Risk Residential = Estimated risks due to ingestion and dermal contact and inhalation of constituents in soil + estimated risks due to inhalation of constituents in soil vapor in shallow soil via SFRWQCB ESL model
∑Risk Commercial = Estimated risks due to ingestion and dermal contact and inhalation of constituents in soil + estimated risks due to inhalation of constituents in soil vapor in shallow soil via SFRWQCB ESL model
∑Risk Construction Worker = Estimated risks due to ingestion and dermal contact and inhalation of constituents in soil + estimated risks due to inhalation of constituents in soil vapor in trenches via VURAM
Hazard Index Residential = Estimated hazards due to ingestion and dermal contact and inhalation of constituents in soil + estimated hazards due to inhalation of constituents in soil vapor in shallow soil via SFRWQCB ESL model
Hazard Index Commercial = Estimated hazards due to ingestion and dermal contact and inhalation of constituents in soil + estimated hazards due to inhalation of constituents in soil vapor in shallow soil via SFRWQCB ESL model
Hazard Index Construction Worker = Estimated hazards due to ingestion and dermal contact and inhalation of constituents in soil + estimated hazards due to inhalation of constituents in soil vapor trenches via VURAM

FIGURES



EXPLANATION

Previously abandoned oil wells

A12, A17, AW-2, and A22 are operating oil wells

N

0 500 feet

Base map: Google Earth Pro, 2019

Figure 1: Site Location Map
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



EXPLANATION

Previously abandoned oil wells

A12, A17, AW-2, and A22 are operating oil wells

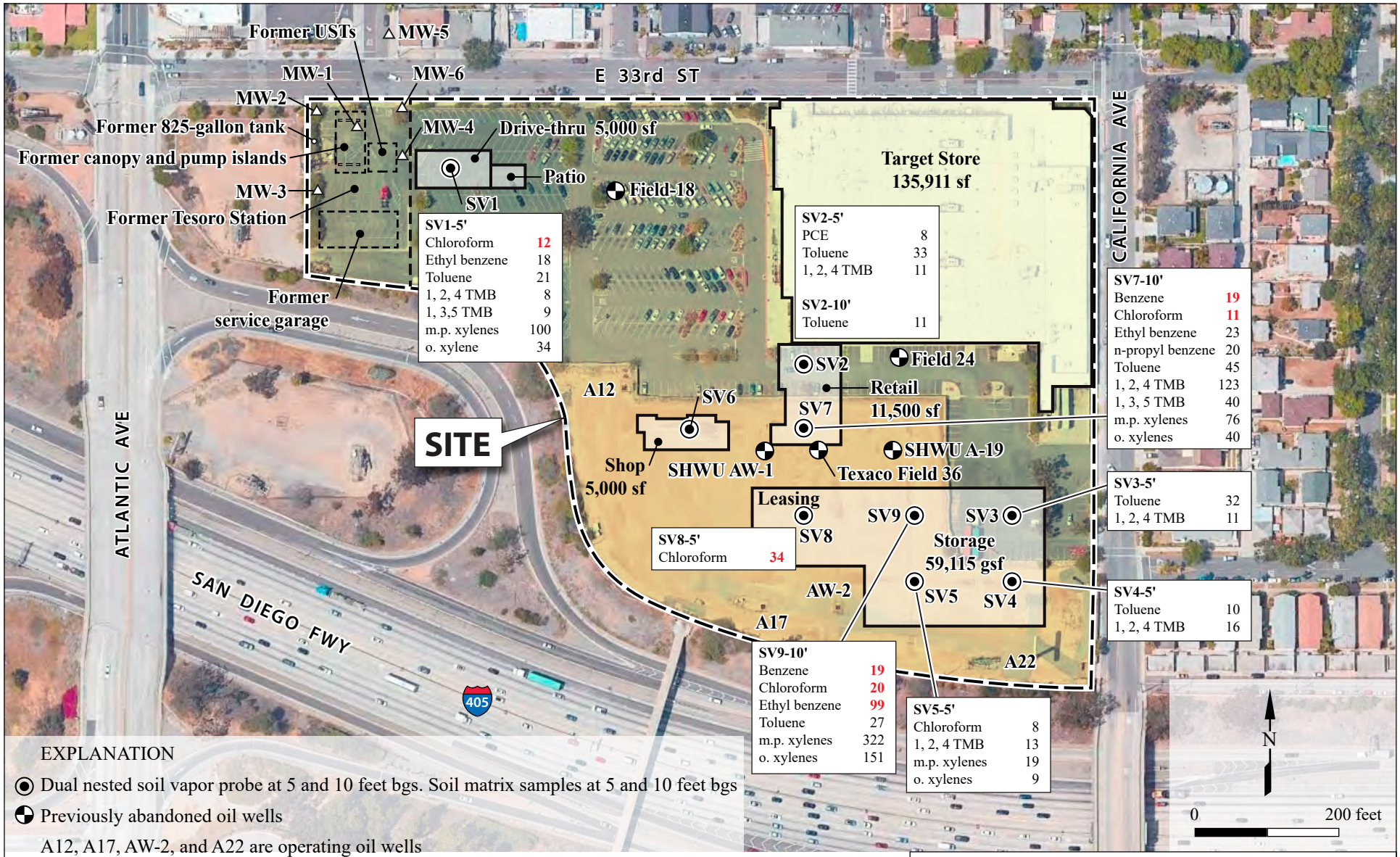
N

0 200 feet

Base map: Google Earth Pro, 2019

Figure 2: Site Map
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



EXPLANATION

◉ Dual nested soil vapor probe at 5 and 10 feet bgs. Soil matrix samples at 5 and 10 feet bgs

◓ Previously abandoned oil wells

A12, A17, AW-2, and A22 are operating oil wells

△ Monitoring wells

PCE = Tetrachloroethene

1, 2, 4 TMB = 1, 2, 4 Trimethyl benzene

1,3, 5 TMB = 1, 3, 5 Trimethyl benzene

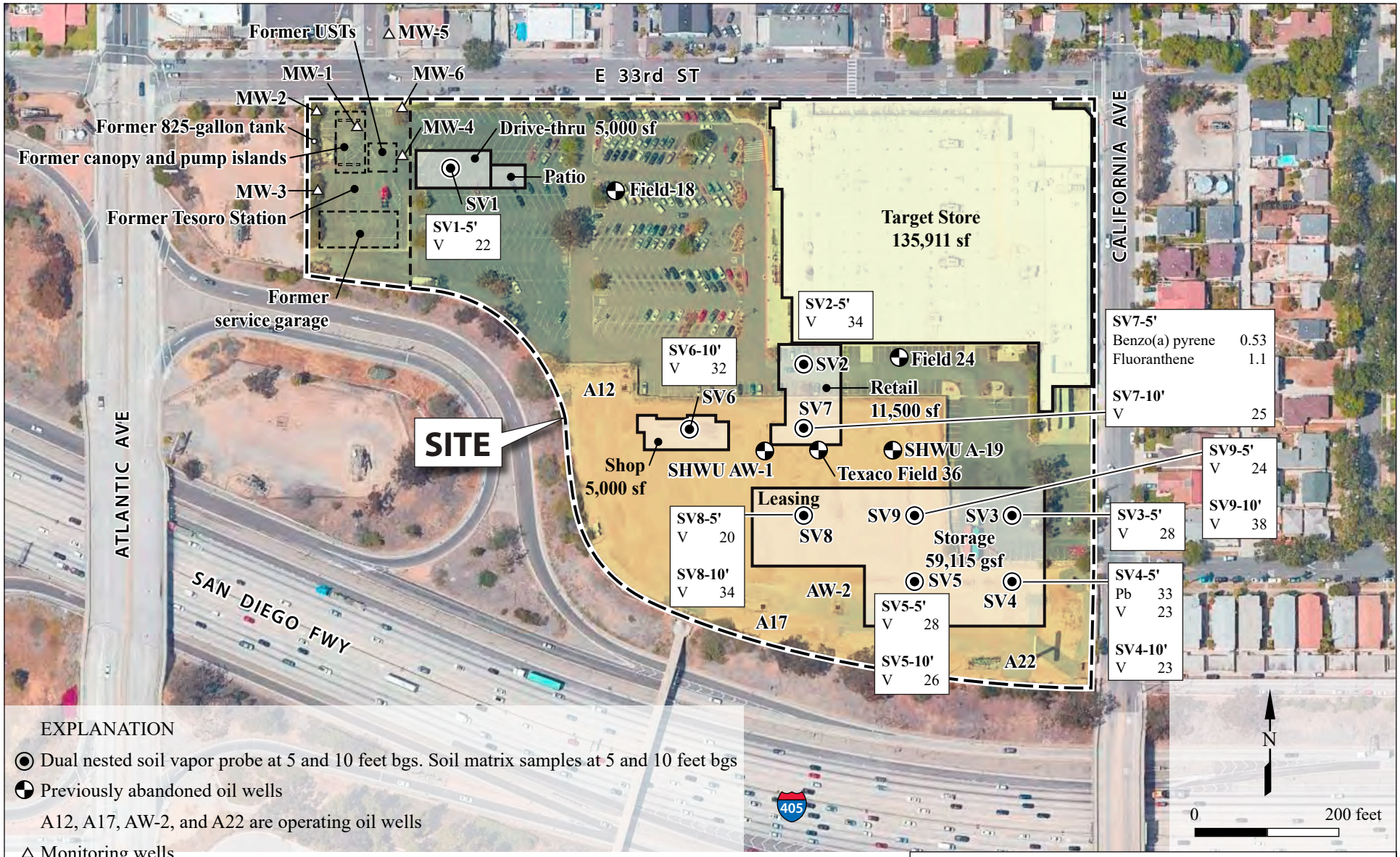
Units are micrograms per cubic meter ($\mu g/m^3$)

Red numbers = Detected concentration exceeds SFRWQCB ESL

Base map:
Google Earth Pro, 2019

Figure 3: Soil Vapor Analytical Results
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



EXPLANATION

◉ Dual nested soil vapor probe at 5 and 10 feet bgs. Soil matrix samples at 5 and 10 feet bgs

◓ Previously abandoned oil wells

A12, A17, AW-2, and A22 are operating oil wells

△ Monitoring wells

PB = Lead

V = Vanadium

Units are milligrams per kilogram (mg/kg)

RSLr = USEPA Regional Screening Levels for Residential Soils (November 2019)

ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels, 2019) (Rev. 2)

Base map: Google Earth Pro, 2019

Figure 4: Metals and SVOCs Analytical Results Exceeding Thresholds
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC

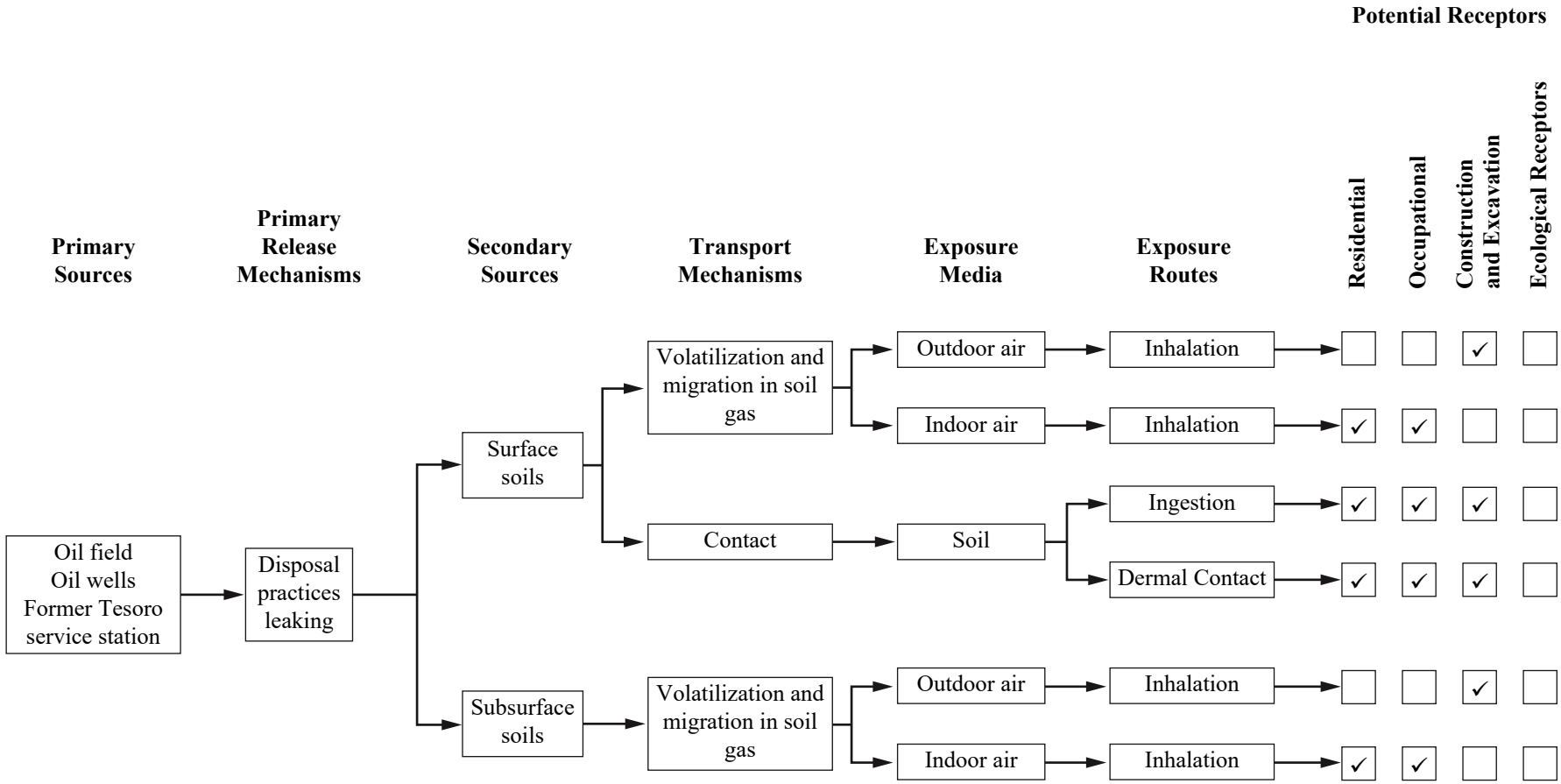
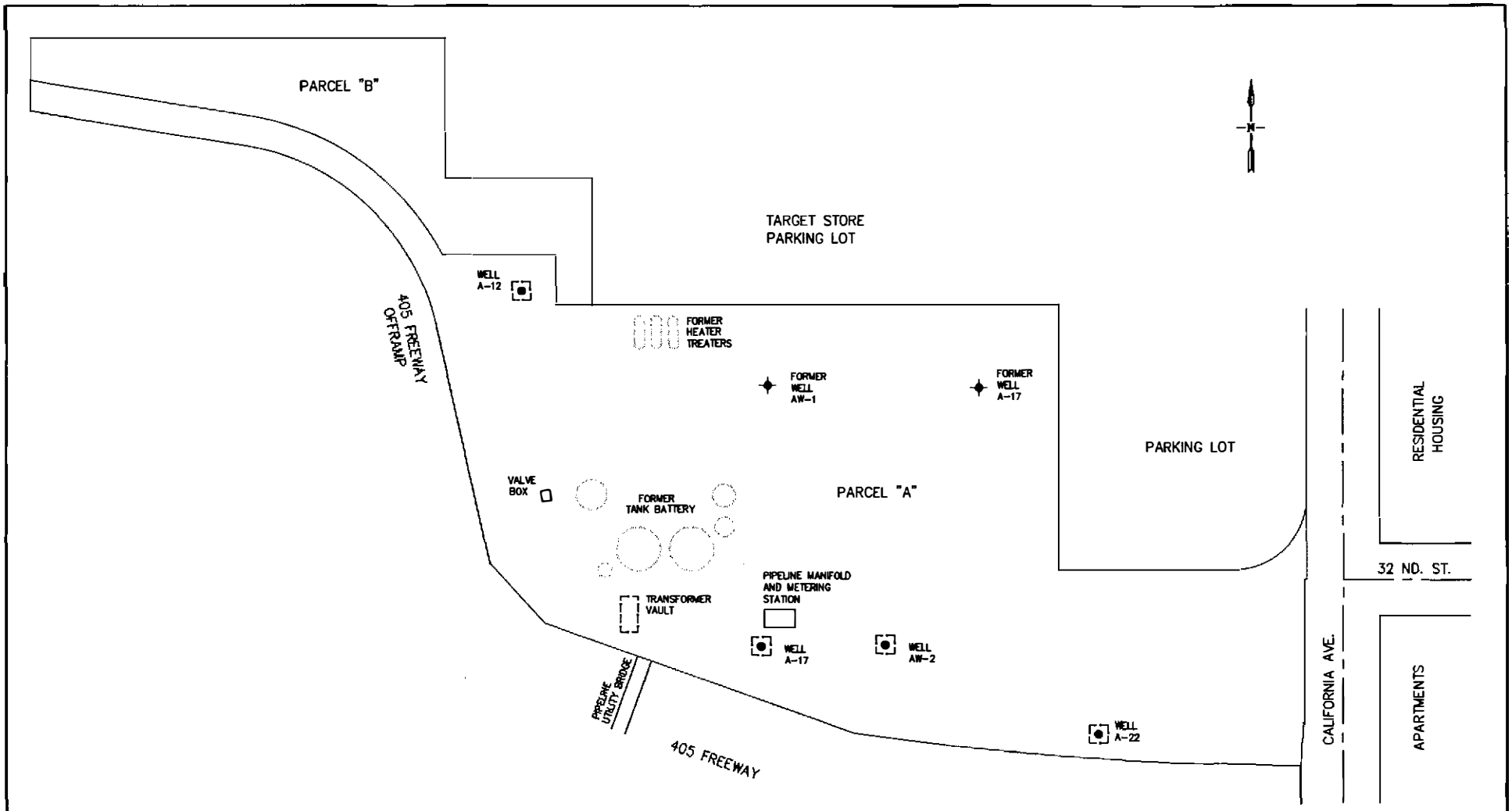


Figure 5: Conceptual Site Model
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC

APPENDIX A

Brycon LLC
Analytical Data



SITE PLAN

SCALE: 1" = 80'

BRYCON, LLC
4570 CAMPUS DRIVE
NEWPORT BEACH, CA. 92646
(949) 475-7749

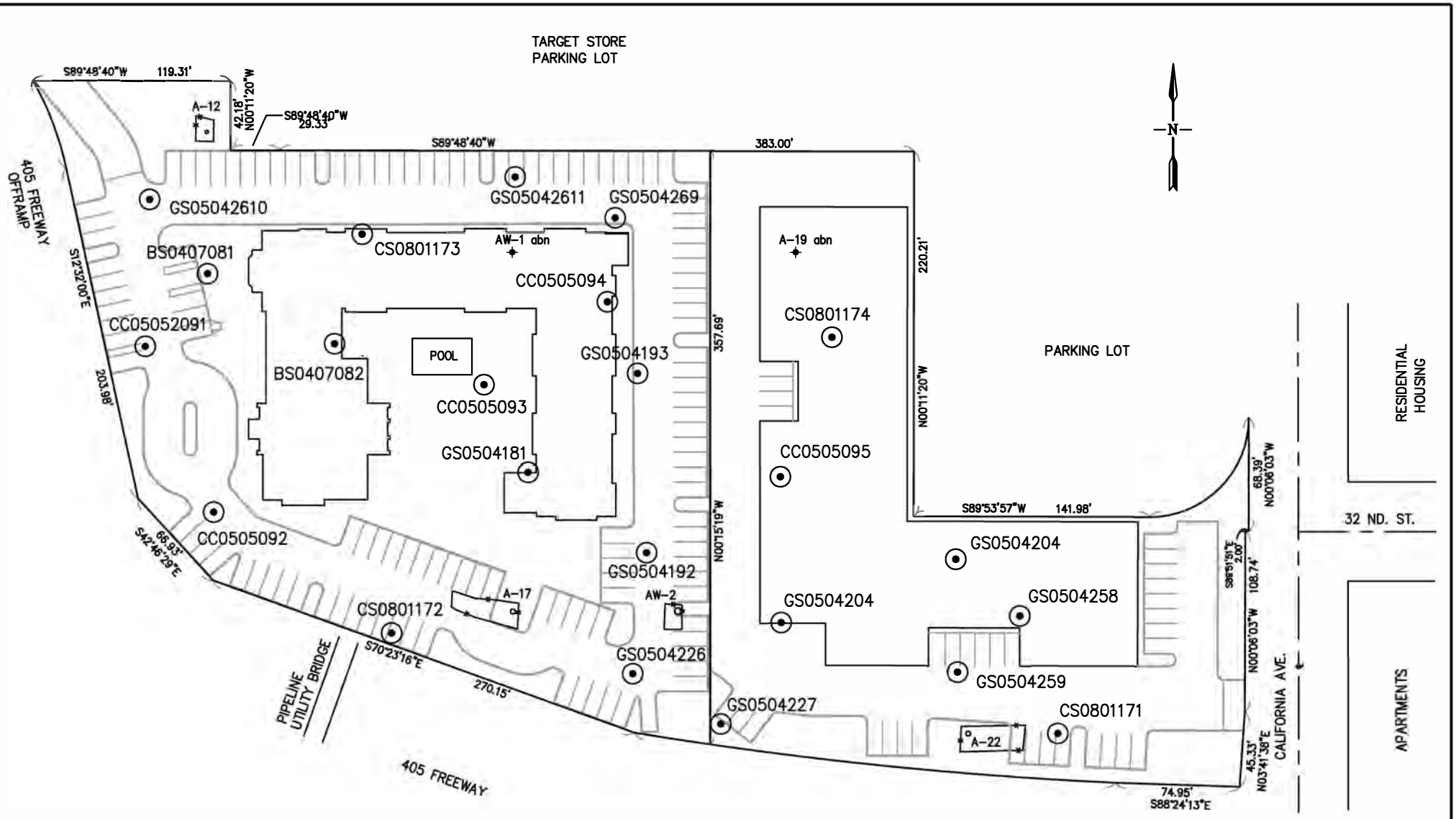
DESIGNED: M.T.W.	SCALE: 1" = 80'
DRAWN: M.T.W.	DATE: 10/22/04
CHECKED: M.T.W.	JOB NO. 04-471
DWG. NO. 04-471-1	REV. 0

SIGNAL HILL PETROLEUM

FIELDS LEASE NORTH

SITE MAP

SIGNAL HILL CALIFORNIA



SITE PLAN

SCALE: NONE

LEGEND

⊙ SOIL SAMPLE LOCATION

BRYCON, LLC
4570 CAMPUS DRIVE
NEWPORT BEACH, CA. 92660
(949) 475-7749

DESIGNED: M.T.W.	SCALE: NONE
DRAWN: M.T.W.	DATE: 4/18/08
CHECKED: M.T.W.	JOB NO. 04-471

DWG. NO. 04-471-1

WESTPORT SIGNAL HILL, LLC

FIELDS LEASE NORTH

SAMPLE LOCATION MAP

SIGNAL HILL CALIFORNIA

REV. 0

Summary - TPH Analytical Results in Soil

SAMPLE ID	DATE SAMPLED	Aliphatic C5-C8 mg/kg	Aliphatic C9-C18 mg/kg	Aliphatic C19-C32 mg/kg
FLN-C822-01	8/22/01		183	390
FLN-C822-02	8/22/01		76	300
FLN-C822-03	8/22/01		<10	<10
FLN-C822-04	8/22/01		<10	<10
FLN-C822-05	8/22/01		132	248
FLN-C822-06	8/22/01		<10	<10
FLN-C822-07	8/22/01		<10	<10
FLN-C822-SS1	8/22/01		<10	<10
FLN-C822-SS2	8/22/01		43	148
FLN-C822-B1	8/22/01		<10	<10
FLN-C822-B2	8/22/01		2720	1390
FLN-C822-B3	8/22/01		2400	1240
T1-2.5'	6/24/04	<0.5	<10	<10
T1-6'	6/24/04	<0.5	<10	<10
T2-2.5'	6/24/04	<0.5	<10	<10
T2-6'	6/24/04	<0.5	<10	<10
T3-2.5'	6/24/04	<0.5	<10	<10
T3-6'	6/24/04	<0.5	<10	<10
T4-2.5'	6/24/04	<0.5	<10	<10
T4-6'	6/24/04	<0.5	<10	<10
T5-2.5'	6/24/04	<0.5	11	52
T5-6'	6/24/04	<0.5	<10	<10
T6-2.5'	6/24/04	<0.5	<10	<10
T6-6'	6/24/04	<0.5	<10	<10
BS070408-1	7/8/04	<0.5	25	120
BS070408-2	7/8/04	<0.5	130	420
GS0504181	4/18/05	<10	<10	<10
GS0504192	4/18/05	<10	110	520
GS0504193	4/18/05	<10	<10	<10
GS0504204	4/20/05	<10	<10	<10
GS0504205	4/20/05	<10	22	120
GS0504226	4/22/05	<10	<10	21
GS0504227	4/22/05	<10	32	140
GS0504258	4/25/05	<10	<10	23
GS0504259	4/25/05	<10	56	110
GS0504269	4/26/05	<0.5	<10	<10
GS05042610	4/26/05	<0.5	<10	<10
GS05042611	4/26/05	<0.5	20	100
CC0505091	5/9/05	<10	21	63
CC0505092	5/9/05	<10	64	240
CC0505093	5/9/05	<10	49	100
CC0505094	5/9/05	<10	35	120
CC0505095	5/9/05	<10	42	120
CS0801171	1/17/08	<0.5	26	87
CS0801172	1/17/08	0.54	190	120
CS0801173	1/17/08	<0.5	110	140
CS0801174	1/17/08	<0.5	70	78

Notes:

mg/kg = milligrams per kilogram

Analytical results are included as Appendix A

Blank cell indicates analyte was not analyzed

Data from 8-22-01 was collected from the base and sidewalls of two excavations (Soil Sampling Results for Excavations at the Fields Lease North Site, Long Beach, California; October 25, 2001; Brycon, LLC).

Data from 6-24-04 was collected from six trenches placed in the former tank farm and sump excavation (Fields Lease North, Environmental Site Assessment; June 29, 2004; Brycon, LLC).

Data from 7-8-04 through 1-17-08 was collected after site grading in July 2004, April and May 2005 and January 2008 (Final Environmental Closure Report, Fields Lease North Site, Commercial Development, Signal Hill, California; February 12, 2008; Brycon, LLC).

Summary - VOCs Analytical Results in Soil

SAMPLE ID	DATE SAMPLED	Naphthalene mg/kg	n-Propylbenzene mg/kg
FLN-C822-01	8/22/01		
FLN-C822-02	8/22/01		
FLN-C822-03	8/22/01		
FLN-C822-04	8/22/01		
FLN-C822-05	8/22/01	<0.002	<0.001
FLN-C822-06	8/22/01		
FLN-C822-07	8/22/01		
FLN-C822-SS1	8/22/01		
FLN-C822-SS2	8/22/01		
FLN-C822-B1	8/22/01		
FLN-C822-B2	8/22/01	<0.002	<0.001
FLN-C822-B3	8/22/01		
T1-2.5'	6/24/04		
T1-6'	6/24/04		
T2-2.5'	6/24/04		
T2-6'	6/24/04		
T3-2.5'	6/24/04		
T3-6'	6/24/04		
T4-2.5'	6/24/04		
T4-6'	6/24/04		
T5-2.5'	6/24/04		
T5-6'	6/24/04		
T6-2.5'	6/24/04		
T6-6'	6/24/04		
BS070408-1	7/8/04		
BS070408-2	7/8/04		
GS0504181	4/18/05		
GS0504192	4/18/05		
GS0504193	4/18/05		
GS0504204	4/20/05		
GS0504205	4/20/05		
GS0504226	4/22/05		
GS0504227	4/22/05		
GS0504258	4/25/05		
GS0504259	4/25/05		
GS0504269	4/26/05		
GS05042610	4/26/05		
GS05042611	4/26/05	<0.002	<0.001
CC0505091	5/9/05		
CC0505092	5/9/05		
CC0505093	5/9/05		
CC0505094	5/9/05		
CC0505095	5/9/05		
CS0801171	1/17/08		
CS0801172	1/17/08	0.062	0.005
CS0801173	1/17/08		
CS0801174	1/17/08		

Notes:

mg/kg = milligrams per kilogram

Analytical results are included as Appendix A

Blank cell indicates analyte was not analyzed

Data from 8-22-01 was collected from the base and sidewalls of two excavations (Soil Sampling Results for Excavations at the Fields Lease North Site, Long Beach, California; October 25, 2001; Brycon, LLC).

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Summary - SVOCs Analytical Results in Soil

SAMPLE ID	DATE SAMPLED	Fluorene mg/kg	2-Methylnaphthalene mg/kg
FLN-C822-01	8/22/01		
FLN-C822-02	8/22/01		
FLN-C822-03	8/22/01		
FLN-C822-04	8/22/01		
FLN-C822-05	8/22/01	<0.33	<0.33
FLN-C822-06	8/22/01		
FLN-C822-07	8/22/01		
FLN-C822-SS1	8/22/01		
FLN-C822-SS2	8/22/01		
FLN-C822-B1	8/22/01		
FLN-C822-B2	8/22/01	<0.33	<0.33
FLN-C822-B3	8/22/01		
T1-2.5'	6/24/04		
T1-6'	6/24/04		
T2-2.5'	6/24/04		
T2-6'	6/24/04		
T3-2.5'	6/24/04		
T3-6'	6/24/04		
T4-2.5'	6/24/04		
T4-6'	6/24/04		
T5-2.5'	6/24/04		
T5-6'	6/24/04		
T6-2.5'	6/24/04		
T6-6'	6/24/04		
BS070408-1	7/8/04		
BS070408-2	7/8/04		
GS0504181	4/18/05		
GS0504192	4/18/05		
GS0504193	4/18/05		
GS0504204	4/20/05		
GS0504205	4/20/05		
GS0504226	4/22/05		
GS0504227	4/22/05		
GS0504258	4/25/05		
GS0504259	4/25/05		
GS0504269	4/26/05		
GS05042610	4/26/05		
GS05042611	4/26/05	<0.17	<0.17
CC0505091	5/9/05		
CC0505092	5/9/05		
CC0505093	5/9/05		
CC0505094	5/9/05		
CC0505095	5/9/05		
CS0801171	1/17/08		
CS0801172	1/17/08	0.057	0.29
CS0801173	1/17/08		
CS0801174	1/17/08		

Notes:

mg/kg = milligrams per kilogram

Analytical results are included as Appendix A

Blank cell indicates analyte was not analyzed

Data from 8-22-01 was collected from the base and sidewalls of two excavations (Soil Sampling Results for Excavations at the Fields Lease North Site, Long Beach, California; October 25, 2001; Brycon, LLC).

Data from 6-24-04 was collected from six trenches placed in the former tank farm and sump excavation (Fields Lease North, Environmental Site Assessment; June 29, 2004; Brycon, LLC).

Data from 7-8-04 through 1-17-08 was collected after site grading in July 2004, April and May 2005 and January 2008 (Final Environmental Closure Report, Fields Lease North Site, Commercial Development, Signal Hill, California; February 12, 2008; Brycon, LLC).

Summary - Metals Analytical Results in Soil

SAMPLE ID	DATE SAMPLED	As mg/kg	Ba mg/kg	Co mg/kg	Cr mg/kg	Cu mg/kg	Pb mg/kg	Hg mg/kg	Ni mg/kg	V mg/kg	Zn mg/kg
RSL*r*		0.68	15000	23	120000	3100	400	9.4	820	390	23000
Offsite-1	4/4/2005	5.2	97	8.1	21	25	12	<0.16	12	35	62
Offsite-5	4/4/2005	12	160	17	50	64	8.1	<0.18	30	75	99
Offsite-10	4/4/2005	12	170	14	32	35	5.6	<0.18	22	58	67
Offsite-20	4/4/2005	14	73	17	35	80	10	<0.15	22	67	95
FLN-C822-01	8/22/01										
FLN-C822-02	8/22/01										
FLN-C822-03	8/22/01										
FLN-C822-04	8/22/01										
FLN-C822-05	8/22/01	12	70	6.9	12	11	3.1	<0.10	7.9	22	40
FLN-C822-06	8/22/01										
FLN-C822-07	8/22/01										
FLN-C822-SS1	8/22/01										
FLN-C822-SS2	8/22/01										
FLN-C822-B1	8/22/01										
FLN-C822-B2	8/22/01	23	530	5.6	12	13	17	0.19	9.2	20	51
FLN-C822-B3	8/22/01										
T1-2.5'	6/24/04										
T1-6'	6/24/04										
T2-2.5'	6/24/04										
T2-6'	6/24/04										
T3-2.5'	6/24/04										
T3-6'	6/24/04										
T4-2.5'	6/24/04										
T4-6'	6/24/04										
T5-2.5'	6/24/04										
T5-6'	6/24/04										
T6-2.5'	6/24/04										
T6-6'	6/24/04										
BS070408-1	7/8/04										
BS070408-2	7/8/04										
GS0504181	4/18/05										
GS0504192	4/18/05										
GS0504193	4/18/05										
GS0504204	4/20/05										
GS0504205	4/20/05										
GS0504226	4/22/05										
GS0504227	4/22/05										
GS0504258	4/25/05										
GS0504259	4/25/05										
GS0504269	4/26/05										
GS05042610	4/26/05										
GS05042611	4/26/05	4.3	130	4.7	11	6.4	7.9	0.02	6.8	18	27
CC0505091	5/9/05										
CC0505092	5/9/05										
CC0505093	5/9/05										
CC0505094	5/9/05										
CC0505095	5/9/05										
CS0801171	1/17/08										
CS0801172	1/17/08	2.49	44.2	4.33	10.7	6.6	2.44	<0.02	6.36	18.2	22.7
CS0801173	1/17/08										
CS0801174	1/17/08										

Notes:
mg/kg = milligram per kilogram
As = arsenic, Ba = barium, Co = cobalt, Cr = chromium, Cu = copper, Pb = lead, Hg = mercury, Ni = nickel, V = vanadium, Zn = zinc
Analytical results are included as Appendix A
Only detected concentrations of metals are presented in this table. All other metals were ND.

Summary- Metals Analytical Results in Soil

RSL*r* = USEPA Regional Screening Level for residential soils (November 2015)
Blank cell indicates analyte was not analyzed
Data from 8-22-01 was collected from the base and sidewalls of two excavations (Soil Sampling Results for Excavations at the Fields Lease North Site, Long Beach, California; October 25, 2001; Brycon, LLC).
Data from 6-24-04 was collected from six trenches placed in the former tank farm and sump excavation (Fields Lease North, Environmental Site Assessment; June 29, 2004; Brycon, LLC).
Data from 7-8-04 through 1-17-08 was collected after site grading in July 2004, April and May 2005 and January 2008 (Final Environmental Closure Report, Fields Lease North Site, Commercial Development, Signal Hill, California; February 12, 2008; Brycon, LLC).

Centrum Analytical Laboratories, Inc.
CERTIFIED HAZARDOUS WASTE TESTING MOBILE & IN HOUSE LABORATORIES

Signal Hill Office

Client: Brycon, LLC
4570 Campus Drive
Newport Beach, CA 92660

Date Sampled: 08/22/01
Date Received: 08/22/01
Job Number: 19123

Project: Fields Lease North

CASE NARRATIVE

The following information applies to samples which were received on 08/22/01 :

The samples were received at the laboratory chilled and sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested.

8270: Detection limit raised due to sample matrix.

Report approved by:

Richard Villafania
Laboratory Manager

ELAP # 2419

DL : Detection Limit -- The lowest level at which the compound can reliably be detected under normal laboratory conditions.
ND : Not Detected -- The compound was analyzed for but was not found to be present at or above the detection limit.
NA : Not Analyzed -- Per client request, this analyte was not on the list of compounds to be analyzed for.

Centrum Analytical Laboratories, Inc.

Modified 8015 - Hydrocarbons by Carbon Chain Length

Client:	Brycon, LLC	Date Sampled:	08/22/01
Project:	Fields Lease North	Date Received:	08/22/01
Job No.:	19123	Date Extracted:	08/24/01
Matrix:	Soil	Dates Analyzed:	08/26-27/01
Analyst:	JB	Batch Number:	8015DS2334

	Sample ID:	Method Blank	FLN-C822 -01	FLN-C822 -02	FLN-C822 -03	FLN-C822 -04	FLN-C822 -05
Compound	DL	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
C9-C12	10	ND	ND	ND	ND	ND	10
C12-C14	10	ND	35	13	ND	ND	25
C14-C16	10	ND	77	31	ND	ND	49
C16-C18	10	ND	71	32	ND	ND	48
C18-C20	10	ND	45	23	ND	ND	32
C20-C22	10	ND	37	20	ND	ND	28
C22-C24	10	ND	33	21	ND	ND	32
C24-C26	10	ND	65	51	ND	ND	48
C26-C28	10	ND	100	88	ND	ND	56
C28-C30	10	ND	110	97	ND	ND	52
Total	10	ND	573	376	ND	ND	380

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Modified 8015 - Hydrocarbons by Carbon Chain Length

Client:	Brycon, LLC	Date Sampled:	08/22/01
Project:	Fields Lease North	Date Received:	08/22/01
Job No.:	19123	Date Extracted:	08/24/01
Matrix:	Soil	Dates Analyzed:	08/26-27/01
Analyst:	JB	Batch Number:	8015DS2334

	Sample ID:	FLN-C822 -06	FLN-C822 -07	FLN-T822 -SS1	FLN-T822 -SS2	FLN-T822 -B1	FLN-T822 -B2
Compound	**DL**	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
C9-C12	10	ND	ND	ND	ND	ND	**940**
C12-C14	10	ND	ND	ND	ND	ND	**730**
C14-C16	10	ND	ND	ND	**20**	ND	**640**
C16-C18	10	ND	ND	ND	**23**	ND	**410**
C18-C20	10	ND	ND	ND	**19**	ND	**240**
C20-C22	10	ND	ND	ND	**17**	ND	**190**
C22-C24	10	ND	ND	ND	**21**	ND	**200**
C24-C26	10	ND	ND	ND	**33**	ND	**270**
C26-C28	10	ND	ND	ND	**33**	ND	**260**
C28-C30	10	ND	ND	ND	**25**	ND	**230**
Total	10	ND	ND	ND	**190**	ND	**4,110**

Centrum Analytical Laboratories, Inc.

Modified 8015 - Hydrocarbons by Carbon Chain Length

Client:	Brycon, LLC	Date Sampled:	08/22/01
Project:	Fields Lease North	Date Received:	08/22/01
Job No.:	19123	Date Extracted:	08/24/01
Matrix:	Soil	Dates Analyzed:	08/26-27/01
Analyst:	JB	Batch Number:	8015DS2334

	Sample ID:	FLN-T822 -B3
Compound	**DL**	mg/Kg
C9-C12	10	**890**
C12-C14	10	**600**
C14-C16	10	**540**
C16-C18	10	**370**
C18-C20	10	**230**
C20-C22	10	**170**
C22-C24	10	**180**
C24-C26	10	**240**
C26-C28	10	**250**
C28-C30	10	**170**
Total	10	**3,640**

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QC Sample Report - EPA 8015M Diesel

Matrix: Soil
Batch #: 8015DS2334

Batch Accuracy Results

Sample ID: Laboratory Control Sample

Analyte	Spike Concentration mg/Kg	% Recovery LCS	Acceptance Limits % Recovery	Pass/Fail
Diesel	100	87	70 - 130	Pass

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: Laboratory Control Sample

Analyte	Spike Sample Recovery mg/Kg	Spike Duplicate Recovery mg/Kg	Relative Percent Difference (RPD)	Upper Control Limit RPD	Pass/Fail
Diesel	87	87	0%	29%	Pass

Analytical Notes:

MS: Matrix Spike Sample
MSD: Matrix Spike Duplicate

Centrum Analytical Laboratories, Inc.

Metals

Client:	Brycon, LLC	Date Sampled:	08/22/01
Project:	Fields Lease North	Date Received:	08/22/01
Job No:	19123	Date Digested:	08/23/01
Matrix:	Soil	Date Analyzed:	08/23/01
Analyst:	TLR/GF	Batch Number:	6010S2134
			7000S0491

		Sample ID:	Blank	FLN-C822-05	FLN-T822-B2
Element	**Method #**	**RL**	mg/Kg	mg/Kg	mg/Kg
Antimony	6010B	2.0	ND	ND	ND
Arsenic	6010B	1.0	ND	**12**	**23**
Barium	6010B	0.50	ND	**70**	**530**
Beryllium	6010B	0.50	ND	ND	ND
Cadmium	6010B	0.50	ND	ND	ND
Chromium	6010B	0.50	ND	**12**	**12**
Cobalt	6010B	0.50	ND	**6.9**	**5.6**
Copper	6010B	0.50	ND	**11**	**13**
Lead	6010B	1.0	ND	**3.1**	**17**
Mercury	7471	0.10	ND	ND	**0.19**
Molybdenum	6010B	1.0	ND	ND	ND
Nickel	6010B	1.0	ND	**7.9**	**9.2**
Selenium	6010B	5.0	ND	ND	ND
Silver	6010B	2.0	ND	ND	ND
Thallium	6010B	5.0	ND	ND	ND
Vanadium	6010B	0.50	ND	**22**	**20**
Zinc	6010B	10	ND	**40**	**51**

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QC Sample Report - Metals

Sample Matrix: Soil
Analytical Batch #: 6010S2134, 7000S0491
MS/MSD Sample ID: Laboratory Control Sample, Laboratory Control Sample

	Batch Precision Results:					Batch Accuracy Results:			
Metal	Spike Sample Recovery mg/Kg	Spike Duplicate Recovery mg/Kg	Relative Percent Difference (RPD)	Upper Control Limit RPD	Pass / Fail	Spike Concentration mg/Kg	% Recovery LCS	Acceptance Limits Percent Recovery	Pass / Fail
Antimony	51.4	50.7	1%	20%	Pass	50	103	75 - 125	Pass
Arsenic	50.3	50.0	1%	20%	Pass	50	101	75 - 125	Pass
Barium	49.5	50.8	3%	20%	Pass	50	99	75 - 125	Pass
Beryllium	49.4	50.0	1%	20%	Pass	50	99	75 - 125	Pass
Cadmium	49.4	50.5	2%	20%	Pass	50	99	75 - 125	Pass
Chromium	50.2	51.6	3%	20%	Pass	50	100	75 - 125	Pass
Cobalt	49.7	51.5	4%	20%	Pass	50	99	75 - 125	Pass
Copper	49.6	51.0	3%	20%	Pass	50	99	75 - 125	Pass
Lead	50.3	50.1	0%	20%	Pass	50	101	75 - 125	Pass
Mercury	2.69	2.71	1%	20%	Pass	2.5	108	75 - 125	Pass
Molybdenum	51.1	52.5	3%	20%	Pass	50	102	75 - 125	Pass
Nickel	50.8	52.0	2%	20%	Pass	50	102	75 - 125	Pass
Selenium	49.4	48.7	2%	20%	Pass	50	99	75 - 125	Pass
Silver	51.6	54.3	5%	20%	Pass	50	103	75 - 125	Pass
Thallium	51.4	50.5	2%	20%	Pass	50	103	75 - 125	Pass
Vanadium	49.8	51.2	3%	20%	Pass	50	100	75 - 125	Pass
Zinc	52.1	54.1	4%	20%	Pass	50	104	75 - 125	Pass

Analytical Notes

LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate
MS: Matrix Spike
MSD: Matrix Spike Duplicate
RPD: Relative Percent Difference

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EPA 8260 - Volatile Organics

Client:	Brycon, LLC	Date Sampled:	08/22/01
Project:	Fields Lease North	Date Received:	08/22/01
Job No.:	19123	Date Analyzed:	08/27-28/01
Matrix:	Soil	Batch Number:	M48260S499
Analyst:	MBH		

	Sample ID:	Blank	FLN-C822-05	FLN-T822-B2
Compounds	**DL**	mg/Kg	mg/Kg	mg/Kg
Acetone	0.050	ND	ND	ND
tert-Amyl Methyl Ether (TAME)	0.005	ND	ND	ND
Benzene	0.001	ND	ND	ND
Bromobenzene	0.005	ND	ND	ND
Bromochloromethane	0.005	ND	ND	ND
Bromodichloromethane	0.001	ND	ND	ND
Bromoform	0.005	ND	ND	ND
Bromomethane	0.005	ND	ND	ND
tert-Butanol (TBA)	0.020	ND	ND	ND
2-Butanone (MEK)	0.010	ND	ND	ND
n-Butylbenzene	0.002	ND	ND	ND
sec-Butylbenzene	0.002	ND	ND	ND
tert-Butylbenzene	0.002	ND	ND	ND
Carbon disulfide	0.010	ND	ND	ND
Carbon tetrachloride	0.001	ND	ND	ND
Chlorobenzene	0.001	ND	ND	ND
Chloroethane	0.005	ND	ND	ND
Chloroform	0.002	ND	ND	ND
Chloromethane	0.001	ND	ND	ND
2-Chlorotoluene	0.002	ND	ND	ND
4-Chlorotoluene	0.002	ND	ND	ND
Dibromochloromethane	0.002	ND	ND	ND
1,2-Dibromoethane	0.002	ND	ND	ND
1,2-Dibromo-3-chloropropane	0.010	ND	ND	ND
Dibromomethane	0.001	ND	ND	ND
1,2-Dichlorobenzene	0.001	ND	ND	ND
1,3-Dichlorobenzene	0.002	ND	ND	ND
1,4-Dichlorobenzene	0.002	ND	ND	ND
Dichlorodifluoromethane	0.005	ND	ND	ND
1,1-Dichloroethane	0.001	ND	ND	ND
1,2-Dichloroethane	0.001	ND	ND	ND
1,1-Dichloroethene	0.005	ND	ND	ND
cis-1,2-Dichloroethene	0.002	ND	ND	ND
trans-1,2-Dichloroethene	0.002	ND	ND	ND
1,2-Dichloropropane	0.001	ND	ND	ND
1,3-Dichloropropane	0.001	ND	ND	ND
2,2-Dichloropropane	0.001	ND	ND	ND
1,1-Dichloropropene	0.001	ND	ND	ND

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EPA 8260 - Volatile Organics

Client:	Brycon, LLC	Date Sampled:	08/22/01
Project:	Fields Lease North	Date Received:	08/22/01
Job No.:	19123	Date Analyzed:	08/27-28/01
Matrix:	Soil	Batch Number:	M48260S499
Analyst:	MBH		

	Sample ID:	Blank	FLN-C822-05	FLN-T822-B2
Compounds	DL	mg/Kg	mg/Kg	mg/Kg
cis-1,3-Dichloropropene	0.001	ND	ND	ND
trans-1,3-Dichloropropene	0.001	ND	ND	ND
Diisopropyl Ether (DIPE)	0.005	ND	ND	ND
Ethylbenzene	0.001	ND	ND	ND
Ethyl tert-Butyl Ether (EtBE)	0.005	ND	ND	ND
Hexachlorobutadiene	0.001	ND	ND	ND
2-Hexanone	0.010	ND	ND	ND
Isopropylbenzene	0.001	ND	ND	ND
p-Isopropyltoluene	0.002	ND	ND	ND
Methylene chloride	0.050	ND	ND	ND
4-Methyl-2-pentanone	0.010	ND	ND	ND
Methyl tert-Butyl Ether (MtBE)	0.005	ND	ND	ND
Naphthalene	0.002	ND	ND	ND
n-Propylbenzene	0.001	ND	ND	ND
Styrene	0.001	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.001	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.002	ND	ND	ND
Tetrachloroethene	0.001	ND	ND	ND
Toluene	0.001	ND	ND	ND
1,2,3-Trichlorobenzene	0.002	ND	ND	ND
1,2,4-Trichlorobenzene	0.002	ND	ND	ND
1,1,1-Trichloroethane	0.001	ND	ND	ND
1,1,2-Trichloroethane	0.003	ND	ND	ND
Trichloroethene	0.001	ND	ND	ND
1,2,3-Trichloropropane	0.003	ND	ND	ND
Trichlorofluoromethane	0.001	ND	ND	ND
Trichlorotrifluoroethane	0.005	ND	ND	ND
1,2,4-Trimethylbenzene	0.001	ND	ND	ND
1,3,5-Trimethylbenzene	0.001	ND	ND	ND
Vinyl chloride	0.002	ND	ND	ND
Xylenes, m-,p-	0.002	ND	ND	ND
Xylene, o-	0.001	ND	ND	ND

Surrogates (% recovery) Limits: 70 - 130

Sample ID:	Blank	FLN-C822-05	FLN-T822-B2
Dibromofluoromethane	98	100	102
Toluene-d8	100	99	91
Bromofluorobenzene	100	97	94

Centrum Analytical Laboratories, Inc.

QC Sample Report - EPA Method 8260

Matrix: Soil
Batch #: M48260S499

Batch Accuracy Results

Sample ID: Laboratory Control Sample

Analyte	Spike Concentration mg/Kg	% Recovery LCS	Acceptance Limits % Recovery	Pass/Fail
1,1-Dichloroethene	0.020	**102**	59 - 172	**Pass**
Benzene	0.020	**102**	66 - 142	**Pass**
Trichloroethene	0.020	**102**	71 - 137	**Pass**
Toluene	0.020	**100**	59 - 139	**Pass**
Chlorobenzene	0.020	**104**	60 - 133	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: 19134-11

Analyte	Spike Sample Recovery mg/Kg	Spike Duplicate Recovery mg/Kg	Relative Percent Difference (RPD)	Upper Control Limit RPD	Pass/Fail
1,1-Dichloroethene	0.0198	0.0191	**4%**	22%	**Pass**
Benzene	0.0198	0.0190	**4%**	21%	**Pass**
Trichloroethene	0.0200	0.0190	**5%**	24%	**Pass**
Toluene	0.0199	0.0188	**6%**	21%	**Pass**
Chlorobenzene	0.0202	0.0194	**4%**	21%	**Pass**

Analytical Notes:

MS: Matrix Spike Sample
MSD: Matrix Spike Duplicate

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EPA 8270 Semivolatile Organics

Client:	Brycon, LLC	Date Sampled:	08/22/01
Project:	Fields Lease North	Date Received:	08/22/01
Job No.:	19123	Date Extracted:	08/28/01
Matrix:	Soil	Dates Analyzed:	09/04/01
Analyst:	TPW	Batch Number:	8270S0734

	Sample ID:	Blank	FLN-C822-05
Compound	DL*	mg/Kg	mg/Kg
Acenaphthene	0.33	ND	ND
Acenaphthylene	0.33	ND	ND
Anthracene	0.33	ND	ND
Benzo[a]anthracene	0.66	ND	ND
Benzo[a]pyrene	0.66	ND	ND
Benzo[b]fluoranthene	0.33	ND	ND
Benzo[g,h,i]perylene	0.99	ND	ND
Benzo[k]fluoranthene	0.66	ND	ND
Benzyl alcohol	1.3	ND	ND
bis(2-Chloroethoxy)methane	0.66	ND	ND
bis(2-Chloroethyl)ether	0.66	ND	ND
bis(2-Chloroisopropyl)ether	0.99	ND	ND
bis(2-Ethylhexyl)phthalate	3.3	ND	ND
4-Bromophenylphenylether	0.33	ND	ND
Butylbenzylphthalate	0.33	ND	ND
4-Chloro-3-methylphenol	1.6	ND	ND
4-Chloroaniline	1.6	ND	ND
2-Chloronaphthalene	0.33	ND	ND
2-Chlorophenol	1.3	ND	ND
4-Chlorophenylphenylether	0.33	ND	ND
Chrysene	0.33	ND	ND
Di-n-butylphthalate	3.3	ND	ND
Di-n-octylphthalate	0.33	ND	ND
Dibenzo[a,h]anthracene	0.99	ND	ND
Dibenzofuran	0.33	ND	ND
1,2-Dichlorobenzene	0.33	ND	ND
1,3-Dichlorobenzene	0.33	ND	ND
1,4-Dichlorobenzene	0.33	ND	ND
3,3-Dichlorobenzidine	1.3	ND	ND
2,4-Dichlorophenol	1.6	ND	ND
Diethylphthalate	3.3	ND	ND
2,4-Dimethylphenol	0.99	ND	ND
Dimethylphthalate	0.33	ND	ND
4,6-Dinitro-2-methylphenol	3.3	ND	ND
2,4-Dinitrophenol	16	ND	ND
2,4-Dinitrotoluene	0.33	ND	ND

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EPA 8270 Semivolatile Organics

Client:	Brycon, LLC	Date Sampled:	08/22/01
Project:	Fields Lease North	Date Received:	08/22/01
Job No.:	19123	Date Extracted:	08/28/01
Matrix:	Soil	Dates Analyzed:	09/04/01
Analyst:	TPW	Batch Number:	8270S0734

	Sample ID:	Blank	FLN-C822-05
Compound	DL*	mg/Kg	mg/Kg
2,6-Dinitrotoluene	0.99	ND	ND
Fluoranthene	0.33	ND	ND
Fluorene	0.33	ND	ND
Hexachlorobenzene	0.33	ND	ND
Hexachlorobutadiene	0.33	ND	ND
Hexachlorocyclopentadiene	16	ND	ND
Hexachloroethane	0.33	ND	ND
Indeno[1,2,3-c,d]pyrene	1.3	ND	ND
Isophorone	0.33	ND	ND
2-Methylnaphthalene	0.33	ND	ND
2-Methylphenol	1.6	ND	ND
4-Methylphenol	1.6	ND	ND
N-Nitrosodi-n-propylamine	0.33	ND	ND
N-Nitrosodiphenylamine	0.33	ND	ND
Naphthalene	0.33	ND	ND
2-Nitroaniline	0.99	ND	ND
3-Nitroaniline	0.99	ND	ND
4-Nitroaniline	3.3	ND	ND
Nitrobenzene	0.99	ND	ND
2-Nitrophenol	1.3	ND	ND
4-Nitrophenol	3.3	ND	ND
Pentachlorophenol	16	ND	ND
Phenanthrene	0.66	ND	ND
Phenol	1.3	ND	ND
Pyrene	0.33	ND	ND
1,2,4-Trichlorobenzene	0.33	ND	ND
2,4,5-Trichlorophenol	2.00	ND	ND
2,4,6-Trichlorophenol	3.3	ND	ND

* See Case Narrative regarding higher than usual detection limits.

Surrogates (Limits) in Percent Recovery

Sample ID:	Blank	FLN-C822-05
2-Fluorophenol (25 - 121%)	104	105
Phenol-D5 (24 - 113%)	93	103
Nitrobenzene-D5 (23 - 120%)	85	97
2-Fluorobiphenyl (30 - 115%)	96	92
2,4,6-Tribromophenol (19 - 122%)	106	107
p-Terphenyl-D14 (18 - 137%)	106	110

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EPA 8270 Semivolatile Organics

Client:	Brycon, LLC	Date Sampled:	08/22/01
Project:	Fields Lease North	Date Received:	08/22/01
Job No.:	19123	Date Extracted:	08/28/01
Matrix:	Soil	Dates Analyzed:	09/04/01
Analyst:	TPW	Batch Number:	8270S0734

	Sample ID:	Blank	FLN-C822-B2
Compound	DL*	mg/Kg	mg/Kg
Acenaphthene	3.3	ND	ND
Acenaphthylene	3.3	ND	ND
Anthracene	3.3	ND	ND
Benzo[a]anthracene	6.6	ND	ND
Benzo[a]pyrene	6.6	ND	ND
Benzo[b]fluoranthene	3.3	ND	ND
Benzo[g,h,i]perylene	9.9	ND	ND
Benzo[k]fluoranthene	6.6	ND	ND
Benzyl alcohol	13	ND	ND
bis(2-Chloroethoxy)methane	6.6	ND	ND
bis(2-Chloroethyl)ether	6.6	ND	ND
bis(2-Chloroisopropyl)ether	9.9	ND	ND
bis(2-Ethylhexyl)phthalate	33	ND	ND
4-Bromophenylphenylether	3.3	ND	ND
Butylbenzylphthalate	3.3	ND	ND
4-Chloro-3-methylphenol	16	ND	ND
4-Chloroaniline	16	ND	ND
2-Chloronaphthalene	3.3	ND	ND
2-Chlorophenol	13	ND	ND
4-Chlorophenylphenylether	3.3	ND	ND
Chrysene	3.3	ND	ND
Di-n-butylphthalate	33	ND	ND
Di-n-octylphthalate	3.3	ND	ND
Dibenzo[a,h]anthracene	9.9	ND	ND
Dibenzofuran	3.3	ND	ND
1,2-Dichlorobenzene	3.3	ND	ND
1,3-Dichlorobenzene	3.3	ND	ND
1,4-Dichlorobenzene	3.3	ND	ND
3,3-Dichlorobenzidine	13	ND	ND
2,4-Dichlorophenol	16	ND	ND
Diethylphthalate	33	ND	ND
2,4-Dimethylphenol	9.9	ND	ND
Dimethylphthalate	3.3	ND	ND
4,6-Dinitro-2-methylphenol	33	ND	ND
2,4-Dinitrophenol	160	ND	ND
2,4-Dinitrotoluene	3.3	ND	ND

Centrum Analytical Laboratories, Inc.

EPA 8270 Semivolatile Organics

Client:	Brycon, LLC	Date Sampled:	08/22/01
Project:	Fields Lease North	Date Received:	08/22/01
Job No.:	19123	Date Extracted:	08/28/01
Matrix:	Soil	Dates Analyzed:	09/04/01
Analyst:	TPW	Batch Number:	8270S0734

	Sample ID:	Blank	FLN-C822-B2
Compound	**DL***	mg/Kg	mg/Kg
2,6-Dinitrotoluene	9.9	ND	ND
Fluoranthene	3.3	ND	ND
Fluorene	3.3	ND	ND
Hexachlorobenzene	3.3	ND	ND
Hexachlorobutadiene	3.3	ND	ND
Hexachlorocyclopentadiene	160	ND	ND
Hexachloroethane	3.3	ND	ND
Indeno[1,2,3-c,d]pyrene	13	ND	ND
Isophorone	3.3	ND	ND
2-Methylnaphthalene	3.3	ND	ND
2-Methylphenol	16	ND	ND
4-Methylphenol	16	ND	ND
N-Nitrosodi-n-propylamine	3.3	ND	ND
N-Nitrosodiphenylamine	3.3	ND	ND
Naphthalene	3.3	ND	ND
2-Nitroaniline	9.9	ND	ND
3-Nitroaniline	9.9	ND	ND
4-Nitroaniline	33	ND	ND
Nitrobenzene	9.9	ND	ND
2-Nitrophenol	13	ND	ND
4-Nitrophenol	33	ND	ND
Pentachlorophenol	160	ND	ND
Phenanthrene	6.6	ND	ND
Phenol	13	ND	ND
Pyrene	3.3	ND	ND
1,2,4-Trichlorobenzene	3.3	ND	ND
2,4,5-Trichlorophenol	20.00	ND	ND
2,4,6-Trichlorophenol	33	ND	ND

* See Case Narrative regarding higher than usual detection limits.

Surrogates (Limits) in Percent Recovery

Sample ID:	Blank	FLN-C822-B2
2-Fluorophenol (25 - 121%)	104	108
Phenol-D5 (24 - 113%)	93	96
Nitrobenzene-D5 (23 - 120%)	85	74
2-Fluorobiphenyl (30 - 115%)	96	98
2,4,6-Tribromophenol (19 - 122%)	106	102
p-Terphenyl-D14 (18 - 137%)	106	113

Centrum
Analytical
Laboratories, Inc.

QC Sample Report - EPA 8270

Batch #: 8270S0734 Matrix: Soil

Sample ID: Laboratory Control Sample

Analyte	Spike Concentration mg/Kg	% Recovery LCS	Acceptance Limits % Recovery	Pass/Fail
Phenol	2.66	88	5 - 112	Pass
2-Chlorophenol	2.66	107	23 - 134	Pass
1,4-Dichlorobenzene	1.33	93	20 - 124	Pass
N-Nitrosodi-n-propylamine	1.33	93	0 - 230	Pass
1,2,4-Trichlorobenzene	1.33	93	44 - 142	Pass
4-Chloro-3-Methylphenol	2.66	118	22 - 147	Pass
Acenaphthene	1.33	83	47 - 145	Pass
4-Nitrophenol	2.66	82	0 - 132	Pass
2,4-Dinitrotoluene	1.33	96	39 - 139	Pass
Pentachlorophenol	2.66	95	14 - 176	Pass
Pyrene	1.33	104	52 - 115	Pass

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: Laboratory Control Sample

Analyte	Spike Sample Recovery mg/Kg	Spike Duplicate Recovery mg/Kg	Relative Percent Difference (RPD)	Upper Control Limit RPD	Pass/Fail
Phenol	2.35	2.34	1%	35%	Pass
2-Chlorophenol	2.86	2.81	2%	50%	Pass
1,4-Dichlorobenzene	1.24	1.22	2%	27%	Pass
N-Nitrosodi-n- propylamine	1.24	1.22	2%	38%	Pass
1,2,4-Trichlorobenzene	1.23	1.19	3%	23%	Pass
4-Chloro-3-Methylphenol	3.13	3.01	4%	33%	Pass
Acenaphthene	1.10	1.11	1%	23%	Pass
4-Nitrophenol	2.20	2.39	8%	50%	Pass
2,4-Dinitrotoluene	1.29	1.24	4%	47%	Pass
Pentachlorophenol	2.52	2.48	2%	47%	Pass
Pyrene	1.38	1.36	2%	36%	Pass

Analytical Notes:

Centrum Analytical Laboratories, Inc.

Chain of Custody Record

Centrum Job #

1401 Research Park Drive, Suite 100
Riverside, CA 92507
Voice: 909.779.0310 ● 800.798.9336
Fax: 909.779.0344

3299 Hill Street, Suite 305
Signal Hill, CA 90806
Voice: 562.498.7005
Fax: 562.498.8617

www.centrum-labs.com lab@centrum-labs.com

Project No:

Project Name: FIELDS LEASE NORTH

Project Manager: GEORGE PASPALOF

Phone: (562) 397.1330 Fax: (714) 968.2017

Client Name: (Report and Billing) BRYCON, LLC

Address: (Report and Billing) 4570 CAMPUS DRIVE NEWPORT BEACH CA 92660

Please Circle Analyses Requested

Centrum ID (Lab use only)	Sample ID (As it should appear on report)	Date sampled	Time sampled	Sample matrix	Site location	Containers: # and type	8015M: Diesel, Fuel Screen, Carbon Chain	8015M: Gas only	8021B: BTEX/MtBE Only	418.1 (TRPH), 413.2, 1664	GC or GCMS Volatiles by 5035*	GCMS: 8260B, 8021B, 624, 524.2	GCMS: MtBE Conf. Only, BTEX/Oxygenates Only	GCMS: 8270C, 625	8080: Pesticides, PCBs, Pest/PCB	Metals: Title 22 (CAM), RCRA, PP	pH, TDS, TSS, Conductivity	Flashpoint, Hex Cr
-	FLN-C822-01	8/22/0	12:25 PM	SOIL	Fields Lease N. Excavation	1 402 JARS	X											
-	FLN-C822-02		12:31				X											
-	FLN-C822-03		12:37				X											
-	FLN-C822-04		12:44				X											
	~~FLN-C822-05~~		~~12:5~~															
	~~FLN-C822-01~~		—															
-	FLN-C822-05		12:50				X					X		X		X		
-	FLN-C822-06		12:56				X											
-	FLN-C822-07		1:02				X											
	—																	

Turn-Around Time

- ☐ 24 Hr. RUSH*
- ☐ 48 Hr. RUSH*
- ☒ Normal TAT

*Requires PRIOR approval, additional charges apply

Requested due date: _____

Remarks/Special Instructions

1) Relinquished by: (Sampler's Signature) Maria Robles — Date: 8/22/0 — Time: 1515

2) Received by: [illegible] — Date: 8/22/0 — Time: 1515

3) Relinquished by: — Date: — Time:

4) Received by: — Date: — Time:

5) Relinquished by: — Date: — Time:

6) Received for Laboratory by: — Date: — Time:

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

To be completed by Laboratory personnel:

Samples chilled? ☒ Yes ☐ No ☐ From Field

Custody seals? ☐ Yes ☒ No

All sample containers intact? ☒ Yes ☐ No

☐ Courier ☐ UPS/Fed Ex ☒ Hand carried

Sample Disposal

- ☐ Client will pick up
- ☐ Return to client
- ☒ Lab disposal

Laboratory Notes:

Sample Locator No.

White Copy - Original (Accompanies Samples) Yellow Copy - Centrum Files Pink Copy - Centrum duplicate Gold Copy - Client Copy

Centrum Analytical Laboratories, Inc.

Chain of Custody Record

Centrum Job #

1401 Research Park Drive, Suite 100
Riverside, CA 92507
Voice: 909.779.0310 ● 800.798.9336
Fax: 909.779.0344

3299 Hill Street, Suite 305
Signal Hill, CA 90806
Voice: 562.498.7005
Fax: 562.498.8617

www.centrum-labs.com lab@centrum-labs.com

Project No:

Project Name: FIELDS LEASE NORTH

Project Manager: GEORGE PASPALOF

Phone: (562) 397-1830

Fax: (714) 969.2017

Client Name: (Report and Billing) BRYCON, LLC

Address: (Report and Billing) 4570 CAMPUS DRIVE, Newport Beach, CA 92660

Please Circle Analyses Requested

Centrum ID (Lab use only)	Sample ID (As it should appear on report)	Date sampled	Time sampled P.M.	Sample matrix	Site location	Containers: # and type	8015M: Diesel, Fuel Screen, Carbon Chain	8015M: Gas only	8021B: BTEX/MtBE Only	418.1 (TRPH), 413.2, 1664	GC or GCMS Volatiles by 5035*	GCMS: 8260B, 8021B, 624, 524.2	GCMS: MtBE Conf. Only, BTEX/Oxygenates Only	GCMS: 8270C, 625	8080: Pesticides, PCBs, Pes/PCB	Metals: Title 22 (CAM), RCRA, PP	pH, TDS, TSS, Conductivity	Flashpoint, Hex Cr	
-	FLN-T822-SS1	8/22/01	1:24	SOIL	Fields Lease N. Tank Farm	3 4oz JAR	X									X			
-	FLN-T822-SS2	↓	1:30	↓	↓	↓	X												
-	FLN-T822-B1		1:38				X												
-	FLN-T822-B2		1:44				X					X		X		X			
-	FLN-T822-B3	↓	1:50	↓	↓	↓	X					X		X		X			

Turn-Around Time

- ☐ 24 Hr. RUSH*
- ☐ 48 Hr. RUSH*
- ☒ Normal TAT

*Requires PRIOR approval, additional charges apply

Requested due date: _____

Remarks/Special Instructions

RU per client request Marina Roberts phonecon 8/23/01.

RU

1) Relinquished by: (Sampler's Signature) Marina Roberts — Date: 8/22/01 — Time: 1515

2) Received by: [signature] — Date: 8/22/01 — Time: 1515

3) Relinquished by: — Date: — Time:

4) Received by: — Date: — Time:

5) Relinquished by: — Date: — Time:

6) Received for Laboratory by: — Date: — Time:

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

To be completed by Laboratory personnel:

Samples chilled? ☒ Yes ☐ No ☐ From Field

Custody seals? ☐ Yes ☒ No

All sample containers intact? ☒ Yes ☐ No

☐ Courier ☐ UPS/Fed Ex ☒ Hand carried

Sample Disposal

- ☐ Client will pick up
- ☐ Return to client
- ☒ Lab disposal

Laboratory Notes:

Sample Locator No.

White Copy - Original (Accompanies Samples) Yellow Copy - Centrum Files Pink Copy - Centrum duplicate Gold Copy - Client Copy

Centrum Analytical Laboratories, Inc.
Certified Hazardous Waste Testing Mobile & In House Laboratories

Client: Brycon, LLC
4570 Campus Drive
Newport Beach, CA 92660

Date Sampled: 06/24/04
Date Received: 06/24/04
Job Number: 24598

Project: Fields Lease North

CASE NARRATIVE

The following information applies to samples which were received on 06/24/04 :

The samples were received at the laboratory at ambient temperature. All sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested. The date of issue for this report is 06/30/04.

Report approved by:

Tom Wilson
Laboratory Director

ELAP Lab# 2419, 2479, 2527, 2373, 2562

RL: Reporting Limit -- The lowest level at which the compound can be reliably detected under normal laboratory conditions.
ND: Not Detected -- The compound was analyzed for, but was not found to be present at or above the Reporting Limit.
NA: Not Analyzed -- This compound was not on the list of compounds requested for analysis.

Centrum
Analytical
Laboratories, Inc.

C6 to C40 Hydrocarbons by GC/FID

Client:	Brycon, LLC	Date Sampled:	06/24/04
Project:	Fields Lease North	Date Received:	06/24/04
Job No.:	24598	Batch Number:	SH2GASS145
Matrix:	Soil		8015DS3208
Analyst:	RV / JB		

	Carbon Chain Length:	C6-C12	C13-C22	C23-C40
	Reporting Limits:	0.50	10	10
	Units:	mg/Kg	mg/Kg	mg/Kg
	Method Blank	ND	ND	ND
T1-2.5'	FS040624-1	ND	ND	ND
T1-6'	BS040624-1	ND	ND	ND
T2-2.5'	FS040624-2	ND	ND	ND
T2-6'	BS040624-2	ND	ND	ND
T3-2.5'	FS040624-3	ND	ND	ND
T3-6'	BS040624-3	ND	ND	ND
T4-2.5'	FS040624-4	ND	ND	ND
-6'	BS040624-4	ND	ND	ND
T5-2.5'	FS040624-5	ND	**11**	**52**
T5-6'	BS040624-5	ND	ND	ND
T6-2.5'	FS040624-6	ND	ND	ND
T6-6'	GS040624-6	ND	ND	ND
	Method:	GC/FID	GC/FID	GC/FID
	Date Extracted:	N/A	06/25/04	06/25/04
	Date Analyzed:	04/25/04	06/25-26/04	06/25-26/04

Centrum
Analytical
Laboratories, Inc.

QC Sample Report - Volatile Hydrocarbons as Gasoline by GC/FID

Matrix: Soil
Batch Number: SH2GASS145

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Gasoline	5.0	**91**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: GS040624-6

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Gasoline	5.42	5.39	**1%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum
Analytical
Laboratories, Inc.

QC Sample Report - Extractable Hydrocarbons as Diesel by GC/FID

Matrix: Soil
Batch Number: 8015DS3208

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Diesel	100	**94**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: GS040624-6

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Diesel	92.3	101.6	**10%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum Analytical Laboratories, Inc.

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Fax: 562.498.8617

www.centrum-labs.com lab@centrum-labs.com

Chain of Custody Record RUSH

Centrum Job # 24598

Project No:	Project Name: Fields Lease North
Project Manager: GBP	Phone: Fax:
Client Name: (Report and Billing) Pyram, LLC	Address: (Report and Billing) 4570 Campus Dr. Newport Beach Ca 92660

Please Circle Analyses Requested

Centrum ID (Lab use only)	Sample ID (As it should appear on report)	Date sampled	Time sampled	Sample matrix	Site location	Containers: # and type	LUFT Diesel, or EPA 8015B DRO	LUFT Gas, or EPA 8015B GRO	Fuel ID (TVH, TEH), Carbon Chain (specify ranges)	8021B: BTEX/MtBE Only	VOCs: 8260B, or 624	VOCs: BTEX/Oxygenates Only	SVOCs: 8270C, or 625	8081A/8082: Pesticides, or PCBs, or Pest/PCB	Metals: Title 22 (CAM), or RCRA, or PP	Metals: TCLP, STLC	pH, TDS, TSS	418.1 (TRPH), or 413.2, or 1664	Remarks/Special Instructions
1	FS[illegible]-1	6/24		Soil	FLN	4 oz glass			X										C6-C40
2	BS[illegible]-1																		
3	[illegible]																		
4	[illegible]																		
5	[illegible]																		
6	[illegible]																		
7	[illegible]																		
8	[illegible]																		
9	[illegible]																		
10	[illegible]	X		X	X				X										

Turn-Around Time

- ☐ 24 Hr. RUSH*
- ☐ 48 Hr. RUSH*
- ☐ Normal TAT
- ☐ Other _____

*Requires PRIOR approval, additional charges apply

Requested due date: _____

1) Relinquished by: (Sampler's Signature)	Date: 6/24	Time: 1140	3) Relinquished by:
2) Received by:	Date:	Time:	4) Received by:
			5) Relinquished by:
			6) Received for Laboratory by:

Date: Time:
Date: Time:
Date: Time:
Date: 6/24/24 Time: 1140

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

To be completed by Laboratory personnel:

Samples chilled? ☐ Yes ☐ No ☒ From Field
Custody seals? ☐ Yes ☒ No
All sample containers intact? ☒ Yes ☐ No
☐ Courier ☐ UPS/Fed Ex ☒ Hand carried

Sample Disposal

- ☐ Client will pick up
- ☐ Return to client
- ☐ Lab disposal

Laboratory Notes:
C6-C12
C13-C22
C23-C40

Additional Report Formats:

- ☐ LARWQCB
- ☐ EDF (Geotracker)
- ☐ EDD (GISKEY)
- ☐ EDD (Other)*

Sample Locator No.

△

White Copy - Original (Accompanies Samples) Yellow Copy - Centrum Files Pink Copy - Centrum duplicate Gold Copy - Client Copy

Centrum Analytical Laboratories, Inc.
1401 Research Park Drive, Suite 100
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3299 Hill Street, Suite 305
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Voice: 562.498.7005
Fax: 562.498.8617

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Chain of Custody Record

RUSH

Centrum Job # 24598

Project No:

Project Name: Fields Lease North

Project Manager: GBP

Phone:

Fax:

Client Name: (Report and Billing) Brycon, LLC

Address: (Report and Billing) 4570 Campus Dr Newport Beach, Ca 92660

Please Circle Analyses Requested

Centrum ID (Lab use only)	Sample ID (As it should appear on report)	Date sampled	Time sampled	Sample matrix	Site location	Containers: # and type	LUFT Diesel, or EPA 8015B DRO	LUFT Gas, or EPA 8015B GRO	Fuel ID (TVH, TEH), Carbon Chain (specify ranges)	8021B: BTEX/MtBE Only		VOCs: 8260B, or 624	VOCs: BTEX/Oxygenates Only	SVOCs: 8270C, or 625	8081A/8082: Pesticides, or PCBs, or Pest/PCB		Metals: Title 22 (CAM), or RCRA, or PP	Metals: TCLP, STLC	pH, TDS, TSS	418.1 (TRPH), or 413.2, or 1664		Remarks/Special Instructions
11	FS040624-6	6/24		Soil	PLN	4oz Stem			X													C6 - C9
12	FS040624-6	1							X													

Turn-Around Time
- ☐ 24 Hr. RUSH*
- ☒ 48 Hr. RUSH*
- ☐ Normal TAT
- ☐ Other _____

*Requires PRIOR approval, additional charges apply

Requested due date: _____

	Date:	Time:		Date:	Time:
1) Relinquished by: (Sampler's Signature)	6/24/4	1140	3) Relinquished by:		
2) Received by:			4) Received by:		
			5) Relinquished by:		
			6) Received for Laboratory by:	6/24/4	1140

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

To be completed by Laboratory personnel:
Samples chilled? ☐ Yes ☐ No ☒ From Field
Custody seals? ☐ Yes ☐ No
All sample containers intact? ☐ Yes ☐ No
☐ Courier ☐ UPS/Fed Ex ☐ Hand carried

Sample Disposal
- ☐ Client will pick up
- ☐ Return to client
- ☐ Lab disposal

Laboratory Notes:

Additional Report Formats:
☐ LARWQCB ☐ EDF (Geotracker)
☐ EDD (GISKEY) ☐ EDD (Other)*

Sample Locator No.

White Copy - Original (Accompanies Samples) Yellow Copy - Centrum Files Pink Copy - Centrum duplicate Gold Copy - Client Copy

Centrum Analytical Laboratories, Inc.
CERTIFIED HAZARDOUS WASTE TESTING MOBILE & IN HOUSE LABORATORIES

Client: Brycon, LLC
4570 Campus Drive
Newport Beach, CA 92660

Date Sampled: 07/08/04
Date Received: 07/08/04
Job Number: 24662

Project: Fields Lease North

CASE NARRATIVE

The following information applies to samples which were received on 07/08/04 :

The samples were received at the laboratory directly from the field and were cooled to 4°C upon arrival. The sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested. The date of issue for this report is 07/20/04.

Report approved by:

Tom Wilson
Laboratory Director

ELAP Lab# 2419, 2479, 2527, 2373, 2562

RL: Reporting Limit -- The lowest level at which the compound can be reliably detected under normal laboratory conditions.
ND: Not Detected -- The compound was analyzed for, but was not found to be present at or above the Reporting Limit.
NA: Not Analyzed -- This compound was not on the list of compounds requested for analysis.

Centrum
Analytical
Laboratories, Inc.

C6 to C40 Hydrocarbons by GC/FID

Client:	Brycon, LLC	Date Sampled:	07/08/04
Project:	Fields Lease North	Date Received:	07/08/04
Job No.:	24662	Batch Number:	SH2GASS152
Matrix:	Soil		8015DS3221
Analyst:	RV / JB		

Carbon Chain Length:	C6-C12	C13-C22	C23-C40
Reporting Limits:	0.50	10	10
Units:	mg/Kg	mg/Kg	mg/Kg
Method Blank	ND	ND	ND
BS040708-1	ND	**25**	**120**
BS040708-2	ND	**130**	**420**
Method:	GC/FID	GC/FID	GC/FID
Date Extracted:	N/A	07/13/04	07/13/04
Date Analyzed:	07/09/04	07/14-15/04	07/14-15/04

Centrum
Analytical
Laboratories, Inc.

QC Sample Report - Volatile Hydrocarbons as Gasoline by GC/FID

Matrix: Soil
Batch Number: SH2GASS152

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Gasoline	5.0	**99**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: 24666-18

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Gasoline	4.61	4.89	**6%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum
Analytical
Laboratories, Inc.

QC Sample Report - Extractable Hydrocarbons as Diesel by GC/FID

Matrix: Soil
Batch Number: 8015DS3221

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Diesel	100	**100**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: 24668-15

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Diesel	104.7	112.2	**7%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

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Voice: 562.498.7005
Fax: 562.498.8617

www.centrum-labs.com lab@centrum-labs.com

Chain of Custody Record

Centrum Job # 24662

Project No:

Project Name: Fields Lease North

Project Manager: GBP

Phone:

Fax:

Client Name: (Report and Billing) Brycon, LLC

Address: (Report and Billing) 4570 Campus Dr. Newport Beach, Ca 92660

*Please Circle Analyses Requested

Centrum ID (Lab use only)	Sample ID (As it should appear on report)	Date sampled	Time sampled	Sample matrix	Site location	Containers: # and type	LUFT Diesel, or EPA 8015B DRO	LUFT Gas, or EPA 8015B GRO	Fuel ID (TVH, TEH), Carbon Chain (specify ranges)	8021B: BTEX/MtBE Only		VOCs: 8260B, or 624	VOCs: BTEX/Oxygenates Only	SVOCs: 8270C, or 625	8081A/8082: Pesticides, or PCBs, or Pest/PCB		Metals: Title 22 (CAM), or RCRA, or PP	Metals: TCLP, STLC	pH, TDS, TSS	418.1 (TRPH), or 413.2, or 1664		Remarks/Special Instructions
1	BS040708-1	7/8	1:15	Soil	F.L.N.	8oz. glass			X													~~C4-C40~~ C4-C40
2	BS040708-2	1	1	1	1	1			X													* C6-C40

Turn-Around Time
- ☐ 24 Hr. RUSH*
- ☐ 48 Hr. RUSH*
- ☒ Normal TAT
- ☐ Other _____

*Requires PRIOR approval, additional charges apply

Requested due date: _____

	Date	Time		Date	Time
1) Relinquished by: (Sampler's Signature)	7/8	1420	3) Relinquished by:		
2) Received by:			4) Received by:		
			5) Relinquished by:		
			6) Received for Laboratory by:	7/8/4	1420

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

Laboratory Notes:

To be completed by Laboratory personnel:
- Samples chilled? ☐ Yes ☐ No ☒ From Field
- Custody seals? ☐ Yes ☒ No
- All sample containers intact? ☒ Yes ☐ No
- ☐ Courier ☐ UPS/Fed Ex ☒ Hand carried

Sample Disposal
- ☐ Client will pick up
- ☐ Return to client
- ☒ Lab disposal

Additional Report Formats:
- ☐ LARWQCB ☐ EDF (Geotracker)
- ☐ EDD (GISKEY) ☐ EDD (Other)*

Sample Locator No.

White Copy - Original (Accompanies Samples) Yellow Copy - Centrum Files Pink Copy - Centrum duplicate Gold Copy - Client Copy

Centrum Analytical Laboratories, Inc.
CERTIFIED HAZARDOUS WASTE TESTING MOBILE & IN HOUSE LABORATORIES

Client: Brycon, LLC
4570 Campus Drive
Newport Beach, CA 92660

Date Sampled: 04/18-19/05
Date Received: 04/19/05
Job Number: 26142

Project: Field Lease North

CASE NARRATIVE

The following information applies to samples which were received on 04/19/05:

The samples were received at the laboratory chilled and sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested. The date of issue for this report is 04/26/05.

Report approved by:

Tom Wilson
Laboratory Director

ELAP Lab# 2419, 2479, 2527, 2373, 2562

RL: Reporting Limit -- The lowest level at which the compound can be reliably detected under normal laboratory conditions.
ND: Not Detected -- The compound was analyzed for, but was not found to be present at or above the Reporting Limit.
NA: Not Analyzed -- This compound was not on the list of compounds requested for analysis.

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Centrum Analytical Laboratories, Inc.

C9 to C40 Hydrocarbons by GC/FID

Client:	Brycon, LLC	Date Sampled:	04/18-19/05
Project:	Field Lease North	Date Received:	04/19/05
Job No.:	26142	Batch Number:	8015DS3448
Matrix:	Soil		
Analyst:	AW		

Carbon Chain Length:	C9-C12	C13-C22	C23-C40
Reporting Limits:	10	10	20
Units:	mg/Kg	mg/Kg	mg/Kg
Method Blank	ND	ND	ND
GS0504181	ND	ND	ND
GS0504192	ND	**110**	**520**
GS0504193	ND	ND	ND
Method:	GC/FID	GC/FID	GC/FID
Date Extracted:	04/21/05	04/21/05	04/21/05
Date Analyzed:	04/21-22/05	04/21-22/05	04/21-22/05

Centrum
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Laboratories, Inc.

QC Sample Report - Extractable Hydrocarbons as Diesel by GC/FID

Matrix: Soil
Batch Number: 8015DS3448

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Diesel	100	**106**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: 26149-1

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Diesel	92.6	93.7	**1%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

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Voice: 562.498.7005
Fax: 562.498.8617

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Chain of Custody Record

Centrum Job # 26142

Page 1 of 1

Project No:

Project Name: Field Lease North

Project Manager: GBP

Phone: 949 475 7749

Fax:

Client Name: (Report and Billing) Brycon, LLC

Address: (Report and Billing) 4570 Campos Dr. Newport Beach, CA

Please Circle Analyses Requested

Centrum ID (Lab use only)	Sample ID (As it should appear on report)	Date sampled	Time sampled	Sample matrix	Site location	Containers: # and type	LUFT Diesel, or EPA 8015B DRO	LUFT Gas, or EPA 8015B GRO	Fuel ID (TVH, TEH), Carbon Chain (specify ranges)	8021B: BTEX/MtBE Only	8059 Cg-C40	VOCs: 8260B, or 624	VOCs: BTEX/Oxygenates Only	SVOCs: 8270C, or 625	8081A/8082: Pesticides, or PCBs, or Pest/PCB		Metals: Title 22 (CAM), or RCRA, or PP	Metals: TCLP, STLC	pH, TDS, TSS	418.1 (TRPH), or 413.2, or 1664		Remarks/Special Instructions
1	GS0504181	4/18/05	1125	soil		4oz Jar					X											
2	GS0504192	4/19/05	730	soil		↓					X											
3	GS0504193	4/19/05	1052	soil		↓					X											

Turn-Around Time
- ☐ 24 Hr. RUSH*
- ☐ 48 Hr. RUSH*
- ☒ Normal TAT
- ☐ Other _____

*Requires PRIOR approval, additional charges apply

Requested due date: _____

	Date:	Time:
1) Relinquished by: (Sampler's Signature) [signature]	4/19/05	1210
2) Received by:		
3) Relinquished by:		
4) Received by:		
5) Relinquished by:		
6) Received for Laboratory by: [signature]	4/19/5	1210

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

Laboratory Notes:

To be completed by Laboratory personnel:
- Samples chilled? ☒ Yes ☐ No ☒ ~~From Field~~
- Custody seals? ☐ Yes ☒ No
- All sample containers intact? ☒ Yes ☐ No
- ☐ Courier ☐ UPS/Fed Ex ☒ Hand carried

Additional Report Formats:
- ☐ LARWQCB ☐ EDF (Geotracker)
- ☐ EDD (GISKEY) ☐ EDD (Other)*

Sample Disposal
- ☐ Client will pick up
- ☐ Return to client
- ☒ Lab disposal

Sample Locator No. H

White Copy - Original (Accompanies Samples) Yellow Copy - Centrum Files Pink Copy - Centrum duplicate Gold Copy - Client Copy

Centrum Analytical Laboratories, Inc.
CERTIFIED HAZARDOUS WASTE TESTING MOBILE & IN HOUSE LABORATORIES

Client: Brycon, LLC
4570 Campus Drive
Newport Beach, CA 92660

Date Sampled: 04/20/05
Date Received: 04/20/05
Job Number: 26149

Project: Field Lease North

CASE NARRATIVE

The following information applies to samples which were received on 04/20/05:

The samples were received at the laboratory directly from the field and were cooled to 4°C upon arrival. The sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested. The date of issue for this report is 04/26/05.

Report approved by:

Tom Wilson
Laboratory Director

ELAP Lab# 2419, 2479, 2527, 2373, 2562

RL: Reporting Limit -- The lowest level at which the compound can be reliably detected under normal laboratory conditions.
ND: Not Detected -- The compound was analyzed for, but was not found to be present at or above the Reporting Limit.
NA: Not Analyzed -- This compound was not on the list of compounds requested for analysis.

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Centrum Analytical Laboratories, Inc.

C9 to C40 Hydrocarbons by GC/FID

Client:	Brycon, LLC	Date Sampled:	04/20/05
Project:	Field Lease North	Date Received:	04/20/05
Job No.:	26149	Batch Number:	8015DS3448
Matrix:	Soil		
Analyst:	AW		

Carbon Chain Length:	C9-C12	C13-C22	C23-C40
Reporting Limits:	10	10	20
Units:	mg/Kg	mg/Kg	mg/Kg
Method Blank	ND	ND	ND
GS0504204	ND	ND	ND
GS0504205	ND	**22**	**120**
Method:	GC/FID	GC/FID	GC/FID
Date Extracted:	04/21/05	04/21/05	04/21/05
Date Analyzed:	04/21-22/05	04/21-22/05	04/21-22/05

Centrum
Analytical
Laboratories, Inc.

QC Sample Report - Extractable Hydrocarbons as Diesel by GC/FID

Matrix: Soil
Batch Number: 8015DS3448

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Diesel	100	**106**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: GS0504204

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Diesel	92.6	93.7	**1%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

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Chain of Custody Record

Centrum Job # 26149

Page 1 of 1

Project No:

Project Name: Field Lease North

Project Manager: GBP

Phone: 949 475 7749

Fax:

Client Name: (Report and Billing) Brycon, LLC

Address: (Report and Billing) 4570 Campos Dr. Newport Beach, CA

Please Circle Analyses Requested

Centrum ID (Lab use only)	Sample ID (As it should appear on report)	Date sampled	Time sampled	Sample matrix	Site location	Containers: # and type	LUFT Diesel, or EPA 8015B DRO	LUFT Gas, or EPA 8015B GRO	Fuel ID (TVH, TEH), Carbon Chain (specify ranges)	8021B: BTEX/MtBE Only	8015 C9 - C40	VOCs: 8260B, or 624	VOCs: BTEX/Oxygenates Only	SVOCs: 8270C, or 625	8081A/8082: Pesticides, or PCBs, or Pest/PCB		Metals: Title 22 (CAM), or RCRA, or PP	Metals: TCLP, STLC	pH, TDS, TSS	418.1 (TRPH), or 413.2, or 1664		Remarks/Special Instructions
1	GS0504204	4/20/05	1135	soil		4oz Jars					X											
2	GS0504205	4/20/05	1140	soil		J					X											

Turn-Around Time
- ☐ 24 Hr. RUSH*
- ☐ 48 Hr. RUSH*
- ☒ Normal TAT
- ☐ Other _____

*Requires PRIOR approval, additional charges apply

Requested due date: _____

	Date:	Time:
1) Relinquished by: (Sampler's Signature) [signature]	4/20/05	1625
2) Received by:		
3) Relinquished by:		
4) Received by:		
5) Relinquished by:		
6) Received for Laboratory by: [signature]	4/20/5	1625

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

Laboratory Notes: C9 - C12
C13 - C22
C23 - C40

To be completed by Laboratory personnel:
- Samples chilled? ☐ Yes ☐ No ☒ From Field
- Custody seals? ☐ Yes ☒ No
- All sample containers intact? ☒ Yes ☐ No
- ☐ Courier ☐ UPS/Fed Ex ☒ Hand carried

Additional Report Formats:
- ☐ LARWQCB ☐ EDF (Geotracker)
- ☐ EDD (GISKEY) ☐ EDD (Other)*

Sample Disposal
- ☐ Client will pick up
- ☐ Return to client
- ☒ Lab disposal

Sample Locator No. I

White Copy - Original (Accompanies Samples) Yellow Copy - Centrum Files Pink Copy - Centrum duplicate Gold Copy - Client Copy

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CERTIFIED HAZARDOUS WASTE TESTING MOBILE & IN HOUSE LABORATORIES

Client: Brycon, LLC
4570 Campus Drive
Newport Beach, CA 92660

Date Sampled: 04/22/05
Date Received: 04/22/05
Job Number: 26165

Project: Field Lease North

CASE NARRATIVE

The following information applies to samples which were received on 04/22/05:

The samples were received at the laboratory directly from the field and were cooled to 4ºC upon arrival. The sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested. The date of issue for this report is 05/03/05.

Report approved by:

Tom Wilson

Tom Wilson
Laboratory Director

ELAP Lab# 2419, 2479, 2527, 2373, 2562

RL: Reporting Limit -- The lowest level at which the compound can be reliably detected under normal laboratory conditions.
ND: Not Detected -- The compound was analyzed for, but was not found to be present at or above the Reporting Limit.
NA: Not Analyzed -- This compound was not on the list of compounds requested for analysis.

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Centrum Analytical Laboratories, Inc.

C9 to C40 Hydrocarbons by GC/FID

Client:	Brycon, LLC	Date Sampled:	04/22/05
Project:	Field Lease North	Date Received:	04/22/05
Job No.:	26165	Batch Number:	8015DS3450
Matrix:	Soil		
Analyst:	AW		

Carbon Chain Length:	C9-C12	C13-C22	C23-C40
Reporting Limits:	10	10	20
Units:	mg/Kg	mg/Kg	mg/Kg
Method Blank	ND	ND	ND
GS0504226	ND	ND	**21**
GS0504227	ND	**32**	**140**
Method:	GC/FID	GC/FID	GC/FID
Date Extracted:	04/25/05	04/25/05	04/25/05
Date Analyzed:	04/25-29/05	04/25-29/05	04/25-29/05

Centrum
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Laboratories, Inc.

QC Sample Report - Extractable Hydrocarbons as Diesel by GC/FID

Matrix: Soil
Batch Number: 8015DS3450

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Diesel	100	**89**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: 26166-2

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Diesel	92.7	85.9	**8%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum Analytical Laboratories, Inc.

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Chain of Custody Record

Centrum Job # 26165

Project No:	Project Name: Field Lease North
Project Manager: GBP	Phone: 949 475 7749 Fax:
Client Name: (Report and Billing) Bycon, LLC	Address: (Report and Billing) 4570 Campus Dr Newport Beach, CA

Please Circle Analyses Requested

Centrum ID (Lab use only)	Sample ID (As it should appear on report)	Date sampled	Time sampled	Sample matrix	Site location	Containers: # and type	LUFT Diesel, or EPA 8015B DRO	LUFT Gas, or EPA 8015B GRO	Fuel ID (TVH, TEH), Carbon Chain (specify ranges)	8021B: BTEX/MtBE Only	8015 C9-C40	VOCs: 8260B, or 624	VOCs: BTEX/Oxygenates Only	SVOCs: 8270C, or 625	8081A/8082: Pesticides, or PCBs, or Pest/PCB		Metals: Title 22 (CAM), or RCRA, or PP	Metals: TCLP, STLC	pH, TDS, TSS	418.1 (TRPH), or 413.2, or 1664		Remarks/Special Instructions
1	6S0504226	4/22/05	1035	Soil		4oz Jar					X											
2	6S0504227	4/22/05	1040	Soil		↓					X											

Turn-Around Time

- ☐ 24 Hr. RUSH*
- ☐ 48 Hr. RUSH*
- ☒ Normal TAT
- ☐ Other _____

*Requires PRIOR approval, additional charges apply

Requested due date: _____

1) Relinquished by: (Sampler's Signature)	Date: 4/22/05	Time: 1420	3) Relinquished by:	Date:	Time:
2) Received by:	Date:	Time:	4) Received by:	Date:	Time:
			5) Relinquished by:	Date:	Time:
The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.			6) Received for Laboratory by: [signature]	Date: 4/22/05	Time: 1420

To be completed by Laboratory personnel:

Samples chilled? ☐ Yes ☐ No ☒ From Field

Custody seals? ☐ Yes ☒ No

All sample containers intact? ☒ Yes ☐ No

☐ Courier ☐ UPS/Fed Ex ☒ Hand carried

Sample Disposal

- ☐ Client will pick up
- ☐ Return to client
- ☒ Lab disposal

Laboratory Notes:

C9-C12
C13-C22
C23-C40

Additional Report Formats:

☐ LARWQCB ☐ EDF (Geotracker)
☐ EDD (GISKEY) ☐ EDD (Other)*

Sample Locator No.

I

Centrum Analytical Laboratories, Inc.
CERTIFIED HAZARDOUS WASTE TESTING MOBILE & IN HOUSE LABORATORIES

Client: Brycon, LLC
4570 Campus Drive
Newport Beach, CA 92660

Date Sampled: 04/25/05
Date Received: 04/25/05
Job Number: 26171

Project: Field Lease North

CASE NARRATIVE

The following information applies to samples which were received on 04/25/05:

The samples were received at the laboratory directly from the field and were cooled to 4°C upon arrival. The sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested. The date of issue for this report is 05/03/05.

Report approved by:

Tom Wilson

Tom Wilson
Laboratory Director

ELAP Lab# 2419, 2479, 2527, 2373, 2562

RL: Reporting Limit -- The lowest level at which the compound can be reliably detected under normal laboratory conditions.
ND: Not Detected -- The compound was analyzed for, but was not found to be present at or above the Reporting Limit.
NA: Not Analyzed -- This compound was not on the list of compounds requested for analysis.

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Centrum Analytical Laboratories, Inc.

C9 to C40 Hydrocarbons by GC/FID

Client:	Brycon, LLC	Date Sampled:	04/25/05
Project:	Field Lease North	Date Received:	04/25/05
Job No.:	26171	Batch Number:	8015DS3453
Matrix:	Soil		
Analyst:	AW		

Carbon Chain Length:	C9-C12	C13-C22	C23-C40
Reporting Limits:	10	10	20
Units:	mg/Kg	mg/Kg	mg/Kg
Method Blank	ND	ND	ND
GS0504258	ND	ND	**23**
GS0504259	ND	**56**	**110**
Method:	GC/FID	GC/FID	GC/FID
Date Extracted:	04/28/05	04/28/05	04/28/05
Date Analyzed:	04/28-29/05	04/28-29/05	04/28-29/05

Centrum Analytical Laboratories, Inc.

QC Sample Report - Extractable Hydrocarbons as Diesel by GC/FID

Matrix: Soil
Batch Number: 8015DS3453

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Diesel	100	**89**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: Laboratory Control Sample

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Diesel	88.9	89.2	**0%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

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Chain of Custody Record

Centrum Job # 26171

Please Circle Analyses Requested

Project No:	Project Name: Field Lease North
Project Manager: GBP	Phone: 949 475 7749 Fax:
Client Name: (Report and Billing) Bycon, LLC	Address: (Report and Billing) 4570 Campos Dr. Newport Beach, CA

Centrum ID (Lab use only)	Sample ID (As it should appear on report)	Date sampled	Time sampled	Sample matrix	Site location	Containers: # and type	LUFT Diesel, or EPA 8015B DRO	LUFT Gas, or EPA 8015B GRO	Fuel ID (TVH, TEH), Carbon Chain (specify ranges)	8021B: BTEX/MtBE Only	8015 C9-C40	VOCs: 8260B, or 624	VOCs: BTEX/Oxygenates Only	SVOCs: 8270C, or 625	8081A/8082: Pesticides, or PCBs, or Pest/PCB		Metals: Title 22 (CAM), or RCRA, or PP	Metals: TCLP, STLC	pH, TDS, TSS	418.1 (TRPH), or 413.2, or 1664		Remarks/Special Instructions
1	GSO504258	4/25/05	915	soil		4oz					X											
2	GSO504259	4/25/05	917	soil							X											

Turn-Around Time
- ☐ 24 Hr. RUSH*
- ☐ 48 Hr. RUSH*
- ☒ Normal TAT
- ☐ Other _____

*Requires PRIOR approval, additional charges apply

Requested due date: _____

1) Relinquished by: (Sampler's Signature)	Date: 4/25/05	Time: 1630	3) Relinquished by:	Date:	Time:
2) Received by:	Date:	Time:	4) Received by:	Date:	Time:
			5) Relinquished by:	Date:	Time:
The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.			6) Received for Laboratory by:	Date: 4/25/05	Time: 1630

Laboratory Notes:
C9-C12
C13-C22
C23-C40

To be completed by Laboratory personnel:
Samples chilled? ☐ Yes ☐ No ☒ From Field
Custody seals? ☐ Yes ☒ No
All sample containers intact? ☒ Yes ☐ No
☐ Courier ☐ UPS/Fed Ex ☒ Hand carried

Additional Report Formats:
☐ LARWQCB ☐ EDF (Geotracker)
☐ EDD (GISKEY) ☐ EDD (Other)*

Sample Disposal
- ☐ Client will pick up
- ☐ Return to client
- ☐ Lab disposal

Sample Locator No.

Centrum Analytical Laboratories, Inc.
CERTIFIED HAZARDOUS WASTE TESTING MOBILE & IN HOUSE LABORATORIES

Client: Brycon, LLC
4570 Campus Drive
Newport Beach, CA 92660

Date Sampled: 04/26/05
Date Received: 04/26/05
Job Number: 26185

Project: Field Lease North

CASE NARRATIVE

The following information applies to samples which were received on 04/26/05:

The samples were received at the laboratory directly from the field and were cooled to 4ºC upon arrival. The sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested. The date of issue for this report is 05/10/05.

Report approved by:

Tom Wilson
Laboratory Director

ELAP Lab# 2419, 2479, 2527, 2373, 2562

RL: Reporting Limit -- The lowest level at which the compound can be reliably detected under normal laboratory conditions.
ND: Not Detected -- The compound was analyzed for, but was not found to be present at or above the Reporting Limit.
NA: Not Analyzed -- This compound was not on the list of compounds requested for analysis.

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Centrum Analytical Laboratories, Inc.

Metals by EPA 6010B and EPA 7471A

Client:	Brycon, LLC	Date Sampled:	04/26/05
Project:	Field Lease North	Date Received:	04/26/05
Job No:	26185	Date Digested:	04/28/05
Matrix:	Soil	Date Analyzed:	04/29/05
Analyst:	TLB	Batch Number:	6010S3327
			7471S1205

		Sample ID:	Blank	GS05042611
Metals	**Method**	**RL**	mg/Kg	mg/Kg
Antimony	6010B	5.0	ND	ND
Arsenic	6010B	1.0	ND	**4.3**
Barium	6010B	0.50	ND	**130**
Beryllium	6010B	0.50	ND	ND
Cadmium	6010B	0.50	ND	ND
Chromium	6010B	0.50	ND	**11**
Cobalt	6010B	0.50	ND	**4.7**
Copper	6010B	2.0	ND	**6.4**
Lead	6010B	1.0	ND	**7.9**
Molybdenum	6010B	5.0	ND	ND
Nickel	6010B	1.0	ND	**6.8**
Selenium	6010B	5.0	ND	ND
Silver	6010B	2.0	ND	ND
Thallium	6010B	5.0	ND	ND
Vanadium	6010B	5.0	ND	**18**
Zinc	6010B	10	ND	**27**
Mercury	7471A	0.02	ND	**0.02**

Centrum Analytical Laboratories, Inc.

QC Sample Report - Metals by EPA 6010B and EPA 7471A

Matrix: Soil

Metals by EPA 6010B

Batch Number: 6010S3327
Spike Sample ID: Laboratory Control Sample
MS/MSD Sample ID: 26186-12

	Batch Accuracy Results				Batch Precision Results				
Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Antimony	50	**118**	75 - 125	**Pass**	59.42	60.68	**2%**	20%	**Pass**
Arsenic	50	**107**	75 - 125	**Pass**	59.94	69.28	**14%**	20%	**Pass**
Barium	50	**105**	75 - 125	**Pass**	161.5	161.0	**0%**	20%	**Pass**
Beryllium	50	**101**	75 - 125	**Pass**	51.80	51.49	**1%**	20%	**Pass**
Cadmium	50	**101**	75 - 125	**Pass**	48.80	48.67	**0%**	20%	**Pass**
Chromium	50	**102**	75 - 125	**Pass**	65.68	65.31	**1%**	20%	**Pass**
Cobalt	50	**103**	75 - 125	**Pass**	54.43	55.16	**1%**	20%	**Pass**
Copper*	50	**102**	75 - 125	**Pass**	51.15	53.38	**4%**	20%	**Pass**
Lead	50	**102**	75 - 125	**Pass**	64.30	65.03	**1%**	20%	**Pass**
Molybdenum	50	**100**	75 - 125	**Pass**	47.47	48.84	**3%**	20%	**Pass**
Nickel	50	**104**	75 - 125	**Pass**	59.12	60.65	**3%**	20%	**Pass**
Selenium	50	**102**	75 - 125	**Pass**	51.01	51.65	**1%**	20%	**Pass**
Silver**	50	**96**	75 - 125	**Pass**	48.16	47.68	**1%**	20%	**Pass**
Thallium	50	**104**	75 - 125	**Pass**	48.10	48.20	**0%**	20%	**Pass**
Vanadium	50	**101**	75 - 125	**Pass**	83.28	90.44	**8%**	20%	**Pass**
Zinc	50	**104**	75 - 125	**Pass**	146.4	146.5	**0%**	20%	**Pass**

Analytical Notes:

*Unable to use the MS/MSD pair for this analyte due to sample matrix; the LCS/LCSD pair was used to provide precision data for this analytical batch.

**The MS Sample was used to provide accuracy data for this compound in this analytical batch.

Mercury by EPA 7471A

Batch Number: 7471S1205
Spike Sample ID: Laboratory Control Sample
MS/MSD Sample ID: 26186-12

	Batch Accuracy Results				Batch Precision Results				
Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Mercury	0.42	**100**	75 - 125	**Pass**	0.592	0.592	**0%**	20%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum
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C6 to C40 Hydrocarbons by GCMS and GC/FID

Client:	Brycon, LLC	Date Sampled:	04/26/05
Project:	Field Lease North	Date Received:	04/26/05
Job No.:	26185	Batch Number:	SH2GASS292
Matrix:	Soil		8015DS3454
Analyst:	RV / AW		

Carbon Chain Length:	C6-C12	C13-C22	C23-C40
Reporting Limits:	0.50	10	20
Units:	mg/Kg	mg/Kg	mg/Kg
Method Blank	ND	ND	ND
GS0504269	ND	ND	ND
GS05042610	ND	ND	ND
GS05042611	ND	**20**	**100**
Method:	GC/FID	GC/FID	GC/FID
Date Extracted:	N/A	04/29/05	04/29/05
Date Analyzed:	04/27/05	04/29-30/05	04/29-30/05

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QC Sample Report - Extractable Hydrocarbons as Diesel by GC/FID

Matrix: Soil
Batch Number: 8015DS3454

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Diesel	100	**84**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: GS0504269

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Diesel	93.4	86.7	**7%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum
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Laboratories, Inc.

QC Sample Report - Volatile Hydrocarbons as Gasoline by GC/FID

Matrix: Soil
Batch Number: SH2GASS292

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Gasoline	5.0	**102**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: GS05042611

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Gasoline	5.25	5.36	**2%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum Analytical Laboratories, Inc.

Organochlorine Pesticides and PCB's by EPA 8081A/8082

Client:	Brycon, LLC	Date Sampled:	04/26/05
Project:	Field Lease North	Date Received:	04/26/05
Job No.:	26185	Date Extracted:	04/28/05
Matrix:	Soil	Date Analyzed:	04/28-29/05
Analyst:	SEC	Batch Number:	PESTS0873

	Sample ID:	Blank	GS05042611
Pesticides	**RL***	mg/Kg	mg/Kg
Aldrin	0.020	ND	ND
Alpha-BHC	0.020	ND	ND
Beta-BHC	0.020	ND	ND
Delta-BHC	0.020	ND	ND
Gamma-BHC (Lindane)	0.020	ND	ND
Chlordane	0.20	ND	ND
4,4'-DDD	0.040	ND	ND
4,4'-DDE	0.040	ND	ND
4,4'-DDT	0.040	ND	ND
Dieldrin	0.040	ND	ND
Endosulfan I	0.020	ND	ND
Endosulfan II	0.040	ND	ND
Endosulfan sulfate	0.040	ND	ND
Endrin	0.040	ND	ND
Endrin Aldehyde	0.040	ND	ND
Endrin Ketone	0.20	ND	ND
Heptachlor	0.020	ND	ND
Heptachlor Epoxide	0.020	ND	ND
Methoxychlor	0.20	ND	ND
Toxaphene	0.40	ND	ND
PCB's			
Aroclor-1016	1.0	ND	ND
Aroclor-1221	1.0	ND	ND
Aroclor-1232	1.0	ND	ND
Aroclor-1242	1.0	ND	ND
Aroclor-1248	1.0	ND	ND
Aroclor-1254	1.0	ND	ND
Aroclor-1260	1.0	ND	ND

*The sample was analyzed at a dilution due to sample matrix effects; consequently, Reporting Limits were raised.

Surrogates in % Recovery (Acceptance Limits: 50 - 150%)

	Sample ID:	Blank	GS05042611
Tetrachloro-m-xylene		75	100

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QC Sample Report - Organochlorine Pesticides and PCBs by EPA 8081A/8082

Matrix: Soil
Batch Number: PESTS0873

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Analytical Notes:

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Lindane	0.0067	**90**	71 - 124	**Pass**
Heptachlor	0.0067	**101**	87 - 132	**Pass**
Aldrin	0.0067	**101**	78 - 125	**Pass**
Dieldrin	0.026	**92**	85 - 113	**Pass**
Endrin	0.026	**96**	84 - 125	**Pass**
DDT	0.026	**93**	88 - 119	**Pass**
Aroclor 1016	0.133	**82**	70 - 130	**Pass**

Batch Precision Results

MS/MSD Sample ID: Laboratory Control Sample

Analytical Notes:

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Lindane	0.0060	0.0056	**7%**	25%	**Pass**
Heptachlor	0.0067	0.0061	**9%**	25%	**Pass**
Aldrin	0.0067	0.0065	**3%**	25%	**Pass**
Dieldrin	0.0244	0.0230	**6%**	25%	**Pass**
Endrin	0.0256	0.0248	**3%**	25%	**Pass**
DDT	0.0247	0.0238	**4%**	25%	**Pass**
Arolclor 1016	0.109	0.115	**5%**	25%	**Pass**

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum Analytical Laboratories, Inc.

Volatile Organic Compounds by EPA 8260B

Client:	Brycon, LLC	Date Sampled:	04/26/05
Project:	Field Lease North	Date Received:	04/26/05
Job No.:	26185	Date Analyzed:	05/02/05
Matrix:	Soil	Batch Number:	SH18260S226
Analyst:	RCG		

	Sample ID:	Blank	GS05042611
Compounds	**RL**	mg/Kg	mg/Kg
Acetone	0.050	ND	ND
tert-Amyl Methyl Ether (TAME)	0.005	ND	ND
Benzene	0.001	ND	ND
Bromobenzene	0.005	ND	ND
Bromochloromethane	0.005	ND	ND
Bromodichloromethane	0.001	ND	ND
Bromoform	0.005	ND	ND
Bromomethane	0.005	ND	ND
tert-Butanol (TBA)	0.020	ND	ND
2-Butanone (MEK)	0.010	ND	ND
n-Butylbenzene	0.002	ND	ND
sec-Butylbenzene	0.002	ND	ND
tert-Butylbenzene	0.002	ND	ND
Carbon disulfide	0.010	ND	ND
Carbon tetrachloride	0.001	ND	ND
Chlorobenzene	0.001	ND	ND
Chloroethane	0.005	ND	ND
Chloroform	0.002	ND	ND
Chloromethane	0.001	ND	ND
2-Chlorotoluene	0.002	ND	ND
4-Chlorotoluene	0.002	ND	ND
Dibromochloromethane	0.002	ND	ND
1,2-Dibromoethane	0.002	ND	ND
1,2-Dibromo-3-chloropropane	0.010	ND	ND
Dibromomethane	0.001	ND	ND
1,2-Dichlorobenzene	0.001	ND	ND
1,3-Dichlorobenzene	0.002	ND	ND
1,4-Dichlorobenzene	0.002	ND	ND
Dichlorodifluoromethane	0.005	ND	ND
1,1-Dichloroethane	0.001	ND	ND
1,2-Dichloroethane	0.001	ND	ND
1,1-Dichloroethene	0.005	ND	ND
cis-1,2-Dichloroethene	0.002	ND	ND
trans-1,2-Dichloroethene	0.002	ND	ND
1,2-Dichloropropane	0.001	ND	ND
1,3-Dichloropropane	0.001	ND	ND
2,2-Dichloropropane	0.001	ND	ND
1,1-Dichloropropene	0.001	ND	ND

Centrum Analytical Laboratories, Inc.

Volatile Organic Compounds by EPA 8260B

Client:	Brycon, LLC	Date Sampled:	04/26/05
Project:	Field Lease North	Date Received:	04/26/05
Job No.:	26185	Date Analyzed:	05/02/05
Matrix:	Soil	Batch Number:	SH18260S226
Analyst:	RCG		

	Sample ID:	Blank	GS05042611
Compounds	**RL**	mg/Kg	mg/Kg
cis-1,3-Dichloropropene	0.001	ND	ND
trans-1,3-Dichloropropene	0.001	ND	ND
Diisopropyl Ether (DIPE)	0.005	ND	ND
Ethylbenzene	0.001	ND	ND
Ethyl tert-Butyl Ether (EtBE)	0.005	ND	ND
Hexachlorobutadiene	0.001	ND	ND
2-Hexanone	0.010	ND	ND
Isopropylbenzene	0.001	ND	ND
p-Isopropyltoluene	0.002	ND	ND
Methylene chloride	0.050	ND	ND
4-Methyl-2-pentanone	0.010	ND	ND
Methyl tert-Butyl Ether (MtBE)	0.005	ND	ND
Naphthalene	0.002	ND	ND
n-Propylbenzene	0.001	ND	ND
Styrene	0.001	ND	ND
1,1,1,2-Tetrachloroethane	0.001	ND	ND
1,1,2,2-Tetrachloroethane	0.002	ND	ND
Tetrachloroethene	0.001	ND	ND
Toluene	0.001	ND	ND
1,2,3-Trichlorobenzene	0.002	ND	ND
1,2,4-Trichlorobenzene	0.002	ND	ND
1,1,1-Trichloroethane	0.001	ND	ND
1,1,2-Trichloroethane	0.003	ND	ND
Trichloroethene	0.001	ND	ND
1,2,3-Trichloropropane	0.003	ND	ND
Trichlorofluoromethane	0.001	ND	ND
Trichlorotrifluoroethane	0.005	ND	ND
1,2,4-Trimethylbenzene	0.001	ND	ND
1,3,5-Trimethylbenzene	0.001	ND	ND
Vinyl chloride	0.002	ND	ND
Xylenes, m-,p-	0.002	ND	ND
Xylene, o-	0.001	ND	ND

Surrogates in % Recovery (Acceptance Limits: 70 - 130%)

	Sample ID:	Blank	GS05042611
Dibromofluoromethane		102	115
Toluene-d8		104	95
Bromofluorobenzene		102	86

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QC Sample Report - Volatile Organic Compounds by EPA 8260B

Matrix: Soil
Batch Number: SH18260S226

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Analytical Notes:

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
1,1-Dichloroethene	0.050	**105**	70 - 130	**Pass**
Benzene	0.050	**86**	70 - 130	**Pass**
Trichloroethene	0.050	**95**	70 - 130	**Pass**
Toluene	0.050	**91**	70 - 130	**Pass**
Chlorobenzene	0.050	**95**	70 - 130	**Pass**

Batch Precision Results

MS/MSD Sample ID: Laboratory Control Sample

Analytical Notes:

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
1,1-Dichloroethene	0.0526	0.0537	**2%**	25%	**Pass**
Benzene	0.0435	0.0372	**16%**	25%	**Pass**
Trichloroethene	0.0476	0.0409	**15%**	25%	**Pass**
Toluene	0.0458	0.0401	**13%**	25%	**Pass**
Chlorobenzene	0.0475	0.0402	**17%**	25%	**Pass**

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum Analytical Laboratories, Inc.

Semivolatile Organic Compounds by EPA 8270C

Client:	Brycon, LLC	Date Sampled:	04/26/05
Project:	Field Lease North	Date Received:	04/26/05
Job No.:	26185	Date Extracted:	05/05-06/05
Matrix:	Soil	Date Analyzed:	05/06-07/05
Analyst:	SEC	Batch Number:	8270S1028

	Sample ID:	Blank	GS05042611
Compound	**RL***	mg/Kg	mg/Kg
Acenaphthene	0.17	ND	ND
Acenaphthylene	0.17	ND	ND
Anthracene	0.17	ND	ND
Benzo[a]anthracene	0.33	ND	ND
Benzo[a]pyrene	0.17	ND	ND
Benzo[b]fluoranthene	0.17	ND	ND
Benzo[g,h,i]perylene	0.50	ND	ND
Benzo[k]fluoranthene	0.17	ND	ND
Benzyl alcohol	0.65	ND	ND
bis(2-Chloroethoxy)methane	0.33	ND	ND
bis(2-Chloroethyl)ether	0.33	ND	ND
bis(2-Chloroisopropyl)ether	0.50	ND	ND
bis(2-Ethylhexyl)phthalate	1.7	ND	ND
4-Bromophenylphenylether	0.17	ND	ND
Butylbenzylphthalate	0.17	ND	ND
4-Chloro-3-methylphenol	0.80	ND	ND
4-Chloroaniline	0.80	ND	ND
2-Chloronaphthalene	0.17	ND	ND
2-Chlorophenol	0.65	ND	ND
4-Chlorophenylphenylether	0.17	ND	ND
Chrysene	0.17	ND	ND
Di-n-butylphthalate	1.7	ND	ND
Di-n-octylphthalate	0.17	ND	ND
Dibenzo[a,h]anthracene	0.50	ND	ND
Dibenzofuran	0.17	ND	ND
1,2-Dichlorobenzene	0.17	ND	ND
1,3-Dichlorobenzene	0.17	ND	ND
1,4-Dichlorobenzene	0.17	ND	ND
3,3-Dichlorobenzidine	0.65	ND	ND
2,4-Dichlorophenol	0.80	ND	ND
Diethylphthalate	1.7	ND	ND
2,4-Dimethylphenol	0.50	ND	ND
Dimethylphthalate	0.17	ND	ND
4,6-Dinitro-2-methylphenol	1.7	ND	ND
2,4-Dinitrophenol	8.0	ND	ND
2,4-Dinitrotoluene	0.17	ND	ND

*The sample was analyzed at a dilution due to sample matrix effects; consequently, Reporting Limits were raised.

Centrum Analytical Laboratories, Inc.

Semivolatile Organic Compounds by EPA 8270C

Client:	Brycon, LLC	Date Sampled:	04/26/05
Project:	Field Lease North	Date Received:	04/26/05
Job No.:	26185	Date Extracted:	05/05-06/05
Matrix:	Soil	Date Analyzed:	05/06-07/05
Analyst:	SEC	Batch Number:	8270S1028

	Sample ID:	Blank	GS05042611
Compound	**RL***	mg/Kg	mg/Kg
2,6-Dinitrotoluene	0.50	ND	ND
Fluoranthene	0.17	ND	ND
Fluorene	0.17	ND	ND
Hexachlorobenzene	0.17	ND	ND
Hexachlorobutadiene	0.17	ND	ND
Hexachlorocyclopentadiene	8.0	ND	ND
Hexachloroethane	0.17	ND	ND
Indeno[1,2,3-c,d]pyrene	0.65	ND	ND
Isophorone	0.17	ND	ND
2-Methylnaphthalene	0.17	ND	ND
2-Methylphenol	0.80	ND	ND
4-Methylphenol	0.80	ND	ND
N-Nitrosodi-n-propylamine	0.17	ND	ND
N-Nitrosodiphenylamine	0.17	ND	ND
Naphthalene	0.17	ND	ND
2-Nitroaniline	0.50	ND	ND
3-Nitroaniline	0.50	ND	ND
4-Nitroaniline	1.7	ND	ND
Nitrobenzene	0.50	ND	ND
2-Nitrophenol	0.65	ND	ND
4-Nitrophenol	1.7	ND	ND
Pentachlorophenol	8.0	ND	ND
Phenanthrene	0.33	ND	ND
Phenol	0.65	ND	ND
Pyrene	0.17	ND	ND
1,2,4-Trichlorobenzene	0.17	ND	ND
2,4,5-Trichlorophenol	1.0	ND	ND
2,4,6-Trichlorophenol	1.7	ND	ND

*The sample was analyzed at a dilution due to sample matrix effects; consequently, Reporting Limits were raised.

Surrogates in % Recovery (Acceptance Limits)

Sample ID:	Blank	GS05042611
2-Fluorophenol (25 - 121%)	90	84
Phenol-D5 (24 - 113%)	97	88
Nitrobenzene-D5 (23 - 120%)	87	72
2-Fluorobiphenyl (30 - 115%)	90	91
2,4,6-Tribromophenol (19 - 122%)	81	76
p-Terphenyl-D14 (18 - 137%)	101	108

Centrum Analytical Laboratories,

QC Sample Report - Semivolatile Organic Compounds by EPA 8270C

Matrix: Soil
Batch Number: 8270S1028

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Analytical Notes:

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Phenol	2.66	**91**	5 - 112	**Pass**
2-Chlorophenol	2.66	**95**	23 - 134	**Pass**
1,4-Dichlorobenzene	1.33	**92**	20 - 124	**Pass**
N-Nitrosodi-n-propylamine	1.33	**111**	0 - 230	**Pass**
1,2,4-Trichlorobenzene	1.33	**89**	44 - 142	**Pass**
4-Chloro-3-Methylphenol	2.66	**91**	22 - 147	**Pass**
Acenaphthene	1.33	**99**	47 - 145	**Pass**
4-Nitrophenol	2.66	**89**	0 - 132	**Pass**
2,4-Dinitrotoluene	1.33	**99**	39 - 139	**Pass**
Pentachlorophenol	2.66	**76**	14 - 176	**Pass**
Pyrene	1.33	**97**	52 - 115	**Pass**

Batch Precision Results

MS/MSD Sample ID: Laboratory Control Sample

Analytical Notes:

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Phenol	2.43	2.67	**9%**	35%	**Pass**
2-Chlorophenol	2.54	2.78	**9%**	50%	**Pass**
1,4-Dichlorobenzene	1.23	1.34	**8%**	27%	**Pass**
N-Nitrosodi-n-propylamine	1.48	1.65	**11%**	38%	**Pass**
1,2,4-Trichlorobenzene	1.19	1.31	**10%**	28%	**Pass**
4-Chloro-3-Methylphenol	2.43	2.69	**10%**	33%	**Pass**
Acenaphthene	1.32	1.47	**10%**	23%	**Pass**
4-Nitrophenol	2.37	2.56	**8%**	50%	**Pass**
2,4-Dinitrotoluene	1.32	1.44	**8%**	47%	**Pass**
Pentachlorophenol	2.03	2.29	**12%**	47%	**Pass**
Pyrene	1.30	1.42	**9%**	36%	**Pass**

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum Analytical Laboratories, Inc.

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Chain of Custody Record

Centrum Job # 26185

Project No:

Project Name: Field Lease North

Project Manager: GBP

Phone: 949 475 7749

Fax:

Client Name: (Report and Billing) Brycon, LLC

Address: (Report and Billing) 4570 Campus Dr. Newport Beach, CA

Please Circle Analyses Requested

Centrum ID (Lab use only)	Sample ID (As it should appear on report)	Date sampled	Time sampled	Sample matrix	Site location	Containers: # and type	LUFT Diesel, or EPA 8015B DRO	LUFT Gas, or EPA 8015B GRO	Fuel ID (TVH, TEH), Carbon Chain (specify ranges)	8021B: BTEX/MBE Only		VOCs: 8260B or 624	VOCs: BTEX/Oxygenates Only	SVOCs: 8270C or 625	8081A/8082: Pesticides, or PCBs, or Pest/PCB		Metals: (Title 22 CAM), or RCRA, or PP	Metals: TCLP, STLC	pH, TDS, TSS	418.1 (TRPH), or 413.2, or 1664	
1	GSO504269	4/26/05	750	soil		4oz										X					
2	GSO504260	4/26/05	755	Soil		4oz										X					
3	GSO504261	4/26/05	1415	soil		8oz						X		X	X	X	X				

Turn-Around Time

- ☐ 24 Hr. RUSH*
- ☐ 48 Hr. RUSH*
- ☒ Normal TAT
- ☐ Other _____

*Requires PRIOR approval, additional charges apply

Requested due date: _____

Remarks/Special Instructions

	Date:	Time:
1) Relinquished by: (Sampler's Signature)	4/26/05	1635
2) Received by:		
3) Relinquished by:		
4) Received by:		
5) Relinquished by:		
6) Received for Laboratory by:	4/26/05	1635

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

Laboratory Notes:

To be completed by Laboratory personnel:

Samples chilled? ☐ Yes ☐ No ☒ From Field

Custody seals? ☐ Yes ☒ No

All sample containers intact? ☒ Yes ☐ No

☐ Courier ☐ UPS/Fed Ex ☒ Hand carried

Additional Report Formats:

☐ LARWQCB ☐ EDF (Geotracker)

☐ EDD (GISKEY) ☐ EDD (Other)*

Sample Disposal

- ☐ Client will pick up
- ☐ Return to client
- ☒ Lab disposal

Sample Locator No.

J

(Accompanies Samples) Yellow Copy - Centrum Files Pink Copy - Centrum duplicate Gold Copy - Client Copy

Centrum Analytical Laboratories, Inc.
CERTIFIED HAZARDOUS WASTE TESTING MOBILE & IN HOUSE LABORATORIES

Client: Brycon, LLC
4570 Campus Drive
Newport Beach, CA 92660

Date Sampled: 05/09/05
Date Received: 05/09/05
Job Number: 26255

Project: Fields Lease North

CASE NARRATIVE

The following information applies to samples which were received on 05/09/05:

The samples were received at the laboratory directly from the field and were cooled to 4°C upon arrival. The sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested. The date of issue for this report is 05/17/05.

Report approved by:

Tom Wilson

Tom Wilson
Laboratory Director

ELAP Lab# 2419, 2479, 2527, 2373, 2562

RL: Reporting Limit -- The lowest level at which the compound can be reliably detected under normal laboratory conditions.
ND: Not Detected -- The compound was analyzed for, but was not found to be present at or above the Reporting Limit.
NA: Not Analyzed -- This compound was not on the list of compounds requested for analysis.

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Centrum
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Laboratories, Inc.

C9 to C40 Hydrocarbons by GC/FID

Client:	Brycon, LLC	Date Sampled:	05/09/05
Project:	Fields Lease North	Date Received:	05/09/05
Job No.:	26255	Batch Number:	8015DS3461
Matrix:	Soil		
Analyst:	AW		

Carbon Chain Length:	C9-C12	C13-C22	C23-C40
Reporting Limits:	10	10	20
Units:	mg/Kg	mg/Kg	mg/Kg
Method Blank	ND	ND	ND
CC0505091	ND	**21**	**63**
CC0505092	ND	**64**	**240**
CC0505093	ND	**49**	**100**
CC0505094	ND	**35**	**120**
CC0505095	ND	**42**	**120**
Method:	GC/FID	GC/FID	GC/FID
Date Extracted:	05/10/05	05/10/05	05/10/05
Date Analyzed:	05/13/05	05/13/05	05/13/05

Centrum
Analytical
Laboratories, Inc.

QC Sample Report - Extractable Hydrocarbons as Diesel by GC/FID

Matrix: Soil
Batch Number: 8015DS3461

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Diesel	100	**92**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: Laboratory Control Sample

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Diesel	92.0	90.1	**2%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum Analytical Laboratories, Inc.

Chain of Custody Record

Centrum Job # 26255

1401 Research Park Drive, Suite 100
Riverside, CA 92507
Voice: 951.779.0310 ● 800.798.9336
Fax: 951.779.0344

3299 Hill Street, Suite 305
Signal Hill, CA 90755
Voice: 562.498.7005
Fax: 562.498.8617

www.centrum-labs.com lab@centrum-labs.com

Project No:

Project Name: FIELDS LEASE NORTH

Project Manager: GEORGE PASPALOF

Phone:

Fax:

Client Name: (Report and Billing) BEYCON

Address: (Report and Billing)

Please Circle Analyses Requested

Centrum ID (Lab use only)	Sample ID (As it should appear on report)	Date sampled	Time sampled	Sample metrix	Site location	Containers: # and type	LUFT Diesel, or EPA 8015B DRO	LUFT Gas, or EPA 8015B GRO	Fuel ID (TVH, TEH), Carbon Chain (specify ranges)	8021B: BTEX/MtBE Only	VOCs: 8260B, or 624	VOCs: BTEX/Oxygenates Only	SVOCs: 8270C, or 625	8081A/8082: Pesticides, or PCBs, or Pest/PCB	Metals: Title 22 (CAM), or RCRA, or PP	Metals: TCLP, STLC	pH, TDS, TSS	418.1 (TRPH), or 413.2, or 1664	Remarks/Special Instructions
1	CC0505091	5/9	0730	S	F, L, N	1, 40Z			X										C9 - C12
2	CC0505092	5/9	0745	S	F, L, N	1, 40Z			X										C13 - C22
3	CC0505093	5/9	0800	S	F, L, N	1, 40Z			X										C23 - C40
4	CC0505094	5/9	0830	S	F, L, N	1, 40Z			X										
5	CC0505095	5/9	0845	S	F, L, N	1, 40Z			X										

Turn-Around Time

- ☐ 24 Hr. RUSH*
- ☐ 48 Hr. RUSH*
- ☑ Normal TAT
- ☐ Other _____

*Requires PRIOR approval, additional charges apply

Requested due date: _____

Remarks/Special Instructions

	Date:	Time:
1) Relinquished by: (Sampler's Signature)	5/9	1000
2) Received by:		
3) Relinquished by:		
4) Received by:		
5) Relinquished by:		
6) Received for Laboratory by:	5/9	1000

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

Laboratory Notes:

To be completed by Laboratory personnel:

Samples chilled? ☐ Yes ☐ No ☑ From Field

Custody seals? ☐ Yes ☒ No

All sample containers intact? ☑ Yes ☐ No

☐ Courier ☐ UPS/Fed Ex ☒ Hand carried

Additional Report Formats:

☐ LARWQCB ☐ EDF (Geotracker)

☐ EDD (GISKEY) ☐ EDD (Other)*

Sample Disposal

- ☐ Client will pick up
- ☐ Return to client
- ☒ Lab disposal

Sample Locator No.

N

White Copy - Original (Accompanies Samples) Yellow Copy - Centrum Files Pink Copy - Centrum duplicate Gold Copy - Client Copy

v7.1 9/04 coc-temp-both-0904.xls

Centrum
Analytical
Laboratories, Inc.
CERTIFIED HAZARDOUS WASTE TESTING MOBILE & IN HOUSE LABORATORIES

Client:	Brycon, LLC 4570 Campus Drive Newport Beach, CA 92660	Date Sampled: Date Received: Job Number:	01/17/08 01/17/08 30718
Project:	Fields Lease North		

CASE NARRATIVE

The following information applies to samples which were received on 01/17/08:

The samples were received at the laboratory directly from the field and were cooled to 4ºC upon arrival. The sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested. The date of issue for this report is 01/25/08.

Report approved by:

Robert R. Clark, PhD
President

ELAP Lab# 2419, 2479, 2527, 2373, 2562

RL: Reporting Limit -- The lowest level at which the compound can be reliably detected under normal laboratory conditions.
ND: Not Detected -- The compound was analyzed for, but was not found to be present at or above the Reporting Limit.
NA: Not Analyzed -- This compound was not on the list of compounds requested for analysis.

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Centrum Analytical Laboratories, Inc.

Metals by EPA 6010B and EPA 7471A

Client:	Brycon, LLC	Date Sampled:	01/17/08
Project:	Fields Lease North	Date Received:	01/17/08
Job No:	30718	Date Digested:	07/23/08
Matrix:	Soil	Date Analyzed:	07/23/08
Analyst:	TLB	Batch Number:	6010S4194
			7471S1690

		Sample ID:	Blank	CS0801172
Metals	**Method**	**RL**	mg/Kg	mg/Kg
Antimony	6010B	5.0	ND	ND
Arsenic	6010B	1.0	ND	**2.49**
Barium	6010B	0.50	ND	**44.2**
Beryllium	6010B	0.50	ND	ND
Cadmium	6010B	0.50	ND	ND
Chromium	6010B	0.50	ND	**10.7**
Cobalt	6010B	0.50	ND	**4.33**
Copper	6010B	1.0	ND	**6.60**
Lead	6010B	1.0	ND	**2.44**
Molybdenum	6010B	5.0	ND	ND
Nickel	6010B	1.0	ND	**6.36**
Selenium	6010B	5.0	ND	ND
Silver	6010B	2.0	ND	ND
Thallium	6010B	10	ND	ND
Vanadium	6010B	5.0	ND	**18.2**
Zinc	6010B	10	ND	**22.7**
Mercury	7471A	0.02	ND	ND

Centrum Analytical Laboratories, Inc.

QC Sample Report - Metals by EPA 6010B and EPA 7471A

Sample Matrix: Soil

Metals by EPA 6010B

Analytical Batch #: 6010S4194
Spike Sample ID: Laboratory Control Sample
MS/MSD Sample ID: 30711-1

Analytical Notes:

	Batch Accuracy Results:				Batch Precision Results:				
Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limits	Pass/Fail
Antimony	50.0	**112**	75 - 125	**Pass**	43.05	42.21	**2%**	20%	**Pass**
Arsenic	50.0	**99**	75 - 125	**Pass**	42.22	41.97	**1%**	20%	**Pass**
Barium	50.0	**100**	75 - 125	**Pass**	178.03	178.11	**0%**	20%	**Pass**
Beryllium	50.0	**104**	75 - 125	**Pass**	42.57	41.25	**3%**	20%	**Pass**
Cadmium	50.0	**101**	75 - 125	**Pass**	37.58	37.33	**1%**	20%	**Pass**
Chromium	50.0	**100**	75 - 125	**Pass**	62.49	62.11	**1%**	20%	**Pass**
Cobalt	50.0	**100**	75 - 125	**Pass**	45.64	44.73	**2%**	20%	**Pass**
Copper	50.0	**103**	75 - 125	**Pass**	71.05	70.46	**1%**	20%	**Pass**
Lead	50.0	**99**	75 - 125	**Pass**	40.76	39.97	**2%**	20%	**Pass**
Molybdenum	50.0	**100**	75 - 125	**Pass**	38.36	37.61	**2%**	20%	**Pass**
Nickel	50.0	**101**	75 - 125	**Pass**	52.65	52.53	**0%**	20%	**Pass**
Selenium	50.0	**106**	75 - 125	**Pass**	42.44	41.55	**2%**	20%	**Pass**
Silver	50.0	**84**	75 - 125	**Pass**	34.51	34.21	**1%**	20%	**Pass**
Thallium	50.0	**102**	75 - 125	**Pass**	33.82	34.72	**3%**	20%	**Pass**
Vanadium	50.0	**100**	75 - 125	**Pass**	77.39	76.87	**1%**	20%	**Pass**
Zinc	50.0	**109**	75 - 125	**Pass**	109.57	108.75	**1%**	20%	**Pass**

Mercury by EPA 7471A

Batch Number: 7471S1690
Spike Sample ID: Laboratory Control Sample
MS/MSD Sample ID: 30711-1

Analytical Notes:

	Batch Accuracy Results				Batch Precision Results				
Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limit	Pass/Fail	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Mercury	0.42	**88**	75 - 125	**Pass**	0.432	0.439	**2%**	20%	**Pass**

MS: Matrix Spike LCS: Laboratory Control Sample
MSD: Matrix Spike Duplicate LCSD: Laboratory Control Sample Duplicate

Centrum Analytical Laboratories, Inc.

C6 to C40 Hydrocarbons by GC/FID

Client:	Brycon, LLC	Date Sampled:	01/17/08
Project:	Fields Lease North	Date Received:	01/17/08
Job No.:	30718	Batch Number:	SH2TPHGS603
Matrix:	Soil		8015DS4257
Analyst:	RV / AW		

Carbon Chain Length:	C6-C12	C12-C22	C22-C40
Reporting Limits:	0.50	10	20
Units:	mg/Kg	mg/Kg	mg/Kg
Method Blank	ND	ND	ND
CS0801171	ND	**26**	**87**
CS0801172	**0.54**	**190**	**120**
CS0801173	ND	**110**	**140**
CS0801174	ND	**70**	**78**
Method:	GC/FID	GC/FID	GC/FID
Date Extracted:	N/A	01/21/08	01/21/08
Date Analyzed:	01/18-21/08	01/21-22/08	01/21-22/08

Centrum Analytical Laboratories, Inc.

QC Sample Report - Extractable Hydrocarbons as Diesel by GC/FID

Matrix: Soil
Batch Number: 8015DS4257

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Diesel	100	**93**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: 30715-1

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Diesel	91.4	88.9	**3%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum Analytical Laboratories, Inc.

QC Sample Report - Volatile Hydrocarbons as Gasoline by GC/FID

Matrix: Soil
Batch Number: SH2TPHGS603

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Gasoline	5.0	**107**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: CS0801174

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Gasoline	4.26	4.21	**1%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum Analytical Laboratories, Inc.

Organochlorine Pesticides and PCB's by EPA 8081A/8082

Client:	Brycon, LLC	Date Sampled:	01/17/08
Project:	Fields Lease North	Date Received:	01/17/08
Job No.:	30718	Date Extracted:	01/23/08
Matrix:	Soil	Date Analyzed:	01/23/08
Analyst:	FSM	Batch Number:	PESTPCBS1265

	Sample ID:	Blank	CS0801171
Pesticides	**RL**	mg/Kg	mg/Kg
Aldrin	0.005	ND	ND
Alpha-BHC	0.005	ND	ND
Beta-BHC	0.005	ND	ND
Delta-BHC	0.005	ND	ND
Gamma-BHC (Lindane)	0.005	ND	ND
Chlordane	0.050	ND	ND
4,4'-DDD	0.010	ND	ND
4,4'-DDE	0.010	ND	ND
4,4'-DDT	0.010	ND	ND
Dieldrin	0.010	ND	ND
Endosulfan I	0.005	ND	ND
Endosulfan II	0.010	ND	ND
Endosulfan sulfate	0.010	ND	ND
Endrin	0.010	ND	ND
Endrin Aldehyde	0.010	ND	ND
Endrin Ketone	0.050	ND	ND
Heptachlor	0.005	ND	ND
Heptachlor Epoxide	0.005	ND	ND
Methoxychlor	0.050	ND	ND
Toxaphene	0.100	ND	ND
PCB's			
Aroclor-1016	0.250	ND	ND
Aroclor-1221	0.250	ND	ND
Aroclor-1232	0.250	ND	ND
Aroclor-1242	0.250	ND	ND
Aroclor-1248	0.250	ND	ND
Aroclor-1254	0.250	ND	ND
Aroclor-1260	0.250	ND	ND

*The sample was analyzed at a dilution due to sample matrix effects; consequently, Reporting Limits were raised.

Surrogates in % Recovery (Acceptance Limits: 50 - 150%)

	Sample ID:	Blank	CS0801171
Tetrachloro-m-xylene		100	91

Centrum Analytical Laboratories, Inc.

QC Sample Report - Organochlorine Pesticides and PCBs by EPA 8081A/8082

Matrix: Soil
Batch Number: PESTPCBS1265

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Lindane	0.0067	**89**	61 - 114	**Pass**
Heptachlor	0.0067	**92**	78 - 129	**Pass**
Aldrin	0.0067	**101**	71 - 123	**Pass**
Dieldrin	0.027	**89**	73 - 123	**Pass**
Endrin	0.027	**97**	72 - 133	**Pass**
DDT	0.027	**94**	76 - 128	**Pass**
Aroclor 1016	0.133	**97**	70 - 130	**Pass**

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: Laboratory Control Sample

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Lindane	0.0059	0.0057	**3%**	25%	**Pass**
Heptachlor	0.0061	0.0064	**4%**	25%	**Pass**
Aldrin	0.0068	0.0065	**4%**	25%	**Pass**
Dieldrin	0.0236	0.0250	**6%**	25%	**Pass**
Endrin	0.0258	0.0236	**9%**	25%	**Pass**
DDT	0.0251	0.0236	**6%**	25%	**Pass**
Aroclor 1016	0.130	0.130	**0%**	25%	**Pass**

Analytical Notes:

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum Analytical Laboratories, Inc.

Volatile Organic Compounds by EPA 8260B

Client:	Brycon, LLC	Date Sampled:	01/17/08
Project:	Fields Lease North	Date Received:	01/17/08
Job No.:	30718	Date Analyzed:	01/22/08
Matrix:	Soil	Batch Number:	MS2TPHGS1180
Analyst:	CMR		

	Sample ID:	Blank	LS0801172
Compounds	**RL**	mg/Kg	mg/Kg
Acetone	0.25	ND	ND
tert-Amyl Methyl Ether (TAME)	0.010	ND	ND
Benzene	0.005	ND	ND
Bromobenzene	0.025	ND	ND
Bromochloromethane	0.025	ND	ND
Bromodichloromethane	0.005	ND	ND
Bromoform	0.025	ND	ND
Bromomethane	0.025	ND	ND
tert-Butanol (TBA)	0.10	ND	ND
2-Butanone (MEK)	0.050	ND	ND
n-Butylbenzene	0.010	ND	ND
sec-Butylbenzene	0.010	ND	ND
tert-Butylbenzene	0.010	ND	ND
Carbon disulfide	0.050	ND	ND
Carbon tetrachloride	0.005	ND	ND
Chlorobenzene	0.005	ND	ND
Chloroethane	0.025	ND	ND
Chloroform	0.010	ND	ND
Chloromethane	0.005	ND	ND
2-Chlorotoluene	0.010	ND	ND
4-Chlorotoluene	0.010	ND	ND
Dibromochloromethane	0.010	ND	ND
1,2-Dibromoethane	0.010	ND	ND
1,2-Dibromo-3-chloropropane	0.050	ND	ND
Dibromomethane	0.005	ND	ND
1,2-Dichlorobenzene	0.005	ND	ND
1,3-Dichlorobenzene	0.010	ND	ND
1,4-Dichlorobenzene	0.010	ND	ND
Dichlorodifluoromethane	0.025	ND	ND
1,1-Dichloroethane	0.005	ND	ND
1,2-Dichloroethane	0.005	ND	ND
1,1-Dichloroethene	0.025	ND	ND
cis-1,2-Dichloroethene	0.010	ND	ND
trans-1,2-Dichloroethene	0.010	ND	ND
1,2-Dichloropropane	0.005	ND	ND
1,3-Dichloropropane	0.005	ND	ND
2,2-Dichloropropane	0.005	ND	ND
1,1-Dichloropropene	0.005	ND	ND

Centrum Analytical Laboratories, Inc.

Volatile Organic Compounds by EPA 8260B

Client:	Brycon, LLC	Date Sampled:	01/17/08
Project:	Fields Lease North	Date Received:	01/17/08
Job No.:	30718	Date Analyzed:	01/22/08
Matrix:	Soil	Batch Number:	MS2TPHGS1180
Analyst:	CMR		

	Sample ID:	Blank	LS0801172
Compounds	**RL**	mg/Kg	mg/Kg
cis-1,3-Dichloropropene	0.005	ND	ND
trans-1,3-Dichloropropene	0.005	ND	ND
Diisopropyl Ether (DIPE)	0.010	ND	ND
Ethylbenzene	0.005	ND	ND
Ethyl tert-Butyl Ether (EtBE)	0.010	ND	ND
Hexachlorobutadiene	0.005	ND	ND
2-Hexanone	0.050	ND	ND
Isopropylbenzene	0.005	ND	ND
p-Isopropyltoluene	0.010	ND	ND
Methylene chloride	0.25	ND	ND
4-Methyl-2-pentanone	0.050	ND	ND
Methyl tert-Butyl Ether (MtBE)	0.010	ND	ND
Naphthalene	0.010	ND	**0.062**
n-Propylbenzene	0.005	ND	**0.005**
Styrene	0.005	ND	ND
1,1,1,2-Tetrachloroethane	0.005	ND	ND
1,1,2,2-Tetrachloroethane	0.010	ND	ND
Tetrachloroethene	0.005	ND	ND
Toluene	0.005	ND	ND
1,2,3-Trichlorobenzene	0.010	ND	ND
1,2,4-Trichlorobenzene	0.010	ND	ND
1,1,1-Trichloroethane	0.005	ND	ND
1,1,2-Trichloroethane	0.015	ND	ND
Trichloroethene	0.005	ND	ND
1,2,3-Trichloropropane	0.015	ND	ND
Trichlorofluoromethane	0.005	ND	ND
Trichlorotrifluoroethane	0.025	ND	ND
1,2,4-Trimethylbenzene	0.005	ND	ND
1,3,5-Trimethylbenzene	0.005	ND	ND
Vinyl chloride	0.010	ND	ND
Xylenes, m-,p-	0.010	ND	ND
Xylene, o-	0.005	ND	ND

Surrogates in % Recovery (Acceptance Limits: 70 - 130%)

	Sample ID:	Blank	LS0801172
Dibromofluoromethane		115	117
Toluene-d8		96	110
Bromofluorobenzene		101	118

Centrum Analytical Laboratories, Inc.

QC Sample Report - Volatile Organic Compounds by EPA 8260B

Matrix: Soil
Batch Number: MS28260S1180

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Analytical Notes:

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
1,1-Dichloroethene	0.050	**100**	70 - 130	**Pass**
Benzene	0.050	**96**	70 - 130	**Pass**
Trichloroethene	0.050	**88**	70 - 130	**Pass**
Toluene	0.050	**87**	70 - 130	**Pass**
Chlorobenzene	0.050	**85**	70 - 130	**Pass**

Batch Precision Results

MS/MSD Sample ID: 30723-2

Analytical Notes:

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
1,1-Dichloroethene	0.0513	0.0504	**2%**	25%	**Pass**
Benzene	0.0499	0.0480	**4%**	25%	**Pass**
Trichloroethene	0.0529	0.0501	**5%**	25%	**Pass**
Toluene	0.0445	0.0437	**2%**	25%	**Pass**
Chlorobenzene	0.0411	0.0406	**1%**	25%	**Pass**

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Centrum Analytical Laboratories, Inc.

Semivolatile Organic Compounds by EPA 8270C

Client:	Brycon, LLC	Date Sampled:	01/17/08
Project:	Fields Lease North	Date Received:	01/17/08
Job No.:	30718	Date Extracted:	01/24/08
Matrix:	Soil	Date Analyzed:	01/24/08
Analyst:	FSM	Batch Number:	8270S1203

	Sample ID:	Blank	CS0801172
Compound	**RL**	mg/Kg	mg/Kg
Acenaphthene	0.033	ND	ND
Acenaphthylene	0.033	ND	ND
Anthracene	0.033	ND	ND
Benzo[a]anthracene	0.066	ND	ND
Benzo[a]pyrene	0.033	ND	ND
Benzo[b]fluoranthene	0.033	ND	ND
Benzo[g,h,i]perylene	0.099	ND	ND
Benzo[k]fluoranthene	0.033	ND	ND
Benzyl alcohol	0.13	ND	ND
bis(2-Chloroethoxy)methane	0.066	ND	ND
bis(2-Chloroethyl)ether	0.066	ND	ND
bis(2-Chloroisopropyl)ether	0.099	ND	ND
bis(2-Ethylhexyl)phthalate	0.33	ND	ND
4-Bromophenylphenylether	0.033	ND	ND
Butylbenzylphthalate	0.033	ND	ND
4-Chloro-3-methylphenol	0.16	ND	ND
4-Chloroaniline	0.16	ND	ND
2-Chloronaphthalene	0.033	ND	ND
2-Chlorophenol	0.13	ND	ND
4-Chlorophenylphenylether	0.033	ND	ND
Chrysene	0.033	ND	ND
Di-n-butylphthalate	0.33	ND	ND
Di-n-octylphthalate	0.033	ND	ND
Dibenzo[a,h]anthracene	0.099	ND	ND
Dibenzofuran	0.033	ND	ND
1,2-Dichlorobenzene	0.033	ND	ND
1,3-Dichlorobenzene	0.033	ND	ND
1,4-Dichlorobenzene	0.033	ND	ND
3,3-Dichlorobenzidine	0.13	ND	ND
2,4-Dichlorophenol	0.16	ND	ND
Diethylphthalate	0.33	ND	ND
2,4-Dimethylphenol	0.099	ND	ND
Dimethylphthalate	0.033	ND	ND
4,6-Dinitro-2-methylphenol	0.33	ND	ND
2,4-Dinitrophenol	1.6	ND	ND
2,4-Dinitrotoluene	0.033	ND	ND

Centrum Analytical Laboratories, Inc.

Semivolatile Organic Compounds by EPA 8270C

Client:	Brycon, LLC	Date Sampled:	01/17/08
Project:	Fields Lease North	Date Received:	01/17/08
Job No.:	30718	Date Extracted:	01/24/08
Matrix:	Soil	Date Analyzed:	01/24/08
Analyst:	FSM	Batch Number:	8270S1203

	Sample ID:	Blank	CS0801172
Compound	**RL**	mg/Kg	mg/Kg
2,6-Dinitrotoluene	0.099	ND	ND
Fluoranthene	0.033	ND	ND
Fluorene	0.033	ND	**0.057**
Hexachlorobenzene	0.033	ND	ND
Hexachlorobutadiene	0.033	ND	ND
Hexachlorocyclopentadiene	1.6	ND	ND
Hexachloroethane	0.033	ND	ND
Indeno[1,2,3-c,d]pyrene	0.13	ND	ND
Isophorone	0.033	ND	ND
2-Methylnaphthalene	0.033	ND	**0.29**
2-Methylphenol	0.16	ND	ND
4-Methylphenol	0.16	ND	ND
N-Nitrosodi-n-propylamine	0.033	ND	ND
N-Nitrosodiphenylamine	0.033	ND	ND
Naphthalene	0.033	ND	ND
2-Nitroaniline	0.099	ND	ND
3-Nitroaniline	0.099	ND	ND
4-Nitroaniline	0.33	ND	ND
Nitrobenzene	0.099	ND	ND
2-Nitrophenol	0.13	ND	ND
4-Nitrophenol	0.33	ND	ND
Pentachlorophenol	1.6	ND	ND
Phenanthrene	0.066	ND	ND
Phenol	0.13	ND	ND
Pyrene	0.033	ND	ND
1,2,4-Trichlorobenzene	0.033	ND	ND
2,4,5-Trichlorophenol	0.20	ND	ND
2,4,6-Trichlorophenol	0.33	ND	ND

Surrogates in % Recovery (Acceptance Limits)

Sample ID:	Blank	CS0801172
2-Fluorophenol (25 - 121%)	107	114
Phenol-D5 (24 - 113%)	110	109
Nitrobenzene-D5 (23 - 120%)	97	97
2-Fluorobiphenyl (30 - 115%)	92	91
2,4,6-Tribromophenol (19 - 122%)	82	88
p-Terphenyl-D14 (18 - 137%)	103	125

Centrum Analytical Laboratories, Inc.

QC Sample Report - Semivolatile Organic Compounds by EPA 8270C

Matrix: Soil
Batch Number: 8270S1203

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Analytical Notes:

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Phenol	2.66	**96**	5 - 112	**Pass**
2-Chlorophenol	2.66	**87**	23 - 134	**Pass**
1,4-Dichlorobenzene	1.33	**86**	20 - 124	**Pass**
N-Nitrosodi-n-propylamine	1.33	**115**	0 - 230	**Pass**
1,2,4-Trichlorobenzene	1.33	**93**	44 - 142	**Pass**
4-Chloro-3-Methylphenol	2.66	**96**	22 - 147	**Pass**
Acenaphthene	1.33	**88**	47 - 145	**Pass**
4-Nitrophenol	2.66	**87**	0 - 132	**Pass**
2,4-Dinitrotoluene	1.33	**87**	39 - 139	**Pass**
Pentachlorophenol	2.66	**84**	14 - 176	**Pass**
Pyrene	1.33	**109**	52 - 115	**Pass**

Batch Precision Results

MS/MSD Sample ID: Laboratory Control Sample

Analytical Notes:

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Phenol	2.56	2.68	**5%**	35%	**Pass**
2-Chlorophenol	2.33	2.45	**5%**	50%	**Pass**
1,4-Dichlorobenzene	1.15	1.21	**6%**	27%	**Pass**
N-Nitrosodi-n-propylamine	1.53	1.61	**5%**	38%	**Pass**
1,2,4-Trichlorobenzene	1.25	1.32	**6%**	28%	**Pass**
4-Chloro-3-Methylphenol	2.56	2.69	**5%**	33%	**Pass**
Acenaphthene	1.17	1.24	**6%**	23%	**Pass**
4-Nitrophenol	2.32	2.50	**7%**	50%	**Pass**
2,4-Dinitrotoluene	1.16	1.22	**5%**	47%	**Pass**
Pentachlorophenol	2.25	2.47	**9%**	47%	**Pass**
Pyrene	1.46	1.21	**19%**	36%	**Pass**

MS: Matrix Spike
MSD: Matrix Spike Duplicate
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Chain of Custody Record

Centrum Analytical Laboratories, Inc.

Centrum Job # 30718

Page 1 of 1

1401 Research Park Drive, Suite 100
Riverside, CA 92507
Voice: 951.779.0310 ● 800.798.9336
Fax: 951.779.0344

3299 Hill Street, Suite 305
Signal Hill, CA 90755
Voice: 562.498.7005
Fax: 562.498.8617

www.centrum-labs.com lab@centrum-labs.com

Project No:

Project Name: FIELDS LEASE NORTH

Project Manager: GPASPALOF

Phone: 949 475-7749 Fax: 949 475-7750

email:

Client Name: (Report and Billing) BRIGHT, LLC

Address: (Report and Billing) 4570 CAMPUS DR. NEWPORT BEACH, CA 92660

Note: Reports and invoice will be sent here

Please Circle Analyses Requested

Centrum ID (Lab use only)	Sample ID (As it should appear on report)	Date sampled	Time sampled	Sample matrix	Site location	Containers: # and type	LUFT Diesel, or EPA 8015B DRO	LUFT Gas, or EPA 8015B GRO	Fuel ID (TVH, TEH); Carbon Chain (specify ranges) C6-C40	8021B: BTEX/MtBE Only	VOCs: 8260B, or 624	VOCs: BTEX/Oxygenates Only	SVOCs: 8270C or 625	8081A/8082: Pesticides, or PCBs, or Pest/PCB	Metals: Title 22 (CAM) or RCRA, or PP	Metals: TCLP, STLC	pH, TDS, TSS	418.1 (TRPH), or 413.2, or 1664	Remarks/Special Instructions
1	CS0801171	11/7	11:00	Soil		40z-GL			X										C6-C40
2	CS0801172	11	11:05	11		11			X		X		X	X	X				
3	CS0801173	11	11:08	11		11			X										
4	CS0801174	11	11:10	11		11			X										

Turn-Around Time see note *

- ☐ 24 Hr. RUSH *
- ☐ 48 Hr. RUSH *
- ☒ Normal TAT
- ☐ Other _____

* Requires PRIOR approval, additional charges apply

Requested due date: _____

Remarks/Special Instructions

1) Relinquished by: (Sampler's Signature) — Date: 11/7 Time: 1:15

2) Received by: — Date: Time:

3) Relinquished by: — Date: Time:

4) Received by: — Date: Time:

5) Relinquished by: — Date: Time:

6) Received for Laboratory by: Ryan Date: 11/7/08 Time: 1:15 pm

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.

Laboratory Notes:

To be completed by Laboratory personnel:

Chilled? ☐ Yes Temp ___C ☒ From Field

Custody seals? ☐ Yes ☒ No

All sample containers intact? ☒ Yes ☐ No

☐ Courier ☐ UPS/Fed Ex ☒ Hand carried

Sample Disposal

- ☐ Client will pick up
- ☐ Return to client
- ☒ Lab disposal

Sample Locator Number: _____

Report Formats: Check all applicable

☐ Paper report ☐ PDF report (include email address)

☐ LARWQCB ☐ EDF (include global ID) ☐ EDD (GISKEY) ☐ EDD (Other) *

* with prior approval only

v7.2 9/05

White Copy - Original (Accompanies Samples) Yellow Copy - Centrum Files Pink Copy - Client Copy

APPENDIX B

Sierra Analytical Labs, Inc.
Soil Matrix Analytical Data
February 18, 2020

26 February 2020

Susan Mearns
Mearns Consulting LLC
738 Ashland Avenue
Santa Monica, CA 90405

RE:950 E. 33rd & 3177 California Ave.

Work Order No.: 2002212

Attached are the results of the analyses for samples received by the laboratory on 02/18/20 16:10.

The samples were received by Sierra Analytical Labs, Inc. with a chain of custody record attached or completed at the submittal of the samples.

The analyses were performed according to the prescribed method as outlined by EPA, Standard Methods, and A.S.T.M.

The remaining portions of the samples will be disposed of within 30 days from the date of this report.
If you require any additional retaining time, please advise us.

Sincerely,

Richard K. Forsyth

Richard K. Forsyth

Laboratory Director

Sierra Analytical Labs, Inc. is certified by the California Department of Health Services (DOHS),
Environmental Laboratory Accredidation Program (ELAP) No. 2320.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB1-5	2002212-01	Soil	02/18/20 08:17	02/18/20 16:10
SB1-10	2002212-02	Soil	02/18/20 08:17	02/18/20 16:10
SB2-5	2002212-03	Soil	02/18/20 09:17	02/18/20 16:10
SB2-10	2002212-04	Soil	02/18/20 09:24	02/18/20 16:10
SB3-5	2002212-05	Soil	02/18/20 10:14	02/18/20 16:10
SB3-10	2002212-06	Soil	02/18/20 10:21	02/18/20 16:10
SB4-5	2002212-07	Soil	02/18/20 11:09	02/18/20 16:10
SB4-10	2002212-08	Soil	02/18/20 11:16	02/18/20 16:10
SB5-5	2002212-09	Soil	02/18/20 11:42	02/18/20 16:10
SB5-10	2002212-10	Soil	02/18/20 11:49	02/18/20 16:10
SB6-5	2002212-11	Soil	02/18/20 13:01	02/18/20 16:10
SB6-10	2002212-12	Soil	02/18/20 13:10	02/18/20 16:10
SB7-5	2002212-13	Soil	02/18/20 13:41	02/18/20 16:10
SB7-10	2002212-14	Soil	02/18/20 13:48	02/18/20 16:10
SB8-5	2002212-15	Soil	02/18/20 14:22	02/18/20 16:10
SB8-10	2002212-16	Soil	02/18/20 14:35	02/18/20 16:10
SB9-5	2002212-17	Soil	02/18/20 15:08	02/18/20 16:10
SB9-10	2002212-18	Soil	02/18/20 15:19	02/18/20 16:10

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
TELEPHONE: (949) 348-9389 FAX: (949) 348-9115
E-MAIL: SIERRALABS @ SIERRALABS.NET

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**66**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**6.6**	1.5	"	"	"	"	"	"	
Chromium	**15**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**12**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.05	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**10**	6.8	"	"	"	"	"	"	
Lead	**2.6**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**22**	3.0	"	"	"	"	"	"	
Zinc	**26**	4.0	"	"	"	"	"	"	
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**44**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**4.7**	1.5	"	"	"	"	"	"	
Chromium	**10**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	ND	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	ND	6.8	"	"	"	"	"	"	
Lead	ND	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**16**	3.0	"	"	"	"	"	"	
Zinc	**23**	4.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**42**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**5.0**	1.5	"	"	"	"	"	"	
Chromium	**16**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**7.3**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**7.5**	6.8	"	"	"	"	"	"	
Lead	**3.0**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**34**	3.0	"	"	"	"	"	"	
Zinc	**21**	4.0	"	"	"	"	"	"	
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**35**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**4.1**	1.5	"	"	"	"	"	"	
Chromium	**7.6**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	ND	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.05	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**7.4**	6.8	"	"	"	"	"	"	
Lead	ND	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**13**	3.0	"	"	"	"	"	"	
Zinc	**19**	4.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**53**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**7.9**	1.5	"	"	"	"	"	"	
Chromium	**21**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**11**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**16**	6.8	"	"	"	"	"	"	
Lead	**3.5**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**28**	3.0	"	"	"	"	"	"	
Zinc	**35**	4.0	"	"	"	"	"	"	
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**30**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**3.8**	1.5	"	"	"	"	"	"	
Chromium	**6.9**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	ND	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.05	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	ND	6.8	"	"	"	"	"	"	
Lead	ND	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**11**	3.0	"	"	"	"	"	"	
Zinc	**17**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Silver	**1.1**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**110**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**7.0**	1.5	"	"	"	"	"	"	
Chromium	**14**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**27**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	**0.20**	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**10**	6.8	"	"	"	"	"	"	
Lead	**33**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**23**	3.0	"	"	"	"	"	"	
Zinc	**110**	4.0	"	"	"	"	"	"	
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
Silver	**1.0**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**33**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**5.5**	1.5	"	"	"	"	"	"	
Chromium	**14**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**8.8**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**9.2**	6.8	"	"	"	"	"	"	
Lead	ND	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**23**	3.0	"	"	"	"	"	"	
Zinc	**29**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
Silver	**1.2**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**130**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**8.3**	1.5	"	"	"	"	"	"	
Chromium	**17**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**15**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	**0.06**	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**12**	6.8	"	"	"	"	"	"	
Lead	**13**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**28**	3.0	"	"	"	"	"	"	
Zinc	**76**	4.0	"	"	"	"	"	"	
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Silver	**1.1**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**63**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**7.6**	1.5	"	"	"	"	"	"	
Chromium	**19**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**12**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.05	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**15**	6.8	"	"	"	"	"	"	
Lead	**3.5**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**26**	3.0	"	"	"	"	"	"	
Zinc	**41**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**110**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**5.0**	1.5	"	"	"	"	"	"	
Chromium	**11**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**7.8**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**7.1**	6.8	"	"	"	"	"	"	
Lead	**6.9**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**18**	3.0	"	"	"	"	"	"	
Zinc	**30**	4.0	"	"	"	"	"	"	
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
Silver	**1.5**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**74**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**7.7**	1.5	"	"	"	"	"	"	
Chromium	**24**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**11**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**11**	6.8	"	"	"	"	"	"	
Lead	**5.4**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**32**	3.0	"	"	"	"	"	"	
Zinc	**44**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**85**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**4.5**	1.5	"	"	"	"	"	"	
Chromium	**9.8**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**7.0**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	**0.09**	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	ND	6.8	"	"	"	"	"	"	
Lead	**8.4**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**17**	3.0	"	"	"	"	"	"	
Zinc	**36**	4.0	"	"	"	"	"	"	
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
Silver	**1.1**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**240**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**6.5**	1.5	"	"	"	"	"	"	
Chromium	**27**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**11**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**10**	6.8	"	"	"	"	"	"	
Lead	**3.7**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**25**	3.0	"	"	"	"	"	"	
Zinc	**35**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**86**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**5.8**	1.5	"	"	"	"	"	"	
Chromium	**12**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**8.4**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**8.2**	6.8	"	"	"	"	"	"	
Lead	**6.8**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**20**	3.0	"	"	"	"	"	"	
Zinc	**32**	4.0	"	"	"	"	"	"	
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Silver	**1.1**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**87**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**10**	1.5	"	"	"	"	"	"	
Chromium	**28**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**19**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.05	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**22**	6.8	"	"	"	"	"	"	
Lead	**5.7**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**34**	3.0	"	"	"	"	"	"	
Zinc	**57**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
Silver	ND	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**130**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**6.3**	1.5	"	"	"	"	"	"	
Chromium	**14**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.38	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**9.7**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	**0.09**	0.05	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**9.1**	6.8	"	"	"	"	"	"	
Lead	**7.1**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**24**	3.0	"	"	"	"	"	"	
Zinc	**38**	4.0	"	"	"	"	"	"	
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
Silver	**1.0**	1.0	mg/kg	1	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Arsenic	ND	7.7	"	"	"	"	"	"	
Barium	**64**	3.0	"	"	"	"	"	"	
Beryllium	ND	1.3	"	"	"	"	"	"	
Cadmium	ND	1.4	"	"	"	"	"	"	
Cobalt	**7.0**	1.5	"	"	"	"	"	"	
Chromium	**25**	3.1	"	"	"	"	"	"	
Hexavalent Chromium	ND	0.41	"	"	B0B1913	02/19/20	02/20/20 20:06	EPA 7199A	
Copper	**11**	7.0	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Mercury	ND	0.06	"	"	B0B1911	02/19/20	02/19/20 20:48	EPA 7471A	
Molybdenum	ND	4.2	"	"	B0B1912	02/19/20	02/21/20 12:39	EPA 6010B	
Nickel	**14**	6.8	"	"	"	"	"	"	
Lead	**4.6**	2.6	"	"	"	"	"	"	
Antimony	ND	5.0	"	"	"	"	"	"	
Selenium	ND	7.6	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**38**	3.0	"	"	"	"	"	"	
Zinc	**39**	4.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Volatile Petroleum Hydrocarbons (TVPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.045	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*102 %*	*35-130*		"	"	"	"	
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*92.5 %*	*35-130*		"	"	"	"	
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.041	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*94.5 %*	*35-130*		"	"	"	"	
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*99.5 %*	*35-130*		"	"	"	"	
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.042	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*90.5 %*	*35-130*		"	"	"	"	
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*65.2 %*	*35-130*		"	"	"	"	
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.043	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*70.8 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Volatile Petroleum Hydrocarbons (TVPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*98.5 %*	*35-130*		"	"	"	"	
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.035	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*36.8 %*	*35-130*		"	"	"	"	
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*39.5 %*	*35-130*		"	"	"	"	
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.043	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*98.8 %*	*35-130*		"	"	"	"	
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.041	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*95.8 %*	*35-130*		"	"	"	"	
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.042	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*94.7 %*	*35-130*		"	"	"	"	
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*66.7 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Volatile Petroleum Hydrocarbons (TVPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.038	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*92.2 %*	*35-130*		"	"	"	"	
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*94.7 %*	*35-130*		"	"	"	"	
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.043	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*86.5 %*	*35-130*		"	"	"	"	
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg	1	B0B2427	02/24/20	02/25/20 09:16	EPA 8015B	
Surrogate: a,a,a-Trifluorotoluene		*94.4 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons (TPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*128 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*128 %*	*60-175*		"	"	"	"	
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*140 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*140 %*	*60-175*		"	"	"	"	
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*98.4 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*98.4 %*	*60-175*		"	"	"	"	
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*70.0 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*70.0 %*	*60-175*		"	"	"	"	
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*158 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*158 %*	*60-175*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons (TPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*101 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*101 %*	*60-175*		"	"	"	"	
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*87.6 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*87.6 %*	*60-175*		"	"	"	"	
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*74.4 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*74.4 %*	*60-175*		"	"	"	"	
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	**48**	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*138 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	**45**	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*138 %*	*60-175*		"	"	"	"	
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*97.6 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*97.6 %*	*60-175*		"	"	"	"	

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738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons (TPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*63.2 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*63.2 %*	*60-175*		"	"	"	"	
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*72.8 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*72.8 %*	*60-175*		"	"	"	"	
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	**69**	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*68.4 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	**33**	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*68.4 %*	*60-175*		"	"	"	"	
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*70.4 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*70.4 %*	*60-175*		"	"	"	"	
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*73.6 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*73.6 %*	*60-175*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons (TPH) by GC/FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*60.0 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*60.0 %*	*60-175*		"	"	"	"	
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*75.2 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*75.2 %*	*60-175*		"	"	"	"	
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
Surrogate: o-Terphenyl		*64.8 %*	*60-175*		"	"	"	"	
Oil Range Organics (C22-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*64.8 %*	*60-175*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*128 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0090	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0090	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0090	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0090	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0090	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0090	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0090	"	"	"	"	"	"	
HC >= C12	ND	0.0090	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.045	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*102 %*	*35-130*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*140 %*		*60-175*	"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*92.5 %*		*35-130*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*98.4 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0083	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0083	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0083	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0083	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0083	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0083	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0083	"	"	"	"	"	"	
HC >= C12	ND	0.0083	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.041	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*94.5 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*70.0 %*		*60-175*	"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*99.5 %*		*35-130*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*158 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0084	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0084	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0084	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0084	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0084	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0084	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0084	"	"	"	"	"	"	
HC >= C12	ND	0.0084	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.042	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*90.5 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*101 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*65.2 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*87.6 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0085	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0085	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0085	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0085	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0085	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0085	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0085	"	"	"	"	"	"	
HC >= C12	ND	0.0085	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.043	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*70.8 %*	*35-130*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*74.4 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*98.5 %*	*35-130*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

26052 Merit Circle Suite 105, Laguna Hills, California 92653
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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	**8.0**	1.0	"	"	"	"	"	"	
C18 <= HC < C20	**9.9**	1.0	"	"	"	"	"	"	
C20 <= HC < C24	**19**	1.0	"	"	"	"	"	"	
C24 <= HC < C28	**15**	1.0	"	"	"	"	"	"	
C28 <= HC < C32	**8.3**	1.0	"	"	"	"	"	"	
HC >= C32	**3.9**	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	**64**	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*138 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0071	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0071	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0071	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0071	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0071	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0071	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0071	"	"	"	"	"	"	
HC >= C12	ND	0.0071	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.035	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*36.8 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*97.6 %*		*60-175*	"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*39.5 %*		*35-130*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project:	950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number:	[none]	**Reported:**
Santa Monica CA, 90405	Project Manager:	Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*63.2 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0085	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0085	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0085	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0085	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0085	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0085	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0085	"	"	"	"	"	"	
HC >= C12	ND	0.0085	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.043	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*98.8 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*72.8 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0083	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0083	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0083	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0083	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0083	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0083	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0083	"	"	"	"	"	"	
HC >= C12	ND	0.0083	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.041	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*95.8 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	**33**	1.0	"	"	"	"	"	"	
C16 <= HC < C18	**8.2**	1.0	"	"	"	"	"	"	
C18 <= HC < C20	**9.5**	1.0	"	"	"	"	"	"	
C20 <= HC < C24	**16**	1.0	"	"	"	"	"	"	
C24 <= HC < C28	**12**	1.0	"	"	"	"	"	"	
C28 <= HC < C32	**5.8**	1.0	"	"	"	"	"	"	
HC >= C32	**2.3**	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	**87**	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*68.4 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0085	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0085	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0085	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0085	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0085	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0085	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0085	"	"	"	"	"	"	
HC >= C12	ND	0.0085	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.042	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*94.7 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*70.4 %*		*60-175*	"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*96.9 %*		*35-130*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*73.6 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0076	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0076	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0076	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0076	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0076	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0076	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0076	"	"	"	"	"	"	
HC >= C12	ND	0.0076	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.038	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*92.2 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*60.0 %*		*60-175*	"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*94.7 %*		*35-130*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*75.2 %*	*60-175*		"	"	"	"	
C5 <= HC < C6	ND	0.0086	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.0086	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.0086	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.0086	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.0086	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.0086	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.0086	"	"	"	"	"	"	
HC >= C12	ND	0.0086	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.043	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*86.5 %*	*35-130*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
HC < C8	ND	1.0	mg/kg	1	B0B2440	02/24/20	02/25/20 13:31	EPA 8015B	
C8 <= HC < C9	ND	1.0	"	"	"	"	"	"	
C9 <= HC < C10	ND	1.0	"	"	"	"	"	"	
C10 <= HC < C11	ND	1.0	"	"	"	"	"	"	
C11 <= HC < C12	ND	1.0	"	"	"	"	"	"	
C12 <= HC < C14	ND	1.0	"	"	"	"	"	"	
C14 <= HC < C16	ND	1.0	"	"	"	"	"	"	
C16 <= HC < C18	ND	1.0	"	"	"	"	"	"	
C18 <= HC < C20	ND	1.0	"	"	"	"	"	"	
C20 <= HC < C24	ND	1.0	"	"	"	"	"	"	
C24 <= HC < C28	ND	1.0	"	"	"	"	"	"	
C28 <= HC < C32	ND	1.0	"	"	"	"	"	"	
HC >= C32	ND	1.0	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*64.8 %*		*60-175*	"	"	"	"	
C5 <= HC < C6	ND	0.010	"	"	B0B2427	"	02/25/20 09:16	"	
C6 <= HC < C7	ND	0.010	"	"	"	"	"	"	
C7 <= HC < C8	ND	0.010	"	"	"	"	"	"	
C8 <= HC < C9	ND	0.010	"	"	"	"	"	"	
C9 <= HC < C10	ND	0.010	"	"	"	"	"	"	
C10 <= HC < C11	ND	0.010	"	"	"	"	"	"	
C11 <= HC < C12	ND	0.010	"	"	"	"	"	"	
HC >= C12	ND	0.010	"	"	"	"	"	"	
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*94.4 %*		*35-130*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Benzene	ND	4.2	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.2	"	"	"	"	"	"	
Bromochloromethane	ND	4.2	"	"	"	"	"	"	
Bromodichloromethane	ND	4.2	"	"	"	"	"	"	
Bromoform	ND	4.2	"	"	"	"	"	"	
Bromomethane	ND	4.2	"	"	"	"	"	"	
n-Butylbenzene	ND	4.2	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.2	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.2	"	"	"	"	"	"	
Chlorobenzene	ND	4.2	"	"	"	"	"	"	
Chloroethane	ND	4.2	"	"	"	"	"	"	
Chloroform	ND	4.2	"	"	"	"	"	"	
Chloromethane	ND	4.2	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.2	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.2	"	"	"	"	"	"	
Dibromochloromethane	ND	4.2	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	4.2	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.2	"	"	"	"	"	"	
Dibromomethane	ND	4.2	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.2	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.2	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.2	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.2	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.2	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.2	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.2	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.2	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.2	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.2	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.2	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.2	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.2	"	"	"	"	"	"	
Ethylbenzene	ND	4.2	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.2	"	"	"	"	"	"	
Isopropylbenzene	ND	4.2	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.2	"	"	"	"	"	"	
Methylene chloride	ND	4.2	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.2	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Naphthalene	ND	4.2	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
n-Propylbenzene	ND	4.2	"	"	"	"	"	"	
Styrene	ND	4.2	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.2	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.2	"	"	"	"	"	"	
Tetrachloroethene	ND	4.2	"	"	"	"	"	"	
Toluene	ND	4.2	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.2	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	4.2	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.2	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.2	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.2	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.2	"	"	"	"	"	"	
Vinyl chloride	ND	4.2	"	"	"	"	"	"	
m,p-Xylene	ND	4.2	"	"	"	"	"	"	
o-Xylene	ND	4.2	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*117 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*114 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*117 %*		*74-121*	"	"	"	"	
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Benzene	ND	5.6	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.6	"	"	"	"	"	"	
Bromochloromethane	ND	5.6	"	"	"	"	"	"	
Bromodichloromethane	ND	5.6	"	"	"	"	"	"	
Bromoform	ND	5.6	"	"	"	"	"	"	
Bromomethane	ND	5.6	"	"	"	"	"	"	
n-Butylbenzene	ND	5.6	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.6	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.6	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.6	"	"	"	"	"	"	
Chlorobenzene	ND	5.6	"	"	"	"	"	"	
Chloroethane	ND	5.6	"	"	"	"	"	"	
Chloroform	ND	5.6	"	"	"	"	"	"	
Chloromethane	ND	5.6	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.6	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.6	"	"	"	"	"	"	
Dibromochloromethane	ND	5.6	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
1,2-Dibromo-3-chloropropane	ND	5.6	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.6	"	"	"	"	"	"	
Dibromomethane	ND	5.6	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.6	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.6	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.6	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.6	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.6	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.6	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.6	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.6	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.6	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.6	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.6	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.6	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.6	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.6	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.6	"	"	"	"	"	"	
Ethylbenzene	ND	5.6	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.6	"	"	"	"	"	"	
Isopropylbenzene	ND	5.6	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.6	"	"	"	"	"	"	
Methylene chloride	ND	5.6	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.6	"	"	"	"	"	"	
Naphthalene	ND	5.6	"	"	"	"	"	"	
n-Propylbenzene	ND	5.6	"	"	"	"	"	"	
Styrene	ND	5.6	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.6	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.6	"	"	"	"	"	"	
Tetrachloroethene	ND	5.6	"	"	"	"	"	"	
Toluene	ND	5.6	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.6	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.6	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.6	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.6	"	"	"	"	"	"	
Trichloroethene	ND	5.6	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.6	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.6	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.6	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.6	"	"	"	"	"	"	
Vinyl chloride	ND	5.6	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
m,p-Xylene	ND	5.6	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
o-Xylene	ND	5.6	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*104 %*		*80-120*		"	"	"	
Surrogate: Toluene-d8		*102 %*		*81-117*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*116 %*		*74-121*		"	"	"	
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
Benzene	ND	4.3	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.3	"	"	"	"	"	"	
Bromochloromethane	ND	4.3	"	"	"	"	"	"	
Bromodichloromethane	ND	4.3	"	"	"	"	"	"	
Bromoform	ND	4.3	"	"	"	"	"	"	
Bromomethane	ND	4.3	"	"	"	"	"	"	
n-Butylbenzene	ND	4.3	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.3	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.3	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.3	"	"	"	"	"	"	
Chlorobenzene	ND	4.3	"	"	"	"	"	"	
Chloroethane	ND	4.3	"	"	"	"	"	"	
Chloroform	ND	4.3	"	"	"	"	"	"	
Chloromethane	ND	4.3	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.3	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.3	"	"	"	"	"	"	
Dibromochloromethane	ND	4.3	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	4.3	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.3	"	"	"	"	"	"	
Dibromomethane	ND	4.3	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.3	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.3	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.3	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.3	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.3	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.3	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.3	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.3	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.3	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.3	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.3	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.3	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.3	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
trans-1,3-Dichloropropene	ND	4.3	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Ethylbenzene	ND	4.3	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.3	"	"	"	"	"	"	
Isopropylbenzene	ND	4.3	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.3	"	"	"	"	"	"	
Methylene chloride	ND	4.3	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.3	"	"	"	"	"	"	
Naphthalene	ND	4.3	"	"	"	"	"	"	
n-Propylbenzene	ND	4.3	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.3	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.3	"	"	"	"	"	"	
Tetrachloroethene	ND	4.3	"	"	"	"	"	"	
Toluene	ND	4.3	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.3	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.3	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.3	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.3	"	"	"	"	"	"	
Trichloroethene	ND	4.3	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.3	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.3	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.3	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.3	"	"	"	"	"	"	
Vinyl chloride	ND	4.3	"	"	"	"	"	"	
m,p-Xylene	ND	4.3	"	"	"	"	"	"	
o-Xylene	ND	4.3	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*119 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*112 %*		*74-121*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Naphthalene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*99.6 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*		*74-121*	"	"	"	"	
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
Benzene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.1	"	"	"	"	"	"	
Bromochloromethane	ND	4.1	"	"	"	"	"	"	
Bromodichloromethane	ND	4.1	"	"	"	"	"	"	
Bromoform	ND	4.1	"	"	"	"	"	"	
Bromomethane	ND	4.1	"	"	"	"	"	"	
n-Butylbenzene	ND	4.1	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.1	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.1	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.1	"	"	"	"	"	"	
Chlorobenzene	ND	4.1	"	"	"	"	"	"	
Chloroethane	ND	4.1	"	"	"	"	"	"	
Chloroform	ND	4.1	"	"	"	"	"	"	
Chloromethane	ND	4.1	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
Dibromochloromethane	ND	4.1	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
1,2-Dibromo-3-chloropropane	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	4.1	"	"	"	"	"	"	
Dibromomethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.1	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.1	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.1	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.1	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.1	"	"	"	"	"	"	
Ethylbenzene	ND	4.1	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.1	"	"	"	"	"	"	
Isopropylbenzene	ND	4.1	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.1	"	"	"	"	"	"	
Methylene chloride	ND	4.1	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.1	"	"	"	"	"	"	
Naphthalene	ND	4.1	"	"	"	"	"	"	
n-Propylbenzene	ND	4.1	"	"	"	"	"	"	
Styrene	ND	4.1	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
Tetrachloroethene	ND	4.1	"	"	"	"	"	"	
Toluene	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.1	"	"	"	"	"	"	
Trichloroethene	ND	4.1	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.1	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
Vinyl chloride	ND	4.1	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
m,p-Xylene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
o-Xylene	ND	4.1	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*116 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*108 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.3 %*	*74-121*		"	"	"	"	
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
trans-1,3-Dichloropropene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*116 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*		*74-121*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Benzene	ND	4.2	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.2	"	"	"	"	"	"	
Bromochloromethane	ND	4.2	"	"	"	"	"	"	
Bromodichloromethane	ND	4.2	"	"	"	"	"	"	
Bromoform	ND	4.2	"	"	"	"	"	"	
Bromomethane	ND	4.2	"	"	"	"	"	"	
n-Butylbenzene	ND	4.2	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.2	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.2	"	"	"	"	"	"	
Chlorobenzene	ND	4.2	"	"	"	"	"	"	
Chloroethane	ND	4.2	"	"	"	"	"	"	
Chloroform	ND	4.2	"	"	"	"	"	"	
Chloromethane	ND	4.2	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.2	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.2	"	"	"	"	"	"	
Dibromochloromethane	ND	4.2	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	4.2	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.2	"	"	"	"	"	"	
Dibromomethane	ND	4.2	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.2	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.2	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.2	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.2	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.2	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.2	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.2	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.2	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.2	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.2	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.2	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.2	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.2	"	"	"	"	"	"	
Ethylbenzene	ND	4.2	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.2	"	"	"	"	"	"	
Isopropylbenzene	ND	4.2	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.2	"	"	"	"	"	"	
Methylene chloride	ND	4.2	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.2	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Naphthalene	ND	4.2	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
n-Propylbenzene	ND	4.2	"	"	"	"	"	"	
Styrene	ND	4.2	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.2	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.2	"	"	"	"	"	"	
Tetrachloroethene	ND	4.2	"	"	"	"	"	"	
Toluene	ND	4.2	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.2	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	4.2	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.2	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.2	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.2	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.2	"	"	"	"	"	"	
Vinyl chloride	ND	4.2	"	"	"	"	"	"	
m,p-Xylene	ND	4.2	"	"	"	"	"	"	
o-Xylene	ND	4.2	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*117 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*114 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*118 %*		*74-121*	"	"	"	"	
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
1,2-Dibromo-3-chloropropane	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
m,p-Xylene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*99.6 %*		*80-120*		"	"	"	
Surrogate: Toluene-d8		*115 %*		*81-117*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*		*74-121*		"	"	"	
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
Benzene	ND	3.9	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	3.9	"	"	"	"	"	"	
Bromochloromethane	ND	3.9	"	"	"	"	"	"	
Bromodichloromethane	ND	3.9	"	"	"	"	"	"	
Bromoform	ND	3.9	"	"	"	"	"	"	
Bromomethane	ND	3.9	"	"	"	"	"	"	
n-Butylbenzene	ND	3.9	"	"	"	"	"	"	
sec-Butylbenzene	ND	3.9	"	"	"	"	"	"	
tert-Butylbenzene	ND	3.9	"	"	"	"	"	"	
Carbon tetrachloride	ND	3.9	"	"	"	"	"	"	
Chlorobenzene	ND	3.9	"	"	"	"	"	"	
Chloroethane	ND	3.9	"	"	"	"	"	"	
Chloroform	ND	3.9	"	"	"	"	"	"	
Chloromethane	ND	3.9	"	"	"	"	"	"	
2-Chlorotoluene	ND	3.9	"	"	"	"	"	"	
4-Chlorotoluene	ND	3.9	"	"	"	"	"	"	
Dibromochloromethane	ND	3.9	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	3.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	3.9	"	"	"	"	"	"	
Dibromomethane	ND	3.9	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	3.9	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	3.9	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	3.9	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	3.9	"	"	"	"	"	"	
1,1-Dichloroethane	ND	3.9	"	"	"	"	"	"	
1,2-Dichloroethane	ND	3.9	"	"	"	"	"	"	
1,1-Dichloroethene	ND	3.9	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	3.9	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	3.9	"	"	"	"	"	"	
1,2-Dichloropropane	ND	3.9	"	"	"	"	"	"	
1,3-Dichloropropane	ND	3.9	"	"	"	"	"	"	
2,2-Dichloropropane	ND	3.9	"	"	"	"	"	"	
1,1-Dichloropropene	ND	3.9	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	3.9	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
trans-1,3-Dichloropropene	ND	3.9	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Ethylbenzene	ND	3.9	"	"	"	"	"	"	
Hexachlorobutadiene	ND	3.9	"	"	"	"	"	"	
Isopropylbenzene	ND	3.9	"	"	"	"	"	"	
p-Isopropyltoluene	ND	3.9	"	"	"	"	"	"	
Methylene chloride	ND	3.9	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	3.9	"	"	"	"	"	"	
Naphthalene	ND	3.9	"	"	"	"	"	"	
n-Propylbenzene	ND	3.9	"	"	"	"	"	"	
Styrene	ND	3.9	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	3.9	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	3.9	"	"	"	"	"	"	
Tetrachloroethene	ND	3.9	"	"	"	"	"	"	
Toluene	ND	3.9	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	3.9	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	3.9	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	3.9	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	3.9	"	"	"	"	"	"	
Trichloroethene	ND	3.9	"	"	"	"	"	"	
Trichlorofluoromethane	ND	3.9	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	3.9	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	3.9	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	3.9	"	"	"	"	"	"	
Vinyl chloride	ND	3.9	"	"	"	"	"	"	
m,p-Xylene	ND	3.9	"	"	"	"	"	"	
o-Xylene	ND	3.9	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*96.1 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*108 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93.1 %*		*74-121*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Naphthalene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*86.6 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.5 %*		*74-121*	"	"	"	"	
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
Benzene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.1	"	"	"	"	"	"	
Bromochloromethane	ND	4.1	"	"	"	"	"	"	
Bromodichloromethane	ND	4.1	"	"	"	"	"	"	
Bromoform	ND	4.1	"	"	"	"	"	"	
Bromomethane	ND	4.1	"	"	"	"	"	"	
n-Butylbenzene	ND	4.1	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.1	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.1	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.1	"	"	"	"	"	"	
Chlorobenzene	ND	4.1	"	"	"	"	"	"	
Chloroethane	ND	4.1	"	"	"	"	"	"	
Chloroform	ND	4.1	"	"	"	"	"	"	
Chloromethane	ND	4.1	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
Dibromochloromethane	ND	4.1	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
1,2-Dibromo-3-chloropropane	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	4.1	"	"	"	"	"	"	
Dibromomethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.1	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.1	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.1	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.1	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.1	"	"	"	"	"	"	
Ethylbenzene	ND	4.1	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.1	"	"	"	"	"	"	
Isopropylbenzene	ND	4.1	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.1	"	"	"	"	"	"	
Methylene chloride	ND	4.1	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.1	"	"	"	"	"	"	
Naphthalene	ND	4.1	"	"	"	"	"	"	
n-Propylbenzene	ND	4.1	"	"	"	"	"	"	
Styrene	ND	4.1	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
Tetrachloroethene	ND	4.1	"	"	"	"	"	"	
Toluene	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.1	"	"	"	"	"	"	
Trichloroethene	ND	4.1	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.1	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
Vinyl chloride	ND	4.1	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
m,p-Xylene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
o-Xylene	ND	4.1	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*113 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*117 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*74-121*		"	"	"	"	
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
Benzene	ND	4.4	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.4	"	"	"	"	"	"	
Bromochloromethane	ND	4.4	"	"	"	"	"	"	
Bromodichloromethane	ND	4.4	"	"	"	"	"	"	
Bromoform	ND	4.4	"	"	"	"	"	"	
Bromomethane	ND	4.4	"	"	"	"	"	"	
n-Butylbenzene	ND	4.4	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.4	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.4	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.4	"	"	"	"	"	"	
Chlorobenzene	ND	4.4	"	"	"	"	"	"	
Chloroethane	ND	4.4	"	"	"	"	"	"	
Chloroform	ND	4.4	"	"	"	"	"	"	
Chloromethane	ND	4.4	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.4	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.4	"	"	"	"	"	"	
Dibromochloromethane	ND	4.4	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	4.4	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.4	"	"	"	"	"	"	
Dibromomethane	ND	4.4	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.4	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.4	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.4	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.4	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.4	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.4	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.4	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.4	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.4	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.4	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.4	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.4	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.4	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.4	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
trans-1,3-Dichloropropene	ND	4.4	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Ethylbenzene	ND	4.4	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.4	"	"	"	"	"	"	
Isopropylbenzene	ND	4.4	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.4	"	"	"	"	"	"	
Methylene chloride	ND	4.4	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.4	"	"	"	"	"	"	
Naphthalene	ND	4.4	"	"	"	"	"	"	
n-Propylbenzene	ND	4.4	"	"	"	"	"	"	
Styrene	ND	4.4	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.4	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.4	"	"	"	"	"	"	
Tetrachloroethene	ND	4.4	"	"	"	"	"	"	
Toluene	ND	4.4	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.4	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.4	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.4	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.4	"	"	"	"	"	"	
Trichloroethene	ND	4.4	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.4	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.4	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.4	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.4	"	"	"	"	"	"	
Vinyl chloride	ND	4.4	"	"	"	"	"	"	
m,p-Xylene	ND	4.4	"	"	"	"	"	"	
o-Xylene	ND	4.4	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*108 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*119 %*		*74-121*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Naphthalene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*117 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*74-121*		"	"	"	"	
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
1,2-Dibromo-3-chloropropane	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
m,p-Xylene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*		*80-120*		"	"	"	
Surrogate: Toluene-d8		*105 %*		*81-117*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.2 %*		*74-121*		"	"	"	
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
Benzene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.1	"	"	"	"	"	"	
Bromochloromethane	ND	4.1	"	"	"	"	"	"	
Bromodichloromethane	ND	4.1	"	"	"	"	"	"	
Bromoform	ND	4.1	"	"	"	"	"	"	
Bromomethane	ND	4.1	"	"	"	"	"	"	
n-Butylbenzene	ND	4.1	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.1	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.1	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.1	"	"	"	"	"	"	
Chlorobenzene	ND	4.1	"	"	"	"	"	"	
Chloroethane	ND	4.1	"	"	"	"	"	"	
Chloroform	ND	4.1	"	"	"	"	"	"	
Chloromethane	ND	4.1	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
Dibromochloromethane	ND	4.1	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	4.1	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.1	"	"	"	"	"	"	
Dibromomethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.1	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.1	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.1	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.1	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
trans-1,3-Dichloropropene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Ethylbenzene	ND	4.1	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.1	"	"	"	"	"	"	
Isopropylbenzene	ND	4.1	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.1	"	"	"	"	"	"	
Methylene chloride	ND	4.1	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.1	"	"	"	"	"	"	
Naphthalene	ND	4.1	"	"	"	"	"	"	
n-Propylbenzene	ND	4.1	"	"	"	"	"	"	
Styrene	ND	4.1	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
Tetrachloroethene	ND	4.1	"	"	"	"	"	"	
Toluene	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.1	"	"	"	"	"	"	
Trichloroethene	ND	4.1	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.1	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
Vinyl chloride	ND	4.1	"	"	"	"	"	"	
m,p-Xylene	ND	4.1	"	"	"	"	"	"	
o-Xylene	ND	4.1	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*116 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*106 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*		*74-121*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Benzene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Naphthalene	ND	5.0	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*105 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*114 %*	*74-121*		"	"	"	"	
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
Benzene	ND	4.5	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.5	"	"	"	"	"	"	
Bromochloromethane	ND	4.5	"	"	"	"	"	"	
Bromodichloromethane	ND	4.5	"	"	"	"	"	"	
Bromoform	ND	4.5	"	"	"	"	"	"	
Bromomethane	ND	4.5	"	"	"	"	"	"	
n-Butylbenzene	ND	4.5	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.5	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.5	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.5	"	"	"	"	"	"	
Chlorobenzene	ND	4.5	"	"	"	"	"	"	
Chloroethane	ND	4.5	"	"	"	"	"	"	
Chloroform	ND	4.5	"	"	"	"	"	"	
Chloromethane	ND	4.5	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.5	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.5	"	"	"	"	"	"	
Dibromochloromethane	ND	4.5	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
1,2-Dibromo-3-chloropropane	ND	4.5	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	4.5	"	"	"	"	"	"	
Dibromomethane	ND	4.5	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.5	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.5	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.5	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.5	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.5	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.5	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.5	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.5	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.5	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.5	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.5	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.5	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.5	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.5	"	"	"	"	"	"	
Ethylbenzene	ND	4.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.5	"	"	"	"	"	"	
Isopropylbenzene	ND	4.5	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.5	"	"	"	"	"	"	
Methylene chloride	ND	4.5	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.5	"	"	"	"	"	"	
Naphthalene	ND	4.5	"	"	"	"	"	"	
n-Propylbenzene	ND	4.5	"	"	"	"	"	"	
Styrene	ND	4.5	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.5	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.5	"	"	"	"	"	"	
Tetrachloroethene	ND	4.5	"	"	"	"	"	"	
Toluene	ND	4.5	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.5	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.5	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.5	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.5	"	"	"	"	"	"	
Trichloroethene	ND	4.5	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.5	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.5	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.5	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.5	"	"	"	"	"	"	
Vinyl chloride	ND	4.5	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
m,p-Xylene	ND	4.5	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
o-Xylene	ND	4.5	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*105 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*74-121*		"	"	"	"	
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
Benzene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Bromobenzene	ND	4.1	"	"	"	"	"	"	
Bromochloromethane	ND	4.1	"	"	"	"	"	"	
Bromodichloromethane	ND	4.1	"	"	"	"	"	"	
Bromoform	ND	4.1	"	"	"	"	"	"	
Bromomethane	ND	4.1	"	"	"	"	"	"	
n-Butylbenzene	ND	4.1	"	"	"	"	"	"	
sec-Butylbenzene	ND	4.1	"	"	"	"	"	"	
tert-Butylbenzene	ND	4.1	"	"	"	"	"	"	
Carbon tetrachloride	ND	4.1	"	"	"	"	"	"	
Chlorobenzene	ND	4.1	"	"	"	"	"	"	
Chloroethane	ND	4.1	"	"	"	"	"	"	
Chloroform	ND	4.1	"	"	"	"	"	"	
Chloromethane	ND	4.1	"	"	"	"	"	"	
2-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
4-Chlorotoluene	ND	4.1	"	"	"	"	"	"	
Dibromochloromethane	ND	4.1	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	4.1	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.1	"	"	"	"	"	"	
Dibromomethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.1	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.1	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.1	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.1	"	"	"	"	"	"	
2,2-Dichloropropane	ND	4.1	"	"	"	"	"	"	
1,1-Dichloropropene	ND	4.1	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.1	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
trans-1,3-Dichloropropene	ND	4.1	µg/kg	1	B0B2001	02/20/20	02/21/20 08:22	EPA 8260B	
Ethylbenzene	ND	4.1	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.1	"	"	"	"	"	"	
Isopropylbenzene	ND	4.1	"	"	"	"	"	"	
p-Isopropyltoluene	ND	4.1	"	"	"	"	"	"	
Methylene chloride	ND	4.1	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.1	"	"	"	"	"	"	
Naphthalene	ND	4.1	"	"	"	"	"	"	
n-Propylbenzene	ND	4.1	"	"	"	"	"	"	
Styrene	ND	4.1	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	4.1	"	"	"	"	"	"	
Tetrachloroethene	ND	4.1	"	"	"	"	"	"	
Toluene	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.1	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.1	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	4.1	"	"	"	"	"	"	
Trichloroethene	ND	4.1	"	"	"	"	"	"	
Trichlorofluoromethane	ND	4.1	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	4.1	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.1	"	"	"	"	"	"	
Vinyl chloride	ND	4.1	"	"	"	"	"	"	
m,p-Xylene	ND	4.1	"	"	"	"	"	"	
o-Xylene	ND	4.1	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*98.5 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*119 %*		*74-121*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-5 (2002212-01) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*94.8 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*82.6 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*106 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*74.2 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*74.6 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*80.8 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-10 (2002212-02) Soil Sampled: 02/18/20 08:17 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*111 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*104 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*81.7 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*92.2 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*91.0 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*94.6 %*	*18-137*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-5 (2002212-03) Soil Sampled: 02/18/20 09:17 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*112 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*101 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*88.6 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*91.6 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*97.8 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*90.7 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-10 (2002212-04) Soil Sampled: 02/18/20 09:24 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*113 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*102 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*85.9 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*94.0 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*96.8 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*84.1 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-5 (2002212-05) Soil Sampled: 02/18/20 10:14 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*98.8 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*52.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*93.4 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*101 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*111 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*73.3 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB3-10 (2002212-06) Soil Sampled: 02/18/20 10:21 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*118 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*107 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*91.6 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*97.0 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*96.8 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*90.4 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-5 (2002212-07) Soil Sampled: 02/18/20 11:09 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*120 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*107 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*88.9 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*94.3 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*110 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*83.8 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB4-10 (2002212-08) Soil Sampled: 02/18/20 11:16 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*117 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*103 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*87.1 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*95.8 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*110 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*88.3 %*	*18-137*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-5 (2002212-09) Soil Sampled: 02/18/20 11:42 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*61.6 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*99.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*97.0 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*101 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*64.6 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*68.2 %*	*18-137*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB5-10 (2002212-10) Soil Sampled: 02/18/20 11:49 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*119 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*111 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*85.3 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*97.3 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*120 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*95.5 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-5 (2002212-11) Soil Sampled: 02/18/20 13:01 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*115 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*106 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*88.0 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*91.3 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*54.4 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*76.6 %*	*18-137*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB6-10 (2002212-12) Soil Sampled: 02/18/20 13:10 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*58.6 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*50.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*97.0 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*98.8 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*80.4 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*62.2 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	**0.67**	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	**0.65**	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	**0.53**	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	**0.70**	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	**1.1**	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-5 (2002212-13) Soil Sampled: 02/18/20 13:41 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	**0.63**	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	**2.5**	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*57.6 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*50.6 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*96.4 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*99.1 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*71.8 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*71.8 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB7-10 (2002212-14) Soil Sampled: 02/18/20 13:48 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*110 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*105 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*78.1 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*93.4 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*93.0 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*50.2 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-5 (2002212-15) Soil Sampled: 02/18/20 14:22 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*115 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*48.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*84.4 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*90.1 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*81.2 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*69.7 %*	*18-137*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB8-10 (2002212-16) Soil Sampled: 02/18/20 14:35 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*120 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*47.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*96.4 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*98.8 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*79.2 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*117 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-5 (2002212-17) Soil Sampled: 02/18/20 15:08 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*111 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*102 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*82.3 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*88.0 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*90.0 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*90.1 %*	*18-137*		"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
Acenaphthene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB9-10 (2002212-18) Soil Sampled: 02/18/20 15:19 Received: 02/18/20 16:10									
Hexachlorobenzene	ND	0.33	mg/kg	1	B0B2102	02/21/20	02/24/20 08:32	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*92.2 %*		*25-121*	"	"	"	"	
Surrogate: Phenol-d6		*94.0 %*		*24-113*	"	"	"	"	
Surrogate: Nitrobenzene-d5		*111 %*		*23-120*	"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*82.3 %*		*30-115*	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*92.6 %*		*19-122*	"	"	"	"	
Surrogate: Terphenyl-d14		*84.1 %*		*18-137*	"	"	"	"	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B1911 - EPA 7471A										
Blank (B0B1911-BLK1)				Prepared & Analyzed: 02/19/20						
Mercury	ND	0.06	mg/kg							
LCS (B0B1911-BS1)				Prepared & Analyzed: 02/19/20						
Mercury	0.17	0.06	mg/kg	0.167		102	70-130			
Matrix Spike (B0B1911-MS1)		**Source: 2002212-01**		Prepared & Analyzed: 02/19/20						
Mercury	0.19	0.06	mg/kg	0.165	0.009	110	70-130			
Matrix Spike Dup (B0B1911-MSD1)		**Source: 2002212-01**		Prepared & Analyzed: 02/19/20						
Mercury	0.20	0.06	mg/kg	0.166	0.009	115	70-130	5.13	30	
Batch B0B1912 - EPA 3050B										
Blank (B0B1912-BLK1)				Prepared: 02/19/20 Analyzed: 02/21/20						
Antimony	ND	5.0	mg/kg							
Arsenic	ND	7.7	"							
Barium	ND	3.0	"							
Beryllium	ND	1.3	"							
Cadmium	ND	1.4	"							
Chromium	ND	3.1	"							
Cobalt	ND	1.5	"							
Copper	ND	7.0	"							
Lead	ND	2.6	"							
Molybdenum	ND	4.2	"							
Nickel	ND	6.8	"							
Selenium	ND	7.6	"							
Silver	ND	1.0	"							
Thallium	ND	2.5	"							
Vanadium	ND	3.0	"							
Zinc	ND	4.0	"							

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B1912 - EPA 3050B										
LCS (B0B1912-BS1)				Prepared: 02/19/20 Analyzed: 02/21/20						
Antimony	109	5.0	mg/kg	100		109	75-125			
Arsenic	97.3	7.7	"	100		97.3	78-122			
Barium	102	3.0	"	100		102	80-120			
Beryllium	106	1.3	"	100		106	80-120			
Cadmium	102	1.4	"	100		102	80-120			
Chromium	104	3.1	"	100		104	80-120			
Cobalt	104	1.5	"	100		104	80-120			
Copper	105	7.0	"	100		105	78-122			
Lead	99.4	2.6	"	100		99.4	80-120			
Molybdenum	97.3	4.2	"	100		97.3	80-120			
Nickel	99.4	6.8	"	100		99.4	80-120			
Selenium	101	7.6	"	100		101	76-124			
Silver	92.1	1.0	"	100		92.1	60-140			
Thallium	99.6	2.5	"	100		99.6	80-120			
Vanadium	102	3.0	"	100		102	80-120			
Zinc	100	4.0	"	100		100	80-120			
LCS Dup (B0B1912-BSD1)				Prepared: 02/19/20 Analyzed: 02/21/20						
Antimony	110	5.0	mg/kg	100		110	75-125	0.913	20	
Arsenic	98.4	7.7	"	100		98.4	78-122	1.12	20	
Barium	102	3.0	"	100		102	80-120	0.00	20	
Beryllium	106	1.3	"	100		106	80-120	0.00	20	
Cadmium	101	1.4	"	100		101	80-120	0.985	20	
Chromium	107	3.1	"	100		107	80-120	2.84	20	
Cobalt	104	1.5	"	100		104	80-120	0.00	20	
Copper	104	7.0	"	100		104	78-122	0.957	20	
Lead	100	2.6	"	100		100	80-120	0.602	20	
Molybdenum	105	4.2	"	100		105	80-120	7.61	20	
Nickel	100	6.8	"	100		100	80-120	0.602	20	
Selenium	101	7.6	"	100		101	76-124	0.00	20	
Silver	87.2	1.0	"	100		87.2	60-140	5.47	40	
Thallium	101	2.5	"	100		101	80-120	1.40	20	
Vanadium	102	3.0	"	100		102	80-120	0.00	20	
Zinc	99.4	4.0	"	100		99.4	80-120	0.602	20	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B1912 - EPA 3050B										
Matrix Spike (B0B1912-MS1)	**Source: 2002212-01**			Prepared: 02/19/20	Analyzed: 02/21/20					
Antimony	86.2	5.0	mg/kg	94.7	1.1	89.9	60-140			
Arsenic	90.3	7.7	"	94.7	ND	95.4	70-130			
Barium	163	3.0	"	94.7	66	102	70-130			
Beryllium	92.5	1.3	"	94.7	0.15	97.5	70-130			
Cadmium	91.3	1.4	"	94.7	0.17	96.2	70-130			
Chromium	111	3.1	"	94.7	15	101	70-130			
Cobalt	101	1.5	"	94.7	6.6	99.7	70-130			
Copper	113	7.0	"	94.7	12	107	70-130			
Lead	93.3	2.6	"	94.7	2.6	95.8	70-130			
Molybdenum	88.0	4.2	"	94.7	0.68	92.2	70-130			
Nickel	106	6.8	"	94.7	10	101	70-130			
Selenium	91.3	7.6	"	94.7	ND	96.4	70-130			
Silver	92.0	1.0	"	94.7	0.93	96.2	60-140			
Thallium	91.1	2.5	"	94.7	0.22	96.0	70-130			
Vanadium	115	3.0	"	94.7	22	98.2	70-130			
Zinc	114	4.0	"	94.7	26	92.9	70-130			
Matrix Spike Dup (B0B1912-MSD1)	**Source: 2002212-01**			Prepared: 02/19/20	Analyzed: 02/21/20					
Antimony	84.8	5.0	mg/kg	94.8	1.1	88.3	60-140	1.64	20	
Arsenic	88.1	7.7	"	94.8	ND	92.9	70-130	2.47	20	
Barium	158	3.0	"	94.8	66	97.0	70-130	3.12	20	
Beryllium	91.5	1.3	"	94.8	0.15	96.4	70-130	1.09	20	
Cadmium	88.4	1.4	"	94.8	0.17	93.1	70-130	3.23	20	
Chromium	108	3.1	"	94.8	15	98.1	70-130	2.74	20	
Cobalt	97.9	1.5	"	94.8	6.6	96.3	70-130	3.12	20	
Copper	108	7.0	"	94.8	12	101	70-130	4.52	30	
Lead	92.0	2.6	"	94.8	2.6	94.3	70-130	1.40	30	
Molybdenum	87.1	4.2	"	94.8	0.68	91.2	70-130	1.03	20	
Nickel	104	6.8	"	94.8	10	99.2	70-130	1.90	20	
Selenium	88.6	7.6	"	94.8	ND	93.5	70-130	3.00	20	
Silver	87.7	1.0	"	94.8	0.93	91.5	60-140	4.79	40	
Thallium	88.6	2.5	"	94.8	0.22	93.2	70-130	2.78	20	
Vanadium	112	3.0	"	94.8	22	94.9	70-130	2.64	20	
Zinc	109	4.0	"	94.8	26	87.6	70-130	4.48	20	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B1913 - EPA 3060A										
Blank (B0B1913-BLK1)				Prepared: 02/19/20		Analyzed: 02/20/20				
Hexavalent Chromium	ND	0.41	mg/kg							
LCS (B0B1913-BS1)				Prepared: 02/19/20		Analyzed: 02/20/20				
Hexavalent Chromium	0.162	0.41	mg/kg	0.150		108	80-120			
Matrix Spike (B0B1913-MS1)		**Source: 2002212-01**		Prepared: 02/19/20		Analyzed: 02/20/20				
Hexavalent Chromium	0.141	0.41	mg/kg	0.141	ND	100	75-125			
Matrix Spike Dup (B0B1913-MSD1)		**Source: 2002212-01**		Prepared: 02/19/20		Analyzed: 02/20/20				
Hexavalent Chromium	0.138	0.41	mg/kg	0.141	ND	97.9	75-125	2.15	20	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Volatile Petroleum Hydrocarbons (TVPH) by GC/FID - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2427 - EPA 5035 P & T										
Blank (B0B2427-BLK1)				Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	ND	0.050	mg/kg							
Surrogate: a,a,a-Trifluorotoluene	*0.0248*		*"*	*0.0200*		*124*	*35-130*			
LCS (B0B2427-BS1)				Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	0.588	0.050	mg/kg	0.600		98.0	85-115			
Matrix Spike (B0B2427-MS1)	**Source: 2002212-01**			Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	0.492	0.050	mg/kg	0.600	ND	82.0	50-150			
Matrix Spike Dup (B0B2427-MSD1)	**Source: 2002212-01**			Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	0.519	0.050	mg/kg	0.600	ND	86.5	50-150	5.34	30	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons (TPH) by GC/FID - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2440 - EPA 3550B Solid Ext										
Blank (B0B2440-BLK1)				Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	ND	5.0	mg/kg							
Oil Range Organics (C22-C36)	ND	5.0	"							
Surrogate: o-Terphenyl	*1.75*		*"*	*2.50*		*70.0*	*60-175*			
Surrogate: o-Terphenyl	*1.75*		*"*	*2.50*		*70.0*	*60-175*			
LCS (B0B2440-BS1)				Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	5.75	5.0	mg/kg	5.00		115	80-120			
Diesel Range Organics (C10-C24)	5.75	5.0	"	5.00		115	80-120			
Matrix Spike (B0B2440-MS1)		**Source: 2002212-01**		Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	5.50	5.0	mg/kg	5.00	ND	110	50-150			
Diesel Range Organics (C10-C24)	5.50	5.0	"	5.00	ND	110	50-150			
Matrix Spike Dup (B0B2440-MSD1)		**Source: 2002212-01**		Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	5.24	5.0	mg/kg	5.00	ND	105	50-150	4.84	30	
Diesel Range Organics (C10-C24)	5.24	5.0	"	5.00	ND	105	50-150	4.84	30	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2427 - EPA 5035 P & T										
Blank (B0B2427-BLK1)				Prepared: 02/24/20 Analyzed: 02/25/20						
C5 <= HC < C6	ND	0.010	mg/kg							
C6 <= HC < C7	ND	0.010	"							
C7 <= HC < C8	ND	0.010	"							
C8 <= HC < C9	ND	0.010	"							
C9 <= HC < C10	ND	0.010	"							
C10 <= HC < C11	ND	0.010	"							
C11 <= HC < C12	ND	0.010	"							
HC >= C12	ND	0.010	"							
Total Petroleum Hydrocarbons (C4-C12)	ND	0.050	"							
Surrogate: a,a,a-Trifluorotoluene	*0.0248*		*"*	*0.0200*		*124*	*35-130*			
LCS (B0B2427-BS1)				Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	0.588	0.050	mg/kg	0.600		98.0	80-120			
Matrix Spike (B0B2427-MS1)	**Source: 2002212-01**			Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	0.492	0.050	mg/kg	0.600	ND	82.0	50-150			
Matrix Spike Dup (B0B2427-MSD1)	**Source: 2002212-01**			Prepared: 02/24/20 Analyzed: 02/25/20						
Gasoline Range Hydrocarbons (C4-C12)	0.519	0.050	mg/kg	0.600	ND	86.5	50-150	5.34	30	
Batch B0B2440 - EPA 3550B Solid Ext										
Blank (B0B2440-BLK1)				Prepared: 02/24/20 Analyzed: 02/25/20						
HC < C8	ND	1.0	mg/kg							
C8 <= HC < C9	ND	1.0	"							
C9 <= HC < C10	ND	1.0	"							
C10 <= HC < C11	ND	1.0	"							
C11 <= HC < C12	ND	1.0	"							
C12 <= HC < C14	ND	1.0	"							
C14 <= HC < C16	ND	1.0	"							
C16 <= HC < C18	ND	1.0	"							
C18 <= HC < C20	ND	1.0	"							
C20 <= HC < C24	ND	1.0	"							
C24 <= HC < C28	ND	1.0	"							
C28 <= HC < C32	ND	1.0	"							
HC >= C32	ND	1.0	"							
Total Petroleum Hydrocarbons (C7-C36)	ND	5.0	"							
Surrogate: o-Terphenyl	*1.75*		*"*	*2.50*		*70.0*	*60-175*			

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Total Petroleum Hydrocarbons Carbon Range Analysis by GC-FID - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2440 - EPA 3550B Solid Ext										
LCS (B0B2440-BS1)				Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	5.75	5.0	mg/kg	5.00		115	80-120			
Matrix Spike (B0B2440-MS1)	**Source: 2002212-01**			Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	5.50	5.0	mg/kg	5.00	ND	110	50-150			
Matrix Spike Dup (B0B2440-MSD1)	**Source: 2002212-01**			Prepared: 02/24/20 Analyzed: 02/25/20						
Diesel Range Organics (C10-C24)	5.24	5.0	mg/kg	5.00	ND	105	50-150	4.84	30	

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2001 - EPA 5035 P & T										
Blank (B0B2001-BLK1)				Prepared: 02/20/20 Analyzed: 02/21/20						
Benzene	ND	5.0	µg/kg							
Bromobenzene	ND	5.0	"							
Bromochloromethane	ND	5.0	"							
Bromodichloromethane	ND	5.0	"							
Bromoform	ND	5.0	"							
Bromomethane	ND	5.0	"							
n-Butylbenzene	ND	5.0	"							
sec-Butylbenzene	ND	5.0	"							
tert-Butylbenzene	ND	5.0	"							
Carbon tetrachloride	ND	5.0	"							
Chlorobenzene	ND	5.0	"							
Chloroethane	ND	5.0	"							
Chloroform	ND	5.0	"							
Chloromethane	ND	5.0	"							
2-Chlorotoluene	ND	5.0	"							
4-Chlorotoluene	ND	5.0	"							
Dibromochloromethane	ND	5.0	"							
1,2-Dibromo-3-chloropropane	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	5.0	"							
Dibromomethane	ND	5.0	"							
1,2-Dichlorobenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	5.0	"							
1,4-Dichlorobenzene	ND	5.0	"							
Dichlorodifluoromethane	ND	5.0	"							
1,1-Dichloroethane	ND	5.0	"							
1,2-Dichloroethane	ND	5.0	"							
1,1-Dichloroethene	ND	5.0	"							
cis-1,2-Dichloroethene	ND	5.0	"							
trans-1,2-Dichloroethene	ND	5.0	"							
1,2-Dichloropropane	ND	5.0	"							
1,3-Dichloropropane	ND	5.0	"							
2,2-Dichloropropane	ND	5.0	"							
1,1-Dichloropropene	ND	5.0	"							
cis-1,3-Dichloropropene	ND	5.0	"							
trans-1,3-Dichloropropene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
Hexachlorobutadiene	ND	5.0	"							

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Mearns Consulting LLC	Project:	950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number:	[none]	**Reported:**
Santa Monica CA, 90405	Project Manager:	Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2001 - EPA 5035 P & T										
Blank (B0B2001-BLK1)				Prepared: 02/20/20 Analyzed: 02/21/20						
Isopropylbenzene	ND	5.0	µg/kg							
p-Isopropyltoluene	ND	5.0	"							
Methylene chloride	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Naphthalene	ND	5.0	"							
n-Propylbenzene	ND	5.0	"							
Styrene	ND	5.0	"							
1,1,1,2-Tetrachloroethane	ND	5.0	"							
1,1,2,2-Tetrachloroethane	ND	5.0	"							
Tetrachloroethene	ND	5.0	"							
Toluene	ND	5.0	"							
1,2,3-Trichlorobenzene	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	5.0	"							
1,1,1-Trichloroethane	ND	5.0	"							
1,1,2-Trichloroethane	ND	5.0	"							
Trichloroethene	ND	5.0	"							
Trichlorofluoromethane	ND	5.0	"							
1,2,3-Trichloropropane	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
1,3,5-Trimethylbenzene	ND	5.0	"							
Vinyl chloride	ND	5.0	"							
m,p-Xylene	ND	5.0	"							
o-Xylene	ND	5.0	"							
Surrogate: Dibromofluoromethane	*50.4*		*"*	*50.0*		*101*	*80-120*			
Surrogate: Toluene-d8	*47.7*		*"*	*50.0*		*95.4*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*57.7*		*"*	*50.0*		*115*	*74-121*			
LCS (B0B2001-BS1)				Prepared: 02/20/20 Analyzed: 02/21/20						
Benzene	51.2	5.0	µg/kg	50.0		102	80-120			
Chlorobenzene	57.6	5.0	"	50.0		115	80-120			
1,1-Dichloroethene	56.6	5.0	"	50.0		113	80-120			
Toluene	49.1	5.0	"	50.0		98.2	80-120			
Trichloroethene	55.0	5.0	"	50.0		110	80-120			

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2001 - EPA 5035 P & T										
Matrix Spike (B0B2001-MS1)	**Source: 2002212-18**			Prepared: 02/20/20	Analyzed: 02/21/20					
Benzene	51.1	5.0	µg/kg	50.0	ND	102	37-151			
Chlorobenzene	53.9	5.0	"	50.0	ND	108	37-160			
1,1-Dichloroethene	60.6	5.0	"	50.0	ND	121	50-150			
Toluene	47.0	5.0	"	50.0	ND	94.0	47-150			
Trichloroethene	49.6	5.0	"	50.0	ND	99.2	71-157			
Matrix Spike Dup (B0B2001-MSD1)	**Source: 2002212-18**			Prepared: 02/20/20	Analyzed: 02/21/20					
Benzene	58.7	5.0	µg/kg	50.0	ND	117	37-151	13.8	30	
Chlorobenzene	60.2	5.0	"	50.0	ND	120	37-160	11.0	30	
1,1-Dichloroethene	52.7	5.0	"	50.0	ND	105	50-150	13.9	30	
Toluene	44.6	5.0	"	50.0	ND	89.2	47-150	5.24	30	
Trichloroethene	50.2	5.0	"	50.0	ND	100	71-157	1.20	30	

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Mearns Consulting LLC	Project:	950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number:	[none]	**Reported:**
Santa Monica CA, 90405	Project Manager:	Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2102 - EPA 3550B Solid Ext										
Blank (B0B2102-BLK1)				Prepared: 02/21/20 Analyzed: 02/24/20						
Acenaphthene	ND	0.33	mg/kg							
Acenaphthylene	ND	0.33	"							
Anthracene	ND	0.33	"							
Benzidine	ND	0.33	"							
Benzo (a) anthracene	ND	0.33	"							
Benzo (b) fluoranthene	ND	0.33	"							
Benzo (k) fluoranthene	ND	0.33	"							
Benzo (a) pyrene	ND	0.33	"							
Benzo (g,h,i) perylene	ND	0.33	"							
Benzyl alcohol	ND	0.33	"							
Bis(2-chloroethyl)ether	ND	0.33	"							
Bis(2-chloroethoxy)methane	ND	0.33	"							
Bis(2-ethylhexyl)phthalate	ND	0.33	"							
Bis(2-chloroisopropyl)ether	ND	0.33	"							
4-Bromophenyl phenyl ether	ND	0.33	"							
Butyl benzyl phthalate	ND	0.33	"							
4-Chloroaniline	ND	0.33	"							
2-Chlorophenol	ND	0.33	"							
4-Chloro-3-methylphenol	ND	0.33	"							
2-Chloronaphthalene	ND	0.33	"							
4-Chlorophenyl phenyl ether	ND	0.33	"							
Chrysene	ND	0.33	"							
Dibenz (a,h) anthracene	ND	0.33	"							
Dibenzofuran	ND	0.33	"							
1,3-Dichlorobenzene	ND	0.33	"							
1,2-Dichlorobenzene	ND	0.33	"							
1,4-Dichlorobenzene	ND	0.33	"							
3,3´-Dichlorobenzidine	ND	0.33	"							
2,4-Dichlorophenol	ND	0.33	"							
Diethyl phthalate	ND	0.33	"							
2,4-Dimethylphenol	ND	0.33	"							
Dimethyl phthalate	ND	0.33	"							
Di-n-butyl phthalate	ND	0.33	"							
2,4-Dinitrophenol	ND	0.33	"							
4,6-Dinitro-2-methylphenol	ND	0.33	"							
2,4-Dinitrotoluene	ND	0.33	"							
2,6-Dinitrotoluene	ND	0.33	"							

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2102 - EPA 3550B Solid Ext										
Blank (B0B2102-BLK1)				Prepared: 02/21/20 Analyzed: 02/24/20						
Di-n-octyl phthalate	ND	0.33	mg/kg							
1,2-Diphenylhydrazine	ND	0.33	"							
Fluoranthene	ND	0.33	"							
Fluorene	ND	0.33	"							
Hexachlorobenzene	ND	0.33	"							
Hexachlorobutadiene	ND	0.33	"							
Hexachlorocyclopentadiene	ND	0.33	"							
Hexachloroethane	ND	0.33	"							
Indeno (1,2,3-cd) pyrene	ND	0.33	"							
Isophorone	ND	0.33	"							
2-Methylnaphthalene	ND	0.33	"							
2-Methylphenol	ND	0.33	"							
4-Methylphenol	ND	0.33	"							
Naphthalene	ND	0.33	"							
2-Nitroaniline	ND	0.33	"							
3-Nitroaniline	ND	0.33	"							
4-Nitroaniline	ND	0.33	"							
Nitrobenzene	ND	0.33	"							
2-Nitrophenol	ND	0.33	"							
4-Nitrophenol	ND	0.33	"							
N-Nitrosodimethylamine	ND	0.33	"							
Diphenylamine	ND	0.33	"							
N-Nitrosodi-n-propylamine	ND	0.33	"							
Pentachlorophenol	ND	0.33	"							
Phenanthrene	ND	0.33	"							
Phenol	ND	0.33	"							
Pyrene	ND	0.33	"							
1,2,4-Trichlorobenzene	ND	0.33	"							
2,4,5-Trichlorophenol	ND	0.33	"							
2,4,6-Trichlorophenol	ND	0.33	"							
Surrogate: 2-Fluorophenol	*0.410*		"	*0.500*		*82.0*	*25-121*			
Surrogate: Phenol-d6	*0.367*		"	*0.500*		*73.4*	*24-113*			
Surrogate: Nitrobenzene-d5	*0.333*		"	*0.333*		*100*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*0.235*		"	*0.333*		*70.6*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*0.368*		"	*0.500*		*73.6*	*19-122*			
Surrogate: Terphenyl-d14	*0.294*		"	*0.333*		*88.3*	*18-137*			

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Mearns Consulting LLC	Project: 950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number: [none]	**Reported:**
Santa Monica CA, 90405	Project Manager: Susan Mearns	02/26/20 11:36

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0B2102 - EPA 3550B Solid Ext										
LCS (B0B2102-BS1)				Prepared: 02/21/20 Analyzed: 02/24/20						
Acenaphthene	0.270	0.33	mg/kg	0.333		81.1	47-145			
2-Chlorophenol	0.838	0.33	"	0.667		126	23-134			
4-Chloro-3-methylphenol	0.791	0.33	"	0.667		119	22-147			
1,4-Dichlorobenzene	0.357	0.33	"	0.333		107	20-124			
2,4-Dinitrotoluene	0.335	0.33	"	0.333		101	39-139			
4-Nitrophenol	0.772	0.33	"	0.667		116	0-132			
N-Nitrosodi-n-propylamine	0.470	0.33	"	0.333		141	0-230			
Pentachlorophenol	0.526	0.33	"	0.667		78.9	14-176			
Phenol	0.578	0.33	"	0.667		86.7	5-112			
Pyrene	0.283	0.33	"	0.333		85.0	52-115			
1,2,4-Trichlorobenzene	0.369	0.33	"	0.333		111	44-142			
Matrix Spike (B0B2102-MS1)		**Source: 2002212-01**		Prepared: 02/21/20 Analyzed: 02/24/20						
Acenaphthene	0.255	0.33	mg/kg	0.333	ND	76.6	47-145			
2-Chlorophenol	0.810	0.33	"	0.667	ND	121	23-134			
4-Chloro-3-methylphenol	0.756	0.33	"	0.667	ND	113	22-147			
1,4-Dichlorobenzene	0.314	0.33	"	0.333	ND	94.3	20-124			
2,4-Dinitrotoluene	0.145	0.33	"	0.333	ND	43.5	39-139			
4-Nitrophenol	0.595	0.33	"	0.667	ND	89.2	0-132			
N-Nitrosodi-n-propylamine	0.421	0.33	"	0.333	ND	126	0-230			
Pentachlorophenol	0.361	0.33	"	0.667	ND	54.1	14-176			
Phenol	0.537	0.33	"	0.667	ND	80.5	5-112			
Pyrene	0.318	0.33	"	0.333	ND	95.5	52-115			
1,2,4-Trichlorobenzene	0.318	0.33	"	0.333	ND	95.5	44-142			
Matrix Spike Dup (B0B2102-MSD1)		**Source: 2002212-01**		Prepared: 02/21/20 Analyzed: 02/24/20						
Acenaphthene	0.292	0.33	mg/kg	0.333	ND	87.7	47-145	13.5	30	
2-Chlorophenol	0.808	0.33	"	0.667	ND	121	23-134	0.247	30	
4-Chloro-3-methylphenol	0.707	0.33	"	0.667	ND	106	22-147	6.70	30	
1,4-Dichlorobenzene	0.347	0.33	"	0.333	ND	104	20-124	9.98	30	
2,4-Dinitrotoluene	0.175	0.33	"	0.333	ND	52.6	39-139	18.8	30	
4-Nitrophenol	0.773	0.33	"	0.667	ND	116	0-132	26.0	30	
N-Nitrosodi-n-propylamine	0.480	0.33	"	0.333	ND	144	0-230	13.1	30	
Pentachlorophenol	0.309	0.33	"	0.667	ND	46.3	14-176	15.5	30	
Phenol	0.555	0.33	"	0.667	ND	83.2	5-112	3.30	30	
Pyrene	0.349	0.33	"	0.333	ND	105	52-115	9.30	30	
1,2,4-Trichlorobenzene	0.356	0.33	"	0.333	ND	107	44-142	11.3	30	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mearns Consulting LLC	Project:	950 E. 33rd & 3177 California Ave.	
738 Ashland Avenue	Project Number:	[none]	**Reported:**
Santa Monica CA, 90405	Project Manager:	Susan Mearns	02/26/20 11:36

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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FAX: 949 • 348 • 9115
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CHAIN OF CUSTODY RECORD

Date: 2 / 18 / 20 Page: 1 of 2

Lab Work Order No.: 2002212

Client: MEARNS CONSULTING CORP
Client Address: 738 ASHLAND AVE
SANTA MONICA CA 90405

Client Tel. No.: 310 403 1921
Client Fax. No.: 310 396 6878
Client Proj. Mgr.: SUSAN L MEARNS PHD

Client Project ID: 950 E 33rd & 3477 CALIFORNIA AVE

Turn Around Time Requested: ☐ Immediate ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4 Day ☐ 5 Day ☒ Normal ☐ Mobile

Analyses Requested

Geotracker EDD Info:
Client LOGCODE
Site Global ID

Client Sample ID.	Sierra No.	Date	Time	Matrix	Preservative	Container Type	No. of Containers	TPHg 8015B	TPHd 8015B	TPHo 8015B	SPECIATED CARBON CHAINS 8015B	VOCs 5035B / 8260B	SVOCs 8270	TTLC METALS 6000/7000	Cr+6					Field Point Names / Comments
SB1-5	01	2-18-20	0817	SOIL	10E	6" SLV 4 VOA VIALS	1/4	X	X	X	X	X	X	X	X					
SB1-10	02	↓	0817	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB2-5	03		0917					X	X	X	X	X	X	X	X					
SB2-10	04		0924					X	X	X	X	X	X	X	X					
SB3-5	05		1014					X	X	X	X	X	X	X	X					
SB3-10	06		1021					X	X	X	X	X	X	X	X					
SB4-5	07		1109					X	X	X	X	X	X	X	X					
SB4-10	08		1116					X	X	X	X	X	X	X	X					
SB5-5	09		1142					X	X	X	X	X	X	X	X					
SB5-10	10	↓	1149	↓	↓	↓	↓	X	X	X	X	X	X	X	X					

1 Sampler Signature: [signature] Scott Fagan
Printed Name: SUSAN MEARNS Scott Fagan
Shipped Via: HAND DELIVERED
(Carrier/Waybill No.)

50/80 Total Number of Containers Submitted to Laboratory

2 Relinquished By: [signature] Date: 2-18-20 Received By: [signature] Date: 2/18/20
Company: MEARNS CONSULTING Time: 1610 Company: SIERRA Time: 1610

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under SIERRA's Terms and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT.
* - Samples determined to be hazardous by SIERRA will be returned to CLIENT.

3 Relinquished By: Date: Received By: Date:
Company: Time: Company: Time:

50/80 Total Number of Containers Received by Laboratory

4 Relinquished By: Date: Received By: Date:
Company: Time: Company: Time:

Special Instructions:

Sample Disposal:
☐ Return to Client
☐ Lab Disposal *
☐ Archive ____ mos.
☐ Other ____

FOR LABORATORY USE ONLY - Sample Receipt Conditions:
☑ Intact ☑ Chilled - Temp (°C) 40°
☐ Sample Seals ☐ Preservatives - Verified By
☑ Properly Labelled ☐ Other
☑ Appropriate Sample Container ☑ Storage Location R5-R1A2

Rev: 120321

DISTRIBUTION: White - To Accompany Samples, Yellow - Laboratory Copy, Pink - Field Personnel Copy

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CHAIN OF CUSTODY RECORD

Date: 2 / 18 / 20 Page: 2 of 2

Lab Work Order No.: 2002212

Client: MEARNS CONSULTING CORP
Client Address: 738 ASHLAND AVE
SANTA MONICA CA 90405

Client Tel. No.: 310 403 1921
Client Fax. No.: 310 396 6878
Client Proj. Mgr.: SUSAN L MEARNS PHD

Client Project ID: 950 E33rd & 3177 CALIFORNIA

Turn Around Time Requested: ☐ Immediate ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4 Day ☐ 5 Day ☒ Normal ☐ Mobile

Analyses Requested

Geotracker EDD Info:
Client LOGCODE
Site Global ID

Client Sample ID.	Sierra No.	Date	Time	Matrix	Preservative	Container Type	No. of Containers	TPHg 8015B	TPHd 8015B	TPHo 8015B	Speciated Carbon Chains 8015B	VOCs 5035B/8260B	SVOCs 8270	TLC Metals 6000/7000	Cr+6					Field Point Names / Comments
SB6-5	11	2-18-20	1301	SOIL	ICE	6" SDV VOA VIALS	1/4	X	X	X	X	X	X	X	X					
SB6-10	12	↓	1310	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB7-5	13	↓	1341	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB7-10	14	↓	1348	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB8-5	15	↓	1422	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB8-10	16	↓	1435	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB9-5	17	↓	1508	↓	↓	↓	↓	X	X	X	X	X	X	X	X					
SB9-10	18	↓	1519	↓	↓	↓	↓	X	X	X	X	X	X	X	X					

1 Sampler Signature: [signature] Scott Fagan
Printed Name: SUSAN MEARNS Scott Fagan
Shipped Via: HAND DELIVERED
(Carrier/Waybill No.)

2 Relinquished By: [signature] Date: 2-18-20 Received By: [signature] Date: 2/18/20
Company: MEARNS CONSULTING Time: 1610 Company: Scott Fagan Time: 1610

3 Relinquished By: Date: Received By: Date:
Company: Time: Company: Time:

4 Relinquished By: Date: Received By: Date:
Company: Time: Company: Time:

Special Instructions:

40/80 Total Number of Containers Submitted to Laboratory

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under SIERRA's Terms and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT.
* Samples determined to be hazardous by SIERRA will be returned to CLIENT.

40/80 Total Number of Containers Received by Laboratory

Sample Disposal:
☐ Return to Client
☐ Lab Disposal *
☐ Archive ____ mos.
☐ Other ____

FOR LABORATORY USE ONLY - Sample Receipt Conditions:
☑ Intact ☑ Chilled - Temp (°C) 40
☐ Sample Seals ☐ Preservatives - Verified By
☑ Properly Labelled ☐ Other
☑ Appropriate Sample Container ☑ Storage Location (RS-[illegible])

Rev: 120321

DISTRIBUTION: White - To Accompany Samples, Yellow - Laboratory Copy, Pink - Field Personnel Copy

APPENDIX C

Jones Environmental Inc.
Soil Vapor Analytical Results
February 21, 2020

JONES ENVIRONMENTAL, INC.

714-449-9937
562-646-1611
805-399-0060

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SANTA FE SPRINGS, CA 90670
WWW.JONESENV.COM

JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

ANALYSES REQUESTED

1. EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sampling – Soil Gas samples were collected in glass gas-tight syringes equipped with Teflon plungers.

A tracer gas mixture of n-pentane, n-hexane, and n-heptane was placed at the tubing-surface interface before sampling. These compounds were analyzed during the 8260B analytical run to determine if there were surface leaks into the subsurface due to improper installation of the probe. No tracer was detected in any of the samples reported herein.

The sampling rate was approximately 200 cc/min, except when noted differently on the chain of custody record, using a glass gas-tight syringe. Purging was completed using a pump set at approximately 200 cc/min, except when noted differently on the chain of custody record. A default of 3 purge volumes was used as recommended by July 2015 DTSC/RWQCB guidance documents.

Prior to purging and sampling of soil gas at each point, a shut-in test was conducted to check for leaks in the above ground fittings. The shut-in test was performed on the above ground apparatus by evacuating the line to a vacuum of 100 inches of water, sealing the entire system and watching the vacuum for at least one minute. A vacuum gauge attached in parallel to the apparatus measured the vacuum. If there was any observable loss of vacuum, the fittings were adjusted as needed until the vacuum did not change noticeably. The soil gas sample was then taken.

No flow conditions occur when a sampling rate greater than 10 mL/min cannot be maintained without applying a vacuum greater than 100 inches of water to the sampling train. The sampling train is left at a vacuum for no less than three minutes. If the vacuum does not subside appreciably after three minutes, the sample location is determined to be a no flow sample.

Analytical – Soil Gas samples were analyzed using EPA Method 8260 that includes extra compounds required by DTSC/RWQCB (such as Freon 113). Instrument Continuing Calibration Verification, QC Reference Standards, Instrument Blanks and Sampling Blanks were analyzed every 12 hours as prescribed by the method. In addition, a Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were analyzed with each batch of Soil Gas samples. A duplicate/replicate sample was analyzed each day of the sampling activity. All samples were injected into the GC/MS system within 30 minutes of collection.

Approval:

Colby Wakeman
QA/QC Manager

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV1-5'**	**SV1-10'**	**SV2-5'**	**SV2-10'**	**SV3-5'**		
Jones ID:	**G-0094-01**	**G-0094-02**	**G-0094-03**	**G-0094-04**	**G-0094-05**	**Reporting Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	8	µg/m3
Bromobenzene	ND	ND	ND	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	ND	ND	ND	8	µg/m3
Bromoform	ND	ND	ND	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
sec-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
tert-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
Carbon tetrachloride	ND	ND	ND	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	ND	ND	ND	8	µg/m3
Chloroform	**12**	ND	ND	ND	ND	8	µg/m3
2-Chlorotoluene	ND	ND	ND	ND	ND	12	µg/m3
4-Chlorotoluene	ND	ND	ND	ND	ND	12	µg/m3
Dibromochloromethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	8	µg/m3
Dibromomethane	ND	ND	ND	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
Dichlorodifluoromethane	ND	ND	ND	ND	ND	16	µg/m3
1,1-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	ND	ND	ND	16	µg/m3
1,1-Dichloropropene	ND	ND	ND	ND	ND	10	µg/m3

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV1-5'**	**SV1-10'**	**SV2-5'**	**SV2-10'**	**SV3-5'**		
Jones ID:	**G-0094-01**	**G-0094-02**	**G-0094-03**	**G-0094-04**	**G-0094-05**	**Reporting Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
Ethylbenzene	**18**	ND	ND	ND	ND	8	µg/m3
Freon 113	ND	ND	ND	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	ND	ND	ND	24	µg/m3
Isopropylbenzene	ND	ND	ND	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	ND	ND	ND	8	µg/m3
Methylene chloride	ND	ND	ND	ND	ND	8	µg/m3
Naphthalene	ND	ND	ND	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	ND	ND	ND	8	µg/m3
Styrene	ND	ND	ND	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	16	µg/m3
Tetrachloroethene	ND	ND	**8**	ND	ND	8	µg/m3
Toluene	**21**	ND	**33**	**11**	**32**	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
Trichloroethene	ND	ND	ND	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	ND	ND	ND	16	µg/m3
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	**8**	ND	**11**	ND	**11**	8	µg/m3
1,3,5-Trimethylbenzene	**9**	ND	ND	ND	ND	8	µg/m3
Vinyl chloride	ND	ND	ND	ND	ND	8	µg/m3
m,p-Xylene	**100**	ND	ND	ND	ND	16	µg/m3
o-Xylene	**34**	ND	ND	ND	ND	8	µg/m3
MTBE	ND	ND	ND	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	ND	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	ND	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	ND	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	ND	ND	ND	400	µg/m3
Gasoline Range Organics (C4-C12)	ND	ND	ND	ND	ND	2000	µg/m3
Tracer:							
n-Pentane	ND	ND	ND	ND	ND	80	µg/m3
n-Hexane	ND	ND	ND	ND	ND	80	µg/m3
n-Heptane	ND	ND	ND	ND	ND	80	µg/m3
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	112%	110%	113%	116%	113%	60 - 140	
Toluene-d_8	95%	103%	97%	98%	98%	60 - 140	
4-Bromofluorobenzene	99%	102%	101%	100%	103%	60 - 140	
Batch ID:	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01		

ND = Value below reporting limit

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV3-10'**	**SV4-5'**	**SV4-10'**	**SV4-10' REP**	**SV5-5'**		
Jones ID:	**G-0094-06**	**G-0094-07**	**G-0094-08**	**G-0094-09**	**G-0094-10**	**Reporting Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	8	µg/m3
Bromobenzene	ND	ND	ND	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	ND	ND	ND	8	µg/m3
Bromoform	ND	ND	ND	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
sec-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
tert-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
Carbon tetrachloride	ND	ND	ND	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	ND	ND	ND	8	µg/m3
Chloroform	ND	ND	ND	ND	**8**	8	µg/m3
2-Chlorotoluene	ND	ND	ND	ND	ND	12	µg/m3
4-Chlorotoluene	ND	ND	ND	ND	ND	12	µg/m3
Dibromochloromethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	8	µg/m3
Dibromomethane	ND	ND	ND	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
Dichlorodifluoromethane	ND	ND	ND	ND	ND	16	µg/m3
1,1-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	ND	ND	ND	16	µg/m3
1,1-Dichloropropene	ND	ND	ND	ND	ND	10	µg/m3

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV3-10'**	**SV4-5'**	**SV4-10'**	**SV4-10' REP**	**SV5-5'**		
Jones ID:	**G-0094-06**	**G-0094-07**	**G-0094-08**	**G-0094-09**	**G-0094-10**	**Reporting Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
Ethylbenzene	ND	ND	ND	ND	ND	8	µg/m3
Freon 113	ND	ND	ND	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	ND	ND	ND	24	µg/m3
Isopropylbenzene	ND	ND	ND	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	ND	ND	ND	8	µg/m3
Methylene chloride	ND	ND	ND	ND	ND	8	µg/m3
Naphthalene	ND	ND	ND	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	ND	ND	ND	8	µg/m3
Styrene	ND	ND	ND	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	16	µg/m3
Tetrachloroethene	ND	ND	ND	ND	ND	8	µg/m3
Toluene	ND	**10**	ND	ND	ND	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
Trichloroethene	ND	ND	ND	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	ND	ND	ND	16	µg/m3
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	ND	**16**	ND	ND	**13**	8	µg/m3
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	8	µg/m3
Vinyl chloride	ND	ND	ND	ND	ND	8	µg/m3
m,p-Xylene	ND	ND	ND	ND	**19**	16	µg/m3
o-Xylene	ND	ND	ND	ND	**9**	8	µg/m3
MTBE	ND	ND	ND	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	ND	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	ND	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	ND	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	ND	ND	ND	400	µg/m3
Gasoline Range Organics (C4-C12)	ND	ND	ND	ND	ND	2000	µg/m3
Tracer:							
n-Pentane	ND	ND	ND	ND	ND	80	µg/m3
n-Hexane	ND	ND	ND	ND	ND	80	µg/m3
n-Heptane	ND	ND	ND	ND	ND	80	µg/m3
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	113%	107%	115%	115%	110%	60 - 140	
Toluene-d_8	98%	99%	98%	97%	98%	60 - 140	
4-Bromofluorobenzene	104%	101%	100%	97%	100%	60 - 140	
Batch ID:	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01		

ND = Value below reporting limit

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV5-10'**	**SV6-5'**	**SV6-5' REP**	**SV7-5'**	**SV7-10'**		
Jones ID:	**G-0094-11**	**G-0094-12**	**G-0094-13**	**G-0094-15**	**G-0094-16**	**Reporting Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	**19**	8	µg/m3
Bromobenzene	ND	ND	ND	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	ND	ND	ND	8	µg/m3
Bromoform	ND	ND	ND	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
sec-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
tert-Butylbenzene	ND	ND	ND	ND	ND	12	µg/m3
Carbon tetrachloride	ND	ND	ND	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	ND	ND	ND	8	µg/m3
Chloroform	ND	ND	ND	ND	**11**	8	µg/m3
2-Chlorotoluene	ND	ND	ND	ND	ND	12	µg/m3
4-Chlorotoluene	ND	ND	ND	ND	ND	12	µg/m3
Dibromochloromethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	8	µg/m3
Dibromomethane	ND	ND	ND	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
Dichlorodifluoromethane	ND	ND	ND	ND	ND	16	µg/m3
1,1-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	ND	ND	ND	16	µg/m3
1,1-Dichloropropene	ND	ND	ND	ND	ND	10	µg/m3

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV5-10'**	**SV6-5'**	**SV6-5' REP**	**SV7-5'**	**SV7-10'**		
Jones ID:	**G-0094-11**	**G-0094-12**	**G-0094-13**	**G-0094-15**	**G-0094-16**	**Reporting Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
Ethylbenzene	ND	ND	ND	ND	**23**	8	µg/m3
Freon 113	ND	ND	ND	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	ND	ND	ND	24	µg/m3
Isopropylbenzene	ND	ND	ND	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	ND	ND	ND	8	µg/m3
Methylene chloride	ND	ND	ND	ND	ND	8	µg/m3
Naphthalene	ND	ND	ND	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	ND	ND	**20**	8	µg/m3
Styrene	ND	ND	ND	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	16	µg/m3
Tetrachloroethene	ND	ND	ND	ND	ND	8	µg/m3
Toluene	ND	ND	ND	ND	**45**	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
Trichloroethene	ND	ND	ND	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	ND	ND	ND	16	µg/m3
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	ND	ND	ND	ND	**123**	8	µg/m3
1,3,5-Trimethylbenzene	ND	ND	ND	ND	**40**	8	µg/m3
Vinyl chloride	ND	ND	ND	ND	ND	8	µg/m3
m,p-Xylene	ND	ND	ND	ND	**76**	16	µg/m3
o-Xylene	ND	ND	ND	ND	**40**	8	µg/m3
MTBE	ND	ND	ND	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	ND	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	ND	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	ND	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	ND	ND	ND	400	µg/m3
Gasoline Range Organics (C4-C12)	ND	ND	ND	ND	ND	2000	µg/m3
Tracer:							
n-Pentane	ND	ND	ND	ND	ND	80	µg/m3
n-Hexane	ND	ND	ND	ND	ND	80	µg/m3
n-Heptane	ND	ND	ND	ND	ND	80	µg/m3
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	113%	113%	109%	108%	111%	60 - 140	
Toluene-d_8	98%	100%	98%	98%	97%	60 - 140	
4-Bromofluorobenzene	99%	101%	104%	102%	101%	60 - 140	
Batch ID:	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01		

ND = Value below reporting limit

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV8-5'**	**SV8-10'**	**SV9-5'**	**SV9-10'**		
Jones ID:	**G-0094-17**	**G-0094-18**	**G-0094-19**	**G-0094-20**	**Reporting Limit**	**Units**
Analytes:						
Benzene	ND	ND	ND	**19**	8	µg/m3
Bromobenzene	ND	ND	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	ND	ND	8	µg/m3
Bromoform	ND	ND	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	ND	ND	12	µg/m3
sec-Butylbenzene	ND	ND	ND	ND	12	µg/m3
tert-Butylbenzene	ND	ND	ND	ND	12	µg/m3
Carbon tetrachloride	ND	ND	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	ND	ND	8	µg/m3
Chloroform	**34**	ND	ND	**20**	8	µg/m3
2-Chlorotoluene	ND	ND	ND	ND	12	µg/m3
4-Chlorotoluene	ND	ND	ND	ND	12	µg/m3
Dibromochloromethane	ND	ND	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	8	µg/m3
Dibromomethane	ND	ND	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	ND	ND	16	µg/m3
1,3-Dichlorobenzene	ND	ND	ND	ND	16	µg/m3
1,4-Dichlorobenzene	ND	ND	ND	ND	16	µg/m3
Dichlorodifluoromethane	ND	ND	ND	ND	16	µg/m3
1,1-Dichloroethane	ND	ND	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	ND	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	ND	ND	16	µg/m3
1,1-Dichloropropene	ND	ND	ND	ND	10	µg/m3

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV8-5'**	**SV8-10'**	**SV9-5'**	**SV9-10'**		
Jones ID:	**G-0094-17**	**G-0094-18**	**G-0094-19**	**G-0094-20**	**Reporting Limit**	**Units**
Analytes:						
cis-1,3-Dichloropropene	ND	ND	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	ND	ND	8	µg/m3
Ethylbenzene	ND	ND	ND	**99**	8	µg/m3
Freon 113	ND	ND	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	ND	ND	24	µg/m3
Isopropylbenzene	ND	ND	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	ND	ND	8	µg/m3
Methylene chloride	ND	ND	ND	ND	8	µg/m3
Naphthalene	ND	ND	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	ND	ND	8	µg/m3
Styrene	ND	ND	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	16	µg/m3
Tetrachloroethene	ND	ND	ND	ND	8	µg/m3
Toluene	ND	ND	ND	**27**	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	ND	ND	8	µg/m3
Trichloroethene	ND	ND	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	ND	ND	16	µg/m3
1,2,3-Trichloropropane	ND	ND	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	ND	ND	ND	ND	8	µg/m3
1,3,5-Trimethylbenzene	ND	ND	ND	ND	8	µg/m3
Vinyl chloride	ND	ND	ND	ND	8	µg/m3
m,p-Xylene	ND	ND	ND	**322**	16	µg/m3
o-Xylene	ND	ND	ND	**151**	8	µg/m3
MTBE	ND	ND	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	ND	ND	400	µg/m3
Gasoline Range Organics (C4-C12)	ND	ND	ND	ND	2000	µg/m3
Tracer:						
n-Pentane	ND	ND	ND	ND	80	µg/m3
n-Hexane	ND	ND	ND	ND	80	µg/m3
n-Heptane	ND	ND	ND	ND	80	µg/m3
Dilution Factor	1	1	1	1		
Surrogate Recoveries:					**QC Limits**	
Dibromofluoromethane	108%	109%	113%	112%	60 - 140	
Toluene-d_8	99%	96%	95%	96%	60 - 140	
4-Bromofluorobenzene	101%	100%	99%	100%	60 - 140	
Batch ID:	G1-022120-01	G1-022120-01	G1-022120-01	G1-022120-01		

ND = Value below reporting limit

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**METHOD BLANK**	**SAMPLING BLANK**		
Jones ID:	**022120-G1MB1**	**022120-G1SB1**	**Reporting Limit**	**Units**
Analytes:				
Benzene	ND	ND	8	µg/m3
Bromobenzene	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	8	µg/m3
Bromoform	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	12	µg/m3
sec-Butylbenzene	ND	ND	12	µg/m3
tert-Butylbenzene	ND	ND	12	µg/m3
Carbon tetrachloride	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	8	µg/m3
Chloroform	ND	ND	8	µg/m3
2-Chlorotoluene	ND	ND	12	µg/m3
4-Chlorotoluene	ND	ND	12	µg/m3
Dibromochloromethane	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	8	µg/m3
Dibromomethane	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	16	µg/m3
1,3-Dichlorobenzene	ND	ND	16	µg/m3
1,4-Dichlorobenzene	ND	ND	16	µg/m3
Dichlorodifluoromethane	ND	ND	16	µg/m3
1,1-Dichloroethane	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	16	µg/m3
1,1-Dichloropropene	ND	ND	10	µg/m3

JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**METHOD BLANK**	**SAMPLING BLANK**		
Jones ID:	**022120-G1MB1**	**022120-G1SB1**	**Reporting Limit**	**Units**
Analytes:				
cis-1,3-Dichloropropene	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	8	µg/m3
Ethylbenzene	ND	ND	8	µg/m3
Freon 113	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	24	µg/m3
Isopropylbenzene	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	8	µg/m3
Methylene chloride	ND	ND	8	µg/m3
Naphthalene	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	8	µg/m3
Styrene	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	16	µg/m3
Tetrachloroethene	ND	ND	8	µg/m3
Toluene	ND	ND	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	8	µg/m3
Trichloroethene	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	16	µg/m3
1,2,3-Trichloropropane	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	ND	ND	8	µg/m3
1,3,5-Trimethylbenzene	ND	ND	8	µg/m3
Vinyl chloride	ND	ND	8	µg/m3
m,p-Xylene	ND	ND	16	µg/m3
o-Xylene	ND	ND	8	µg/m3
MTBE	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	400	µg/m3
Gasoline Range Organics (C4-C12)	ND	ND	2000	µg/m3
Tracer:				
n-Pentane	ND	ND	80	µg/m3
n-Hexane	ND	ND	80	µg/m3
n-Heptane	ND	ND	80	µg/m3
Dilution Factor	1	1		
Surrogate Recoveries:			**QC Limits**	
Dibromofluoromethane	114%	110%	60 - 140	
Toluene-d_8	97%	92%	60 - 140	
4-Bromofluorobenzene	105%	97%	60 - 140	
Batch ID:	G1-022120-01	G1-022120-01		

ND = Value below reporting limit

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Mearns Consulting Corp	**Report date:**	2/21/2020
Client Address:	738 Ashland Avenue Santa Monica, CA 90405	**Jones Ref. No.:**	G-0094
Attn:	Susan L Mearns	**Date Sampled:**	2/21/2020
		Date Received:	2/21/2020
Project:	950 E 33rd & 3177 California Ave	**Date Analyzed:**	2/21/2020
Project Address:	950 E 33rd & 3177 California Ave Signal Hill, CA 90755	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Batch ID: G1-022120-01

Jones ID:	**022120-G1LCS1**	**022120-G1LCSD1**			**022120-G1CCV1**	
Parameter	LCS Recovery (%)	LCSD Recovery (%)	RPD	Acceptability Range (%)	CCV	Acceptability Range (%)
Vinyl chloride	58%	58%	0.3%	60 - 140	80%	80 - 120
1,1-Dichloroethene	78%	81%	2.8%	60 - 140	98%	80 - 120
Cis-1,2-Dichloroethene	104%	102%	2.4%	70 - 130	100%	80 - 120
1,1,1-Trichloroethane	100%	93%	6.9%	70 - 130	107%	80 - 120
Benzene	102%	98%	3.4%	70 - 130	103%	80 - 120
Trichloroethene	93%	96%	3.0%	70 - 130	98%	80 - 120
Toluene	105%	100%	5.0%	70 - 130	105%	80 - 120
Tetrachloroethene	97%	95%	2.3%	70 - 130	109%	80 - 120
Chlorobenzene	107%	101%	6.3%	70 - 130	102%	80 - 120
Ethylbenzene	116%	110%	5.0%	70 - 130	112%	80 - 120
1,2,4 Trimethylbenzene	127%	119%	6.8%	70 - 130	107%	80 - 120
Gasoline Range Organics (C4-C12)	113%	107%	5.1%	70 - 130	107%	80 - 120
Surrogate Recovery:						
Dibromofluoromethane	111%	109%		60 - 140	104%	60 - 140
Toluene-d_8	96%	96%		60 - 140	102%	60 - 140
4-Bromofluorobenzene	100%	101%		60 - 140	106%	60 - 140

LCS = Laboratory Control Sample
LCSD = Laboratory Control Sample Duplicate
CCV = Continuing Calibration Verification
RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 20%

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Santa Fe Springs, CA 90670
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Soil-Gas Chain-of-Custody Record

Client: Mearns Consulting Corp
Project Name: 950 E 33rd & 3177 California Ave
Project Address: 950 E 33rd & 3177 California Ave
Signal Hill, CA 90755
Email:
Phone: 310-403-1921
Report To: Susan L Mearns
Sampler: Casey Ellis

Date: 2/21/2020
Client Project #:

Purge Number: ☐ 1P ☒ 3P ☐ 7P ☐ 10P
Shut-In Test: (Y) / N

Report Options
EDD ____
EDF* - 10% Surcharge____
*Global ID _____

LAB USE ONLY
Jones Project # G-0094
Page 1 of 2
Sample Container: GASTIGHT GLASS SYRINGE
If different than above, see Notes.

Turn Around Requested
☐ Immediate Attention
☐ Rush 24 Hours
☐ Rush 48 Hours
☐ Rush 72 Hours
☐ Normal
☒ Mobile Lab

Tracer
☒ n-pentane
☒ n-hexane
☒ n-heptane
☐ Isopropyl Alchohol
☐ 1,1-DFA
☐ _____

Reporting Limits
☒ Standard ☐ Low Level* ☐ MDL*
*surcharge for these limits
Units ug/m³

Analysis Requested

Sample ID	Purge Number	Purge Volume (mL)	Date	Sample Collection Time	Sample Analysis Time	Laboratory Sample ID	Purge Rate (mL/min)	Pump Used	Magnehelic	Sample Matrix: Soil Gas (SG), Air (A), Material (M)	EPA 8260B (VOCs)	Gasoline Range Organics			Magnehelic Vacuum (In/H_2O)	Number of Containers	Notes & Special Instructions
SV1-5'	3	1310	2/21/20	07:52	07:52	G-0094-01	200	CASEY.1	118007	SG	X	X			<2	1	
SV1-10'	3	1390	2/21/20	08:09	08:09	G-0094-02	200	JOEL.1	M100.102	SG	X	X			<2	1	
SV2-5'	3	1310	2/21/20	08:28	08:28	G-0094-03	200	CASEY.1	M100.107	SG	X	X			<2	1	
SV2-10'	3	1390	2/21/20	08:43	08:44	G-0094-04	200	JOEL.1	M100.155	SG	X	X			<2	1	
SV3-5'	3	1,310	2/21/20	09:02	09:05	G-0094-05	200	CASEY.1	118007	SG	X	X			<2	1	
SV3-10'	3	1,390	2/21/20	9:17	09:20	G-0094-06	200	JOEL.1	M100.102	SG	X	X			<2	1	
SV4-5'	3	1,310	2/21/20	9:37	09:38	G-0094-07	200	CASEY.1	M100.107	SG	X	X			<2	1	
SV4-10'	3	1390	2/21/20	09:56	09:57	G-0094-08	200	JOEL.1	M100.155	SG	X	X			<2	1	
SV4-10' REP	3	1390	2/21/20	10:06	10:12	G-0094-09	200	JOEL.1	M100.155	SG	X	X			<2	1	
SV5-5'	3	1310	2/21/20	10:28	10:30	G-0094-10	200	CASEY.1	118007	SG	X	X			<2	1	

Representative Signature	Printed Name	Laboratory Signature	Printed Name		
[signature]	SUSAN MEARNS	[signature]	CASEY ELLIS	10	Total Number of Containers
Company	**Date** / **Time**	**Company**	**Date** / **Time**		
MEARNS CONSULTING CORP	2/21/2020 13:40	JONES ENVIRONMENTAL, INC.	2/21/2020 13:40		
Representative Signature	**Printed Name**	**Laboratory Signature**	**Printed Name**		
Company	**Date** / **Time**	**Company**	**Date** / **Time**		

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

JONES ENVIRONMENTAL, INC.

11007 Forest Pl.
Santa Fe Springs, CA 90670
(714) 449-9937
Fax (714) 449-9685
www.jonesenv.com

Soil-Gas Chain-of-Custody Record

Client: Mearns Consulting Corp

Project Name: 950 E 33rd & 3177 California Ave

Project Address: 950 E 33rd & 3177 California Ave

Signal Hill, CA 90755

Email:

Phone: 310-403-1921

Report To: Susan L Mearns

Sampler: Casey Ellis

Date: 2/21/2020

Client Project #: 0

Purge Number: □ 1P ☒ 3P □ 7P □ 10P

Shut-In Test: (Y) / N

Report Options: EDD ____ EDF* - 10% Surcharge____ *Global ID _____

Turn Around Requested:
- □ Immediate Attention
- □ Rush 24 Hours
- □ Rush 48 Hours
- □ Rush 72 Hours
- □ Normal
- ☒ Mobile Lab

Tracer:
- ☒ n-pentane
- ☒ n-hexane
- ☒ n-heptane
- □ Isopropyl Alchohol
- □ 1,1-DFA
- □ _____

Reporting Limits: ☒ Standard □ Low Level* □ MDL* (*surcharge for these limits)

Units: ug/m3

Analysis Requested

LAB USE ONLY

Jones Project #: G-0094

Page 2 of 2

Sample Container: GASTIGHT GLASS SYRINGE

If different than above, see Notes.

Sample ID	Purge Number	Purge Volume (mL)	Date	Sample Collection Time	Sample Analysis Time	Laboratory Sample ID	Purge Rate (mL/min)	Pump Used	Magnehelic	Sample Matrix: Soil Gas (SG), Air (A), Material (M)	EPA 8260B (VOCs)	Gasoline Range Organics			Magnehelic Vacuum (In/H_2O)	Number of Containers	Notes & Special Instructions
SV5-10'	3	1390	2/21/20	10:43	10:47	G-0094-11	200	JOEL.1	M100.102	SG	X	X			<2	1	
SV6-5'	3	1310	2/21/20	11:05	11:06	G-0094-12	200	CASEY.1	M100.107	SG	X	X			<2	1	
SV6-5' REP	3	1310	2/21/20	11:12	11:21	G-0094-13	200	CASEY.1	M100.107	SG	X	X			<2	1	
SV7-5'	3	1310	2/21/20	11:45	11:45	G-0094-15	200	CASEY.1	118007	SG	X	X			<2	1	
SV7-10'	3	1,390	2/21/20	11:53	12:00	G-0094-16	200	JOEL.1	M100.102	SG	X	X			40	1	
SV8-5'	3	1,310	2/21/20	12:10	12:17	G-0094-17	200	CASEY.1	M100.107	SG	X	X			20	1	
SV8-10'	3	1,390	2/21/20	12:36	12:39	G-0094-18	200	JOEL.1	M100.155	SG	X	X			<2	1	
SV9-5'	3	1310	2/21/20	12:55	12:57	G-0094-19	200	JOEL.1	118007	SG	X	X			<2	1	
SV9-10'	3	1390	2/21/20	13:09	13:14	G-0094-20	100	CASEY.1	M100.102	SG	X	X			50	1	LOW FLOW
SV6-10'	-	-	2/21/20	11:30	-	-	-	-	M100.102	-	-	-			>100	-	NO FLOW

9 Total Number of Containers

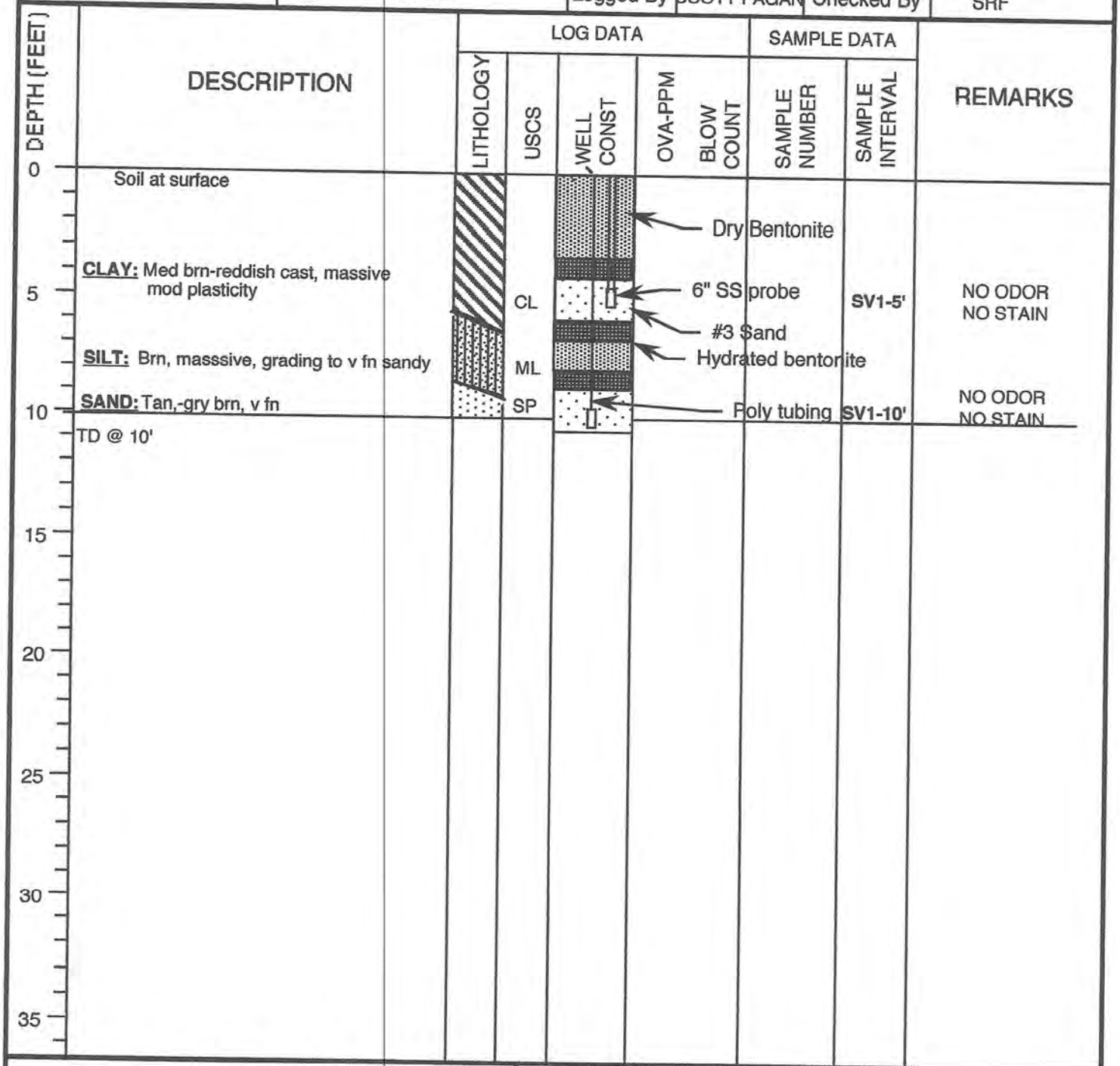
Representative Signature	**Printed Name** SUSAN MEARNS	**Laboratory Signature**	**Printed Name** CASEY ELLIS
Company MEARNS CONSULTING CORP	**Date** 2/21/2020 **Time** 13:40	**Company** JONES ENVIRONMENTAL, INC.	**Date** 2/21/2020 **Time** 13:40
Representative Signature	**Printed Name**	**Laboratory Signature**	**Printed Name**
Company	**Date** **Time**	**Company**	**Date** **Time**

Client signature on this Chain of Custody form constitutes acknowledgement that the above analyses have been reqested, and the information provided herein is correct and accurate.

APPENDIX D

Boring Logs

Boring Location	SV1	Elevation or Datum	grade		
Drilling Company	Gregg Drilling	Completion Depth	10 FEET		
Drilling Equipment	Marl 25 DP	Number of Samples	2		
Type/Diameter of Casing	NA	Water Depth at Date of Installation	NA		
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled	NA		
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

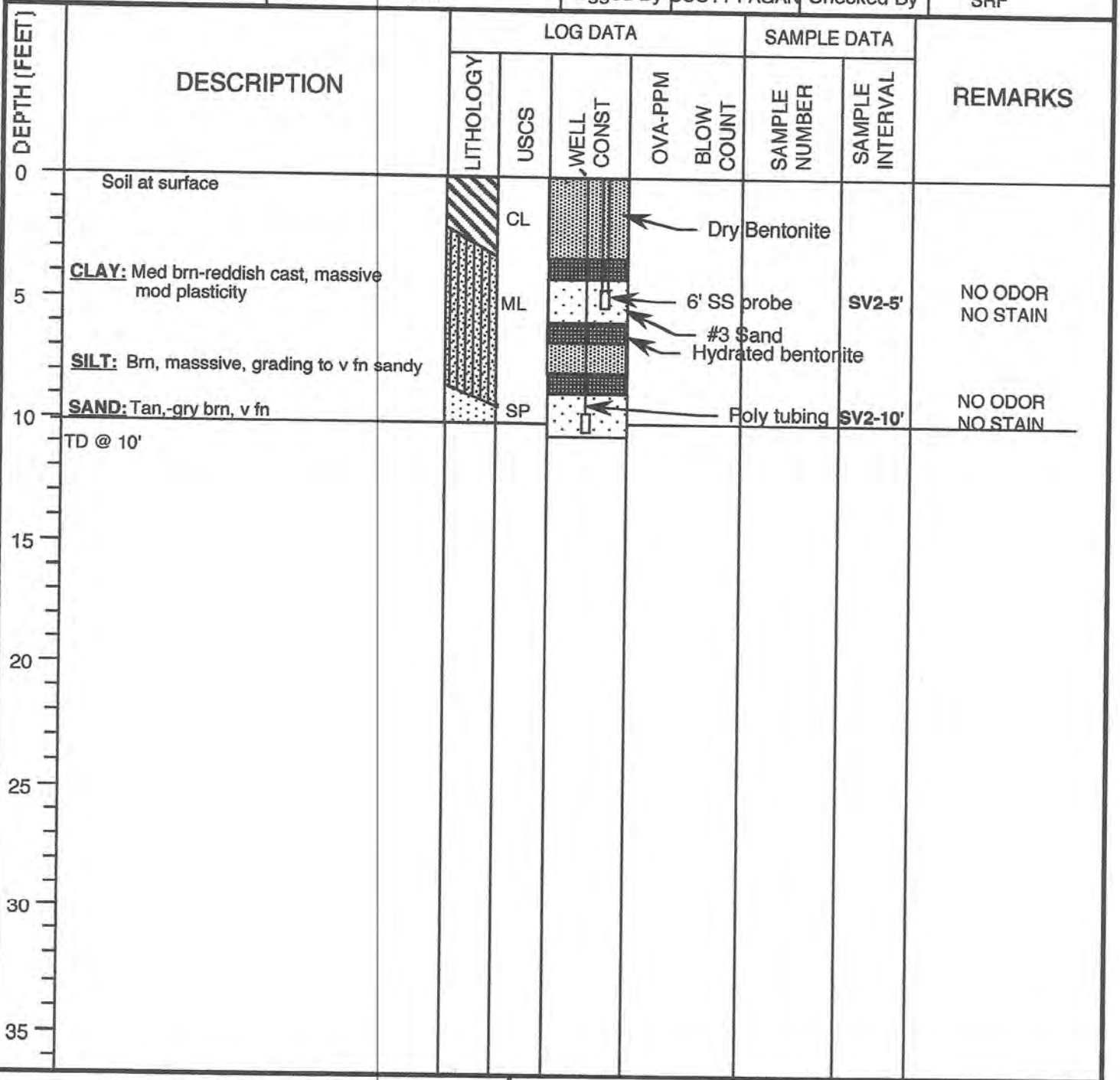


MEARNS CONSULTING CORP.

BORING LOG SV1
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV2	Elevation or Datum	grade		
Drilling Company	Gregg Drilling	Completion Depth	10 FEET		
Drilling Equipment	Marl 25 DP	Number of Samples	2		
Type/Diameter of Casing	NA	Water Depth at Date of Installation	NA		
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled	NA		
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

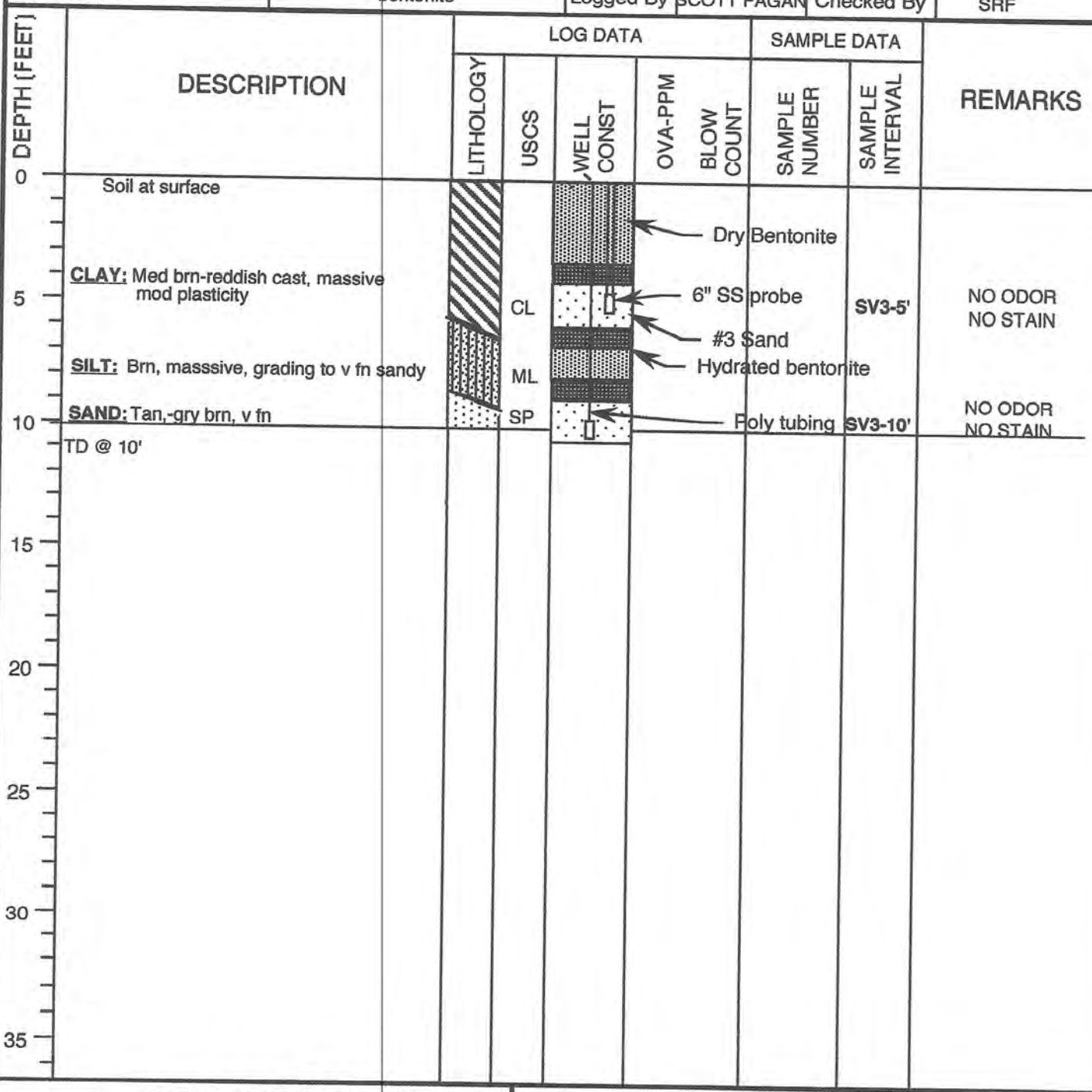


MEARNS CONSULTING CORP.

BORING LOG SV2
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV3	Elevation or Datum	grade		
Drilling Company	Gregg Drilling	Completion Depth	10 FEET		
Drilling Equipment	Marl 25 DP	Number of Samples	2		
Type/Diameter of Casing	NA	Water Depth at Date of Installation	NA		
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled	NA		
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

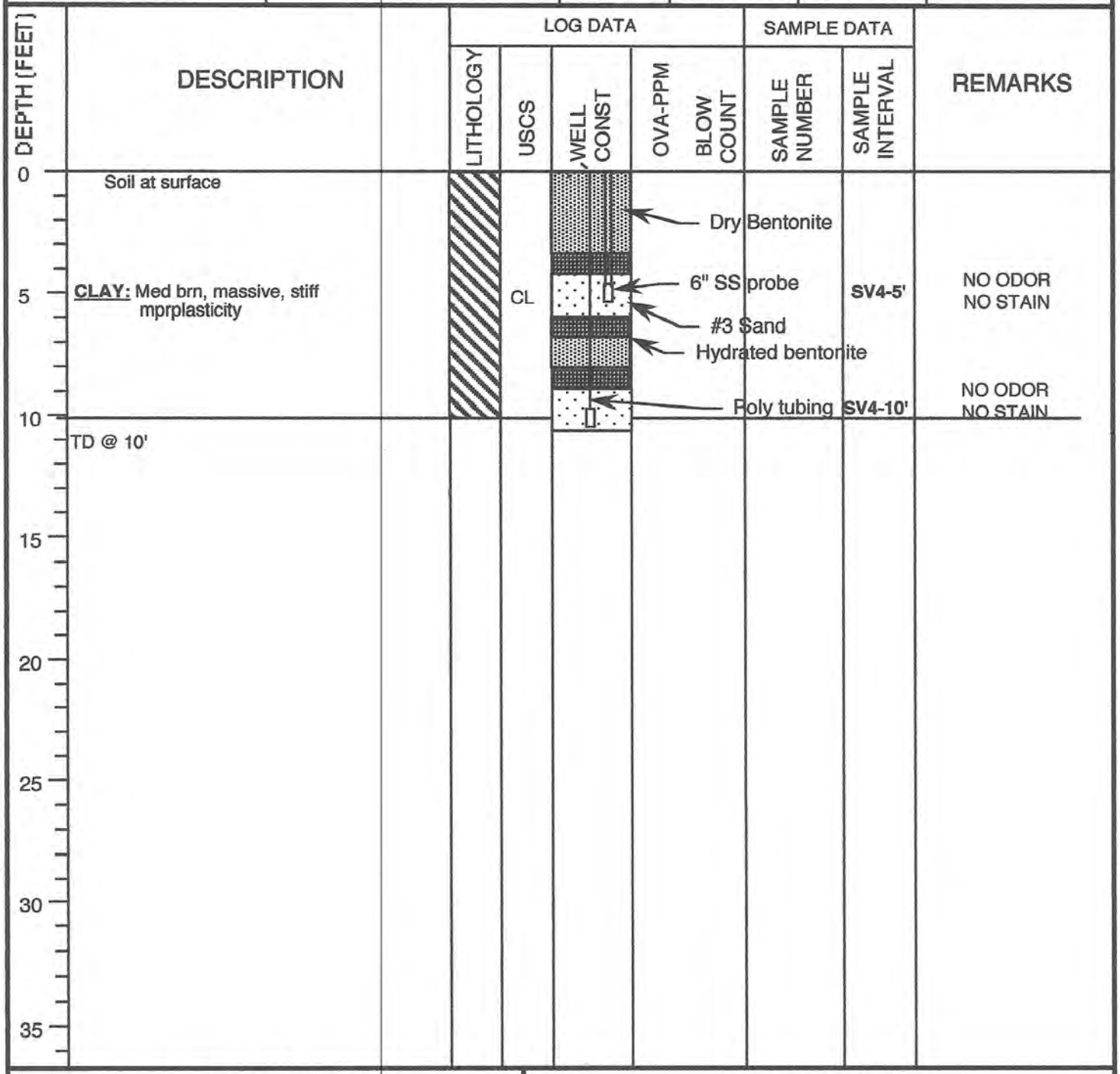


MEARNS CONSULTING CORP.

BORING LOG SV3
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV4	Elevation or Datum	grade		
Drilling Company	Gregg Drilling	Completion Depth	10 FEET		
Drilling Equipment	Marl 25 DP	Number of Samples	2		
Type/Diameter of Casing	NA	Water Depth at Date of Installation	NA		
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled	NA		
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

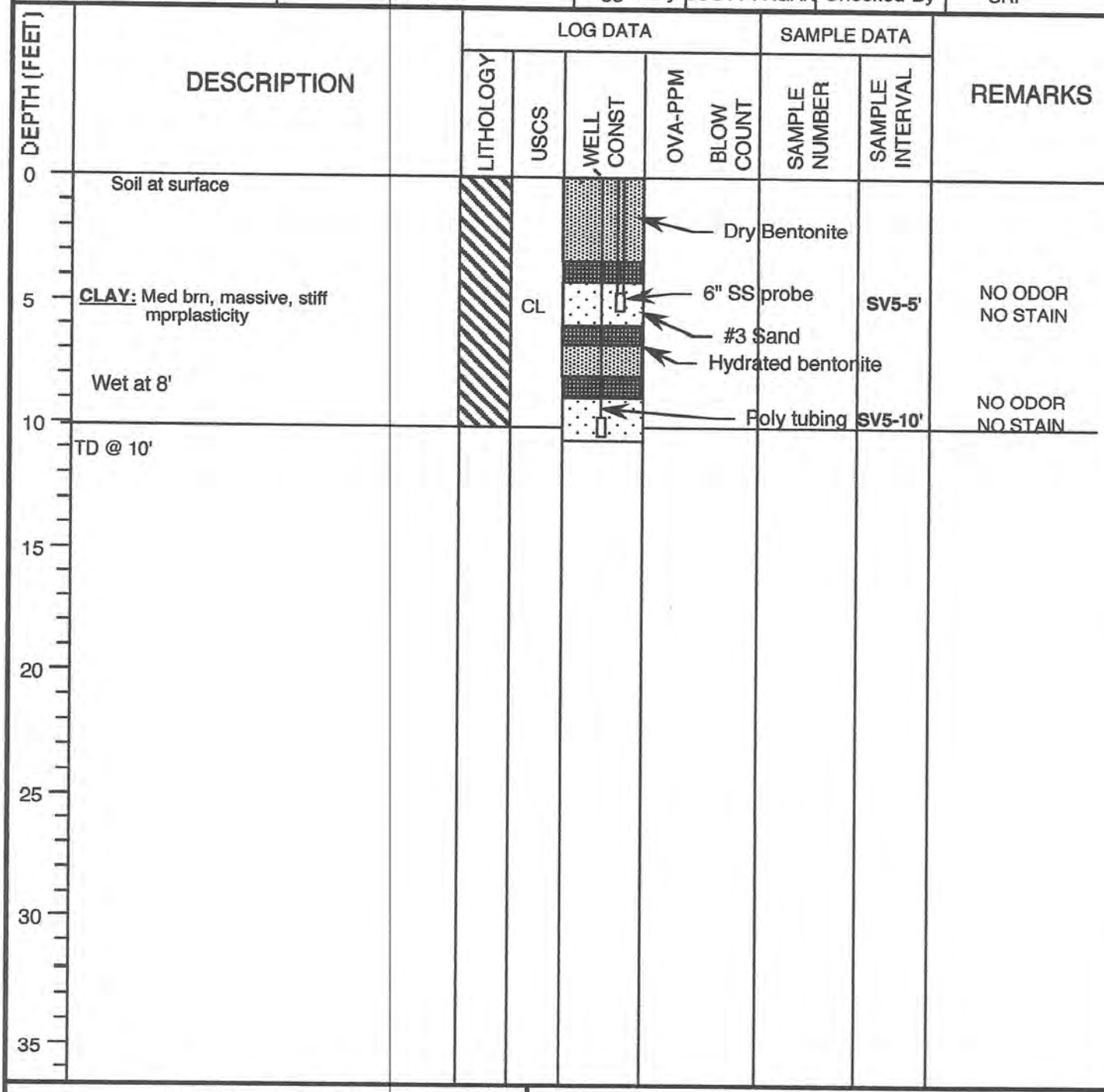


MEARNS CONSULTING CORP.

BORING LOG SV4
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV5	Elevation or Datum		grade	
Drilling Company	Gregg Drilling	Completion Depth		10 FEET	
Drilling Equipment	Marl 25 DP	Number of Samples		2	
Type/Diameter of Casing	NA	Water Depth at Date of Installation		NA	
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled		NA	
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

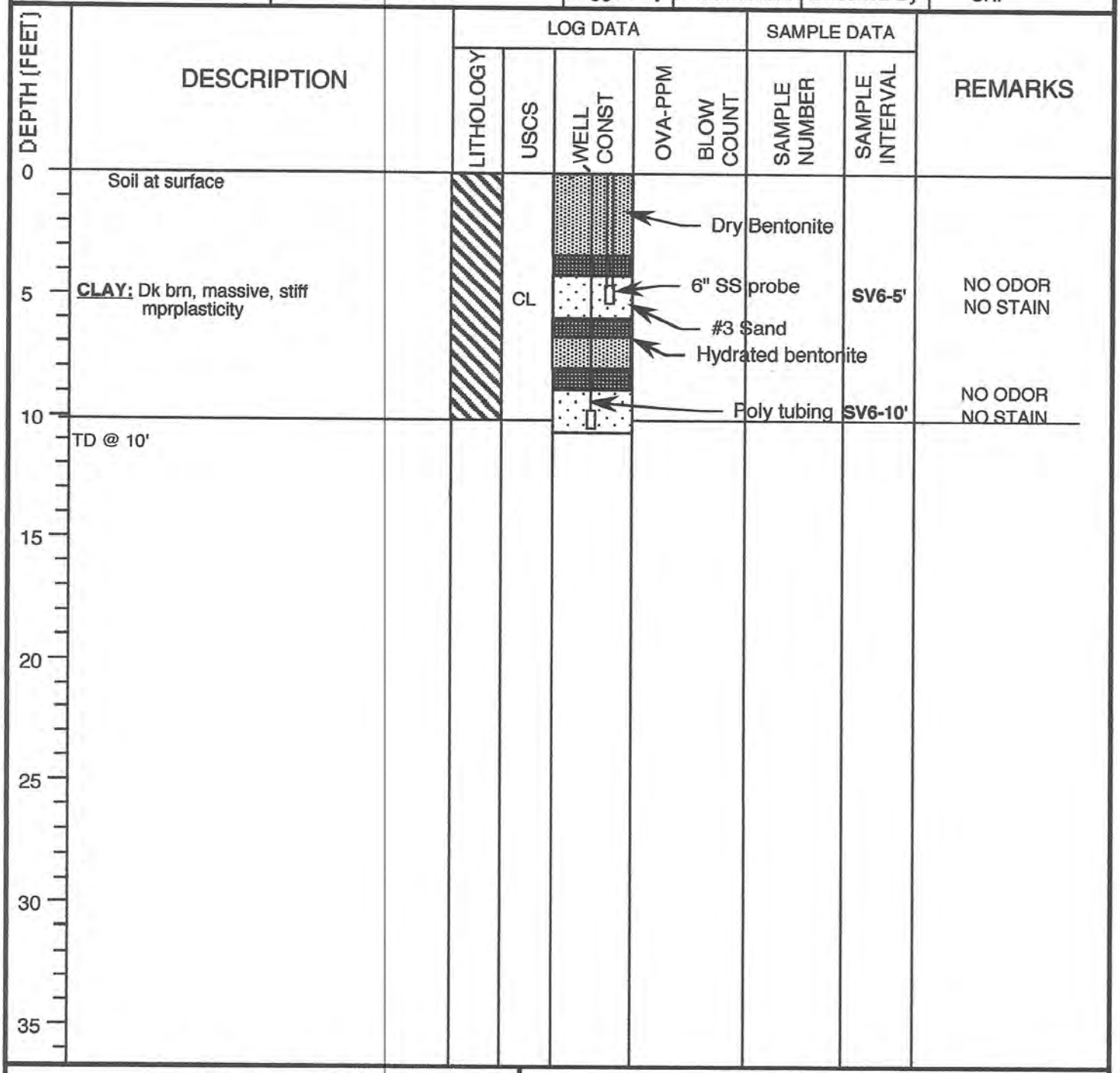


MEARNS CONSULTING CORP.

BORING LOG SV5
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV6	Elevation or Datum		grade	
Drilling Company	Gregg Drilling	Completion Depth		10 FEET	
Drilling Equipment	Marl 25 DP	Number of Samples		2	
Type/Diameter of Casing	NA	Water Depth at Date of Installation		NA	
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled		NA	
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

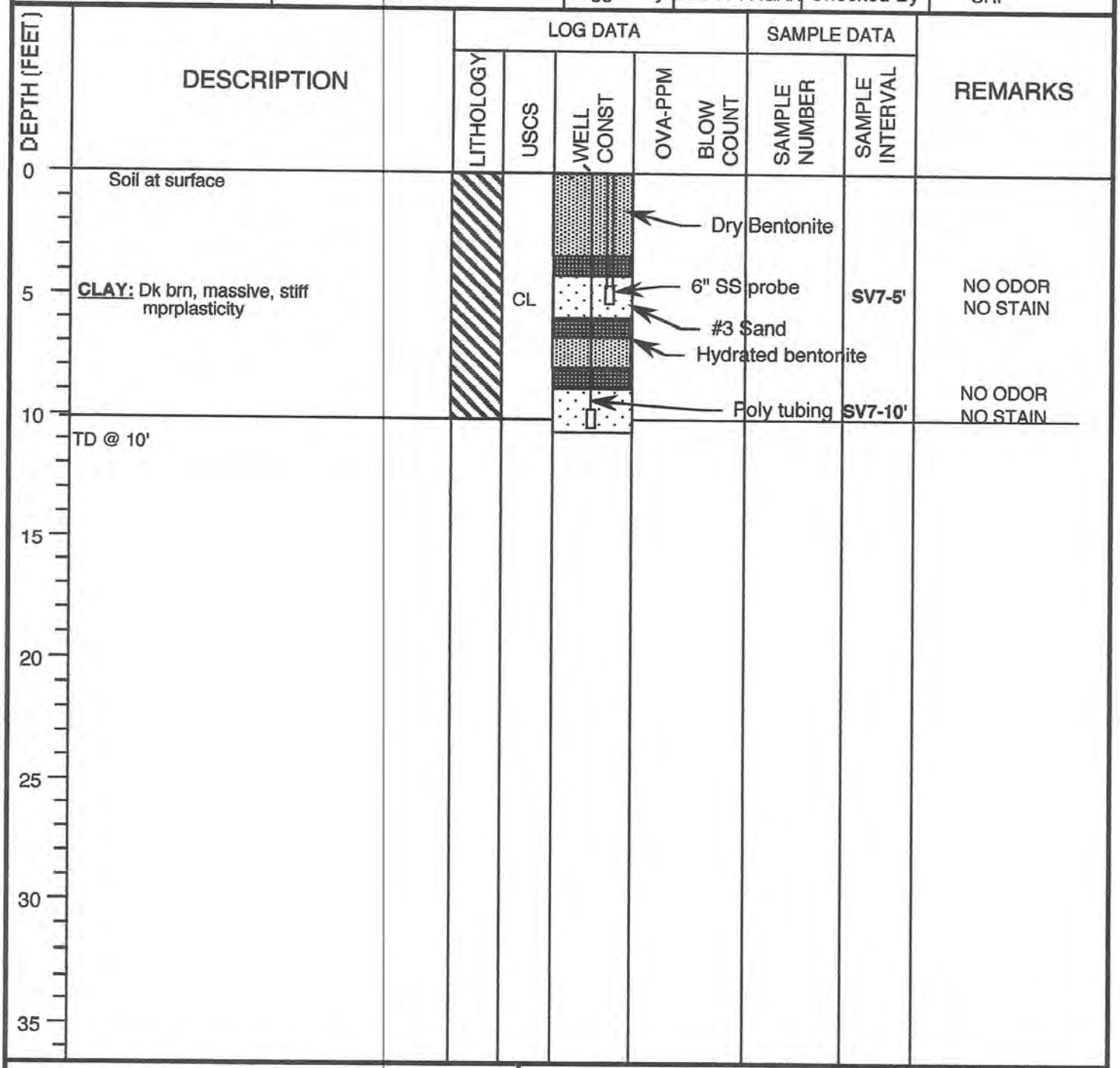


MEARNS CONSULTING CORP.

BORING LOG SV6
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV7	Elevation or Datum	grade		
Drilling Company	Gregg Drilling	Completion Depth	10 FEET		
Drilling Equipment	Marl 25 DP	Number of Samples	2		
Type/Diameter of Casing	NA	Water Depth at Date of Installation	NA		
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled	NA		
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

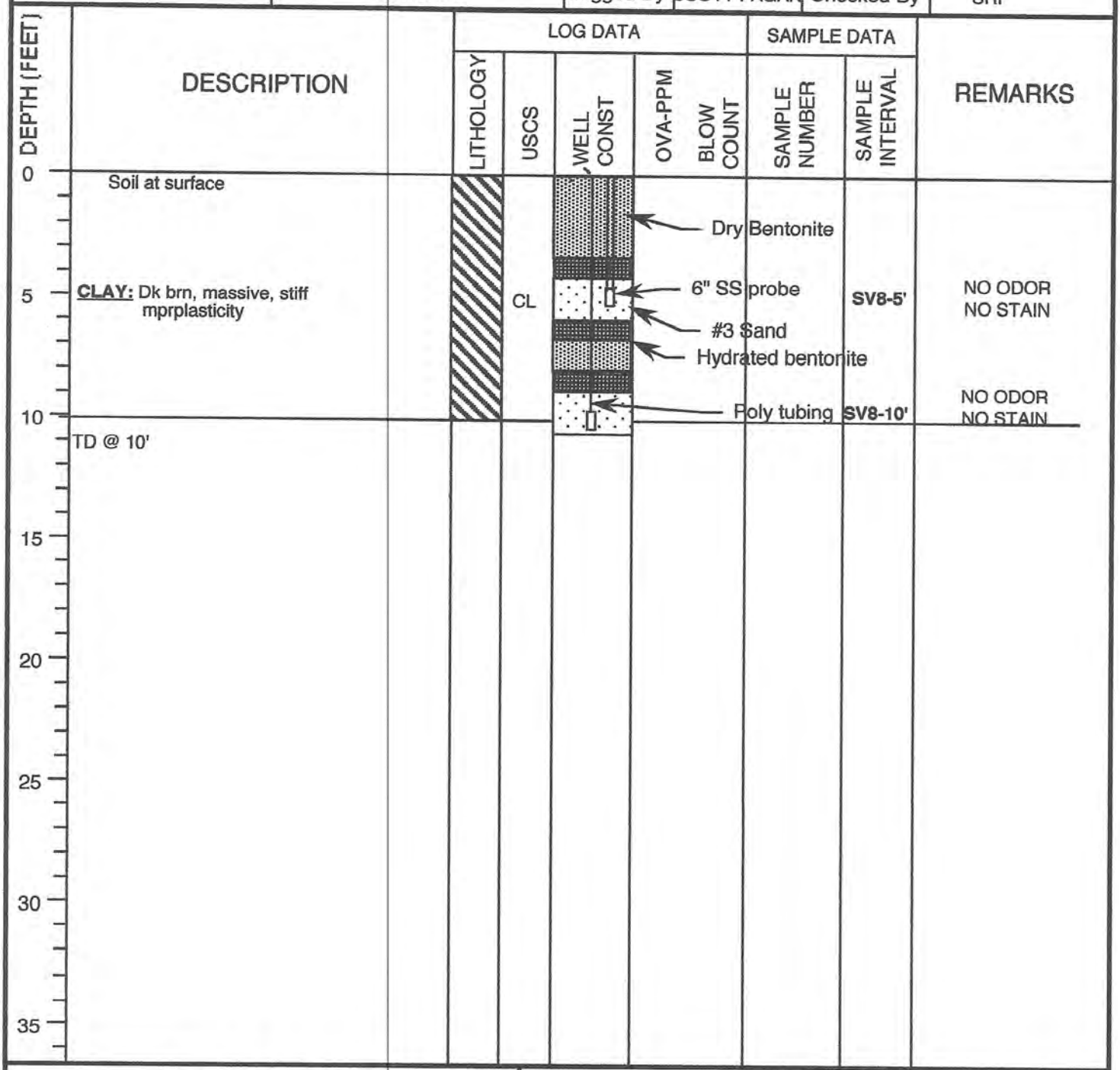


MEARNS CONSULTING CORP.

BORING LOG SV7
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV8	Elevation or Datum	grade		
Drilling Company	Gregg Drilling	Completion Depth	10 FEET		
Drilling Equipment	Marl 25 DP	Number of Samples	2		
Type/Diameter of Casing	NA	Water Depth at Date of Installation	NA		
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled	NA		
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF

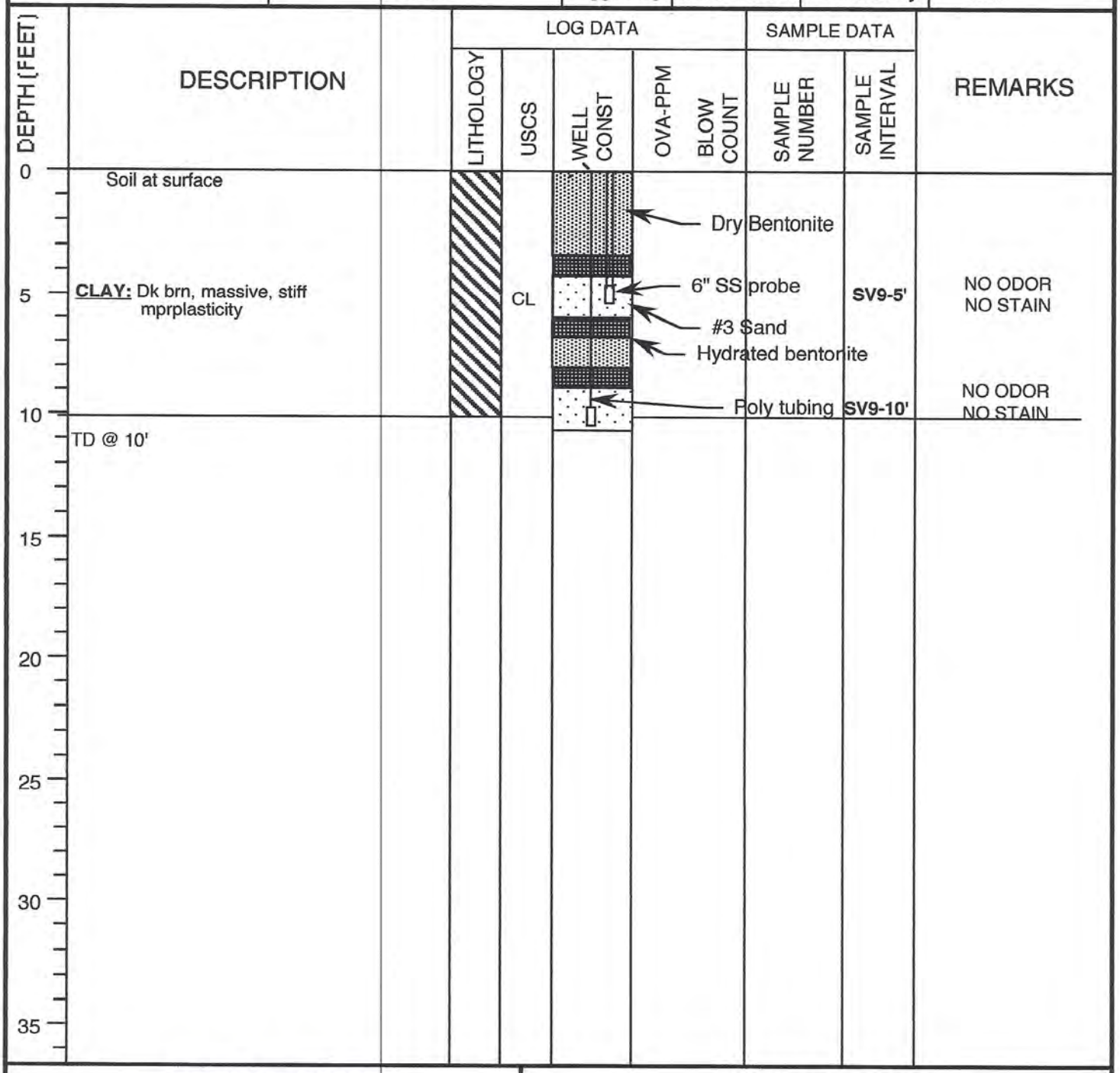


MEARNS CONSULTING CORP.

BORING LOG SV8
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

Boring Location	SV9	Elevation or Datum		grade	
Drilling Company	Gregg Drilling	Completion Depth		10 FEET	
Drilling Equipment	Marl 25 DP	Number of Samples		2	
Type/Diameter of Casing	NA	Water Depth at Date of Installation		NA	
Type of Perforation	NA	Start Date	2/18/20	Completion Date	2/18/20
Type of Perforation Backfill	NA	Date Developed and Sampled		NA	
Type of Seal	bentonite	Logged By	SCOTT FAGAN	Checked By	SRF



MEARNS CONSULTING CORP.

BORING LOG SV9
3177 California Ave
Signal Hill, California

Project Number	Date	PM	Page
	2/18/20	SM	1

APPENDIX E

Statistics Metals Background


Multiple Box Plots
Ordered Observations
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
Maximum Non-Detect Value 0.8
Ag
Offsite Ag

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 7:54:42 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Ag

Sample 2 Data: Offsite Ag

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	18	4
Number of Non-Detects	10	4
Number of Detect Data	8	0
Minimum Non-Detect	1	0.8
Maximum Non-Detect	1	0.8
Percent Non-detects	55.56%	100.00%
Minimum Detect	1	N/A
Maximum Detect	1.5	N/A
Mean of Detects	1.138	N/A
Median of Detects	1.1	N/A
SD of Detects	0.16	N/A
KM Mean	1.061	N/A
KM SD	0.121	N/A

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

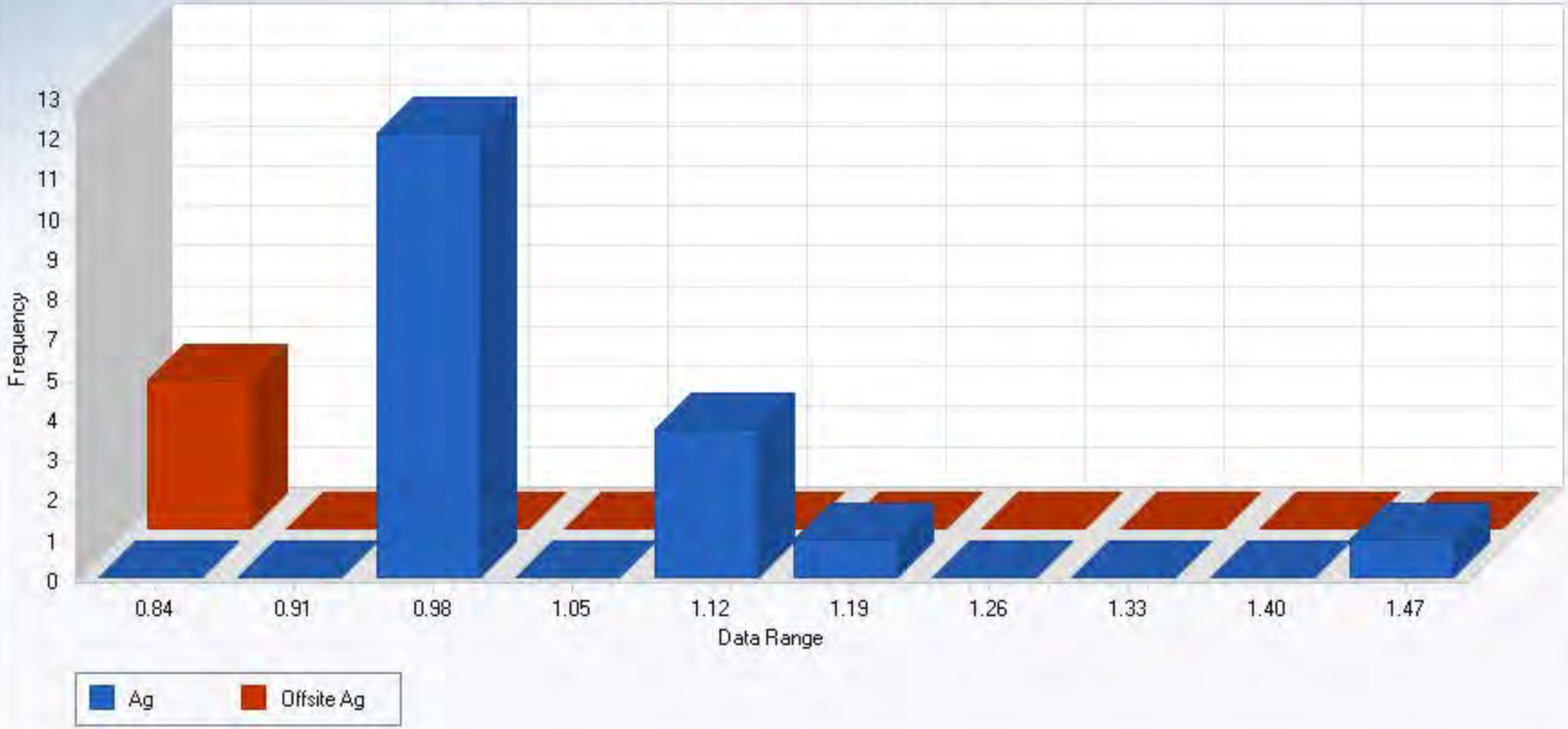
Gehan z Test Value	1.58
Critical z (0.05)	1.645
P-Value	0.0571

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Multiple Histogram
Reported values used for nondetects



☐ Normal Distribution

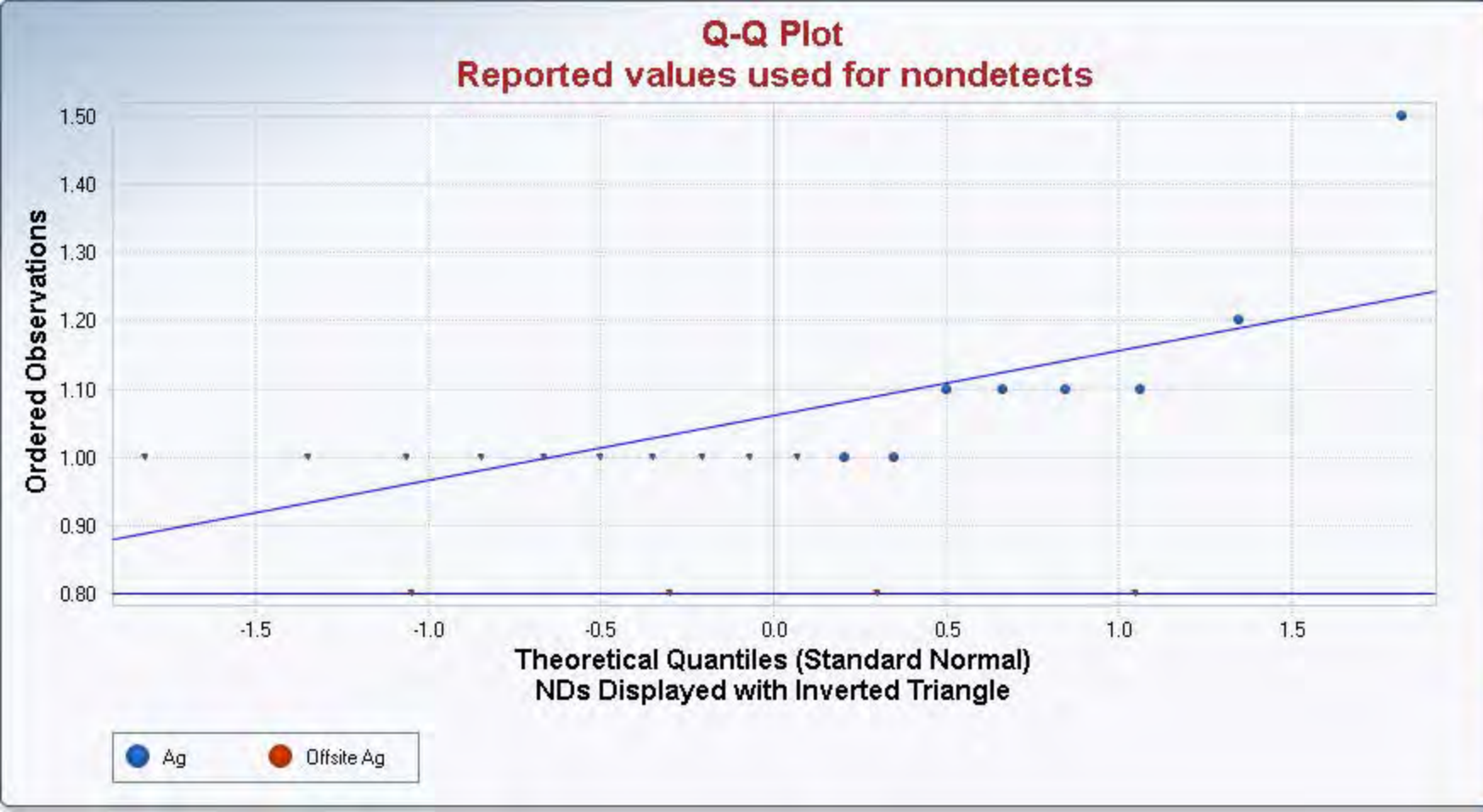
☐ Less Bins
☐ More Bins

Ag

Number of Values	18
Number of Values	18
Mean	1.06
SD	0.12

Offsite Ag

Number of Values	4
Number of Values	4
Mean	0.80
SD	0.00



Ag

Total Number of Data = 18
Number of Non-Detects = 10
Number of Detects = 8
Detected Mean = 1.138
Detected Sd = 0.16
Slope (displayed data) = 0.0949
Intercept (displayed data)= 1.061
Correlation, R = 0.733

Offsite Ag

Total Number of Data = 4
Number of Non-Detects = 4
Number of Detects = 0
Detected Mean = N/A
Detected Sd = N/A
Slope (displayed data) = 1.213E-16
Intercept (displayed data)= 0.8
Correlation, R = N/A

Best Fit Line

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 7:55:54 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Ag

Sample 2 Data: Offsite Ag

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	18	4
Number of Non-Detects	10	4
Number of Detects	8	0
Minimum Non-Detect	1	0.8
Maximum Non-Detect	1	0.8
Percent Non-detects	55.56%	100.00%
Minimum Detect	1	N/A
Maximum Detect	1.5	N/A
Mean of Detects	1.138	N/A
Median of Detects	1.1	N/A
SD of Detects	0.16	N/A
KM Mean	1.061	N/A
KM SD	0.121	N/A

Sample 1 vs Sample 2 Tarone-Ware Test

There are no detects in at least on of the groups - no analysis will be performed!

Graphical displays may be helpful!

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects	
User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 7:56:47 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Ag

Sample 2 Data: Offsite Ag

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	18	4
Number of Non-Detects	10	4
Number of Detect Data	8	0
Minimum Non-Detect	1	0.8
Maximum Non-Detect	1	0.8
Percent Non-detects	55.56%	100.00%
Minimum Detect	1	N/A
Maximum Detect	1.5	N/A
Mean of Detects	1.138	N/A
Median of Detects	1.1	N/A
SD of Detects	0.16	N/A

WMW test is meant for a Single Detection Limit Case

Use of Gehan or T-W test is suggested when multiple detection limits are present

All observations <= 1 (Max DL) are ranked the same

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

There are no detects in at least on of the groups - no analysis will be performed

Graphical displays may be helpful!


Multiple Box Plots
Ordered Observations
21
18
15
12
9
6
3
As
Offsite As

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 7:57:37 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: As

Sample 2 Data: Offsite As

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	18	0
Number of Detect Data	4	4
Minimum Non-Detect	7.7	N/A
Maximum Non-Detect	7.7	N/A
Percent Non-detects	81.82%	0.00%
Minimum Detect	2.49	5.2
Maximum Detect	23	14
Mean of Detects	10.45	10.8
Median of Detects	8.15	12
SD of Detects	9.329	3.851
KM Mean	4.677	10.8
KM SD	4.465	3.851

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

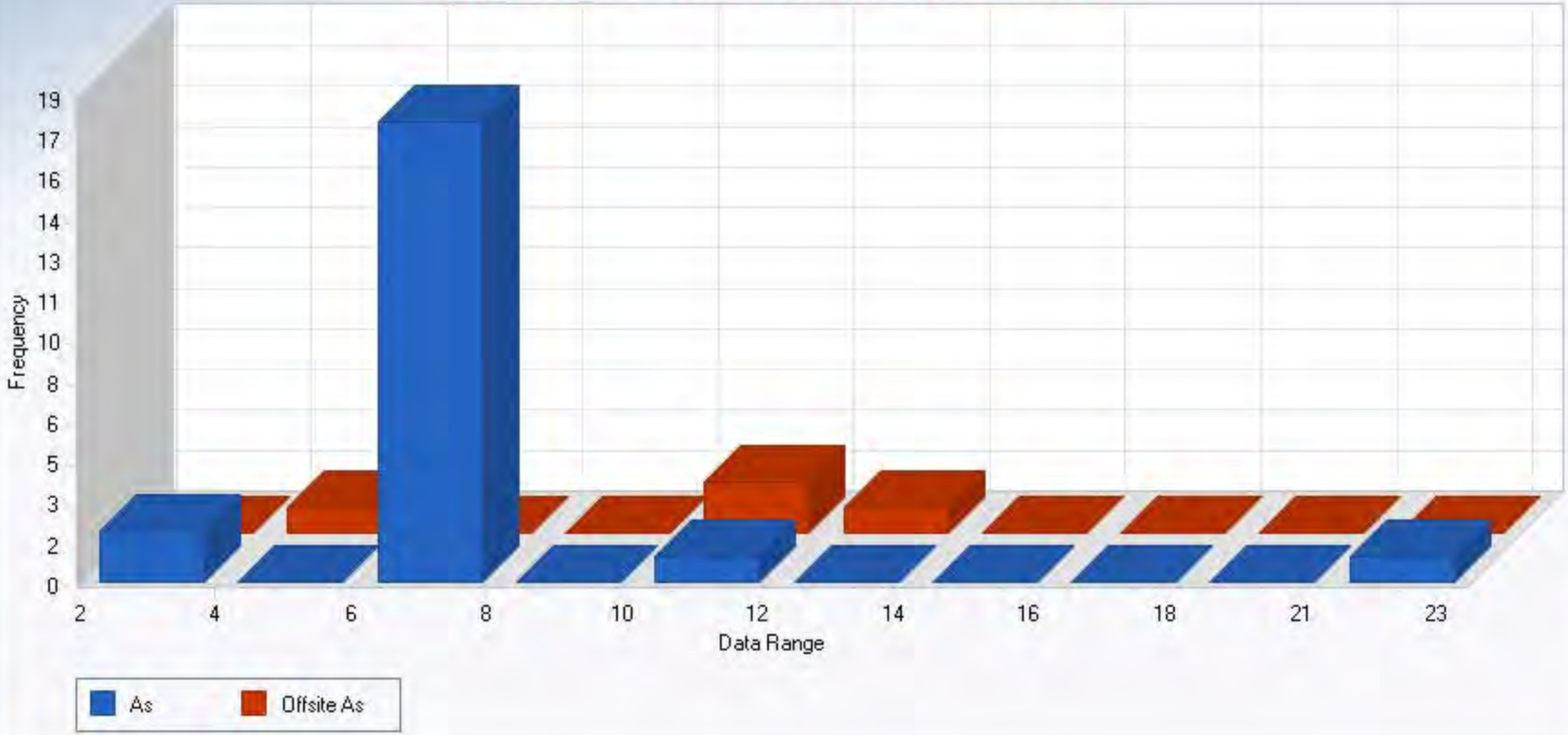
Gehan z Test Value	-3.094
Critical z (0.05)	1.645
P-Value	0.999

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Multiple Histogram
Reported values used for nondetects

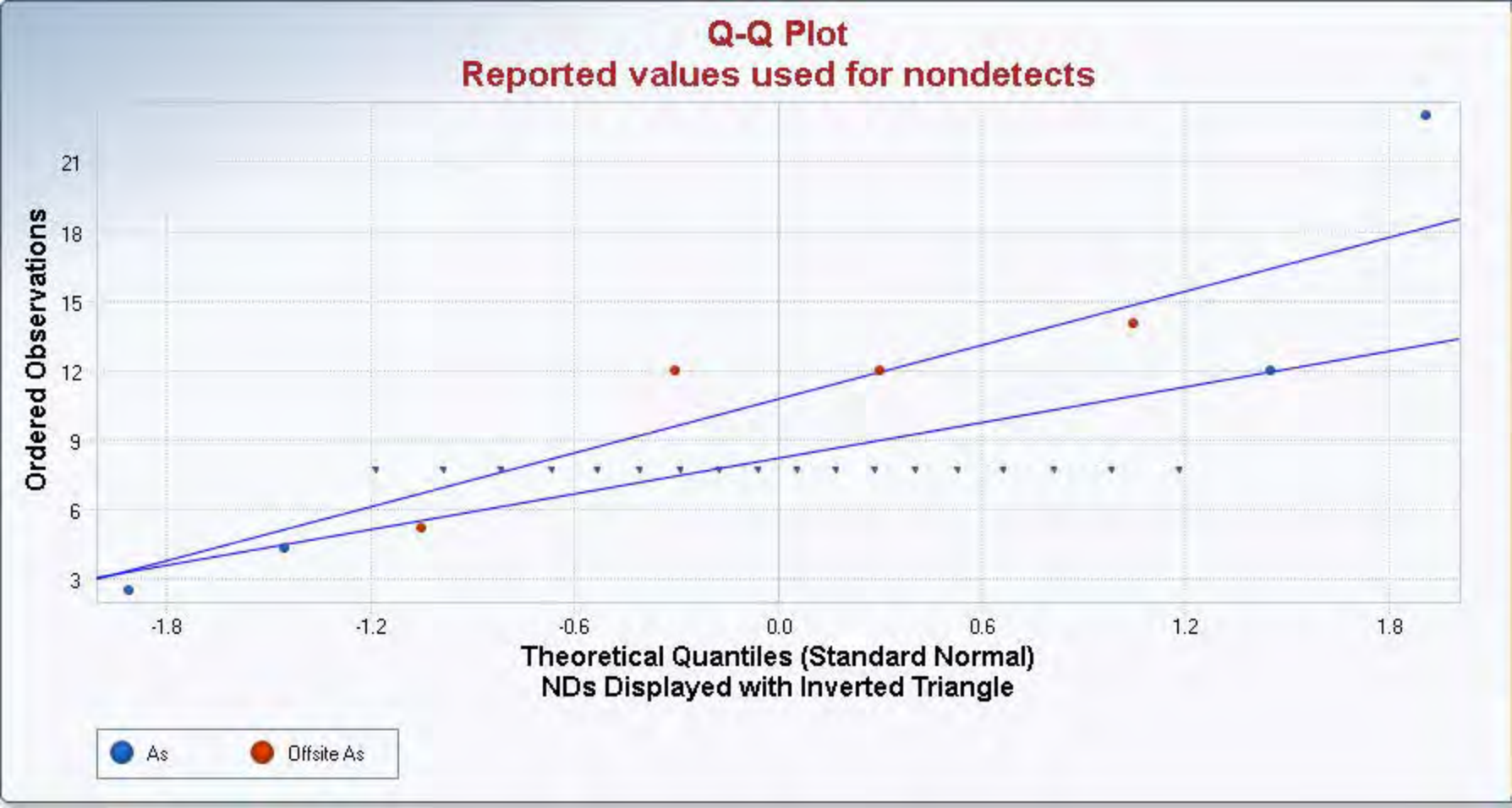


☐ Normal Distribution

☐ Less Bins

☐ More Bins

As	
Number of Values	22
Number of Values	22
Mean	8.20
SD	3.69
Offsite As	
Number of Values	4
Number of Values	4
Mean	10.80
SD	3.85



As

Total Number of Data = 22
Number of Non-Detects = 18
Number of Detects = 4
Detected Mean = 10.45
Detected Sd = 9.329
Slope (displayed data) = 2.571
Intercept (displayed data)= 8.2
Correlation, R = 0.673

Offsite As

Total Number of Data = 4
Number of Non-Detects = 0
Number of Detects = 4
Detected Mean = 10.8
Detected Sd = 3.851
Slope (displayed data) = 3.878
Intercept (displayed data)= 10.8
Correlation, R = 0.897

Best Fit Line

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 7:58:29 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: As

Sample 2 Data: Offsite As

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	18	0
Number of Detects	4	4
Minimum Non-Detect	7.7	N/A
Maximum Non-Detect	7.7	N/A
Percent Non-detects	81.82%	0.00%
Minimum Detect	2.49	5.2
Maximum Detect	23	14
Mean of Detects	10.45	10.8
Median of Detects	8.15	12
SD of Detects	9.329	3.851
KM Mean	4.677	10.8
KM SD	4.465	3.851

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

TW Statistic	-3.279
TW Critical Value (0.05)	1.645
P-Value	0.999

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 7:59:13 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: As

Sample 2 Data: Offsite As

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	18	0
Number of Detect Data	4	4
Minimum Non-Detect	7.7	N/A
Maximum Non-Detect	7.7	N/A
Percent Non-detects	81.82%	0.00%
Minimum Detect	2.49	5.2
Maximum Detect	23	14
Mean of Detects	10.45	10.8
Median of Detects	8.15	12
SD of Detects	9.329	3.851

Wilcoxon-Mann-Whitney (WMW) Test

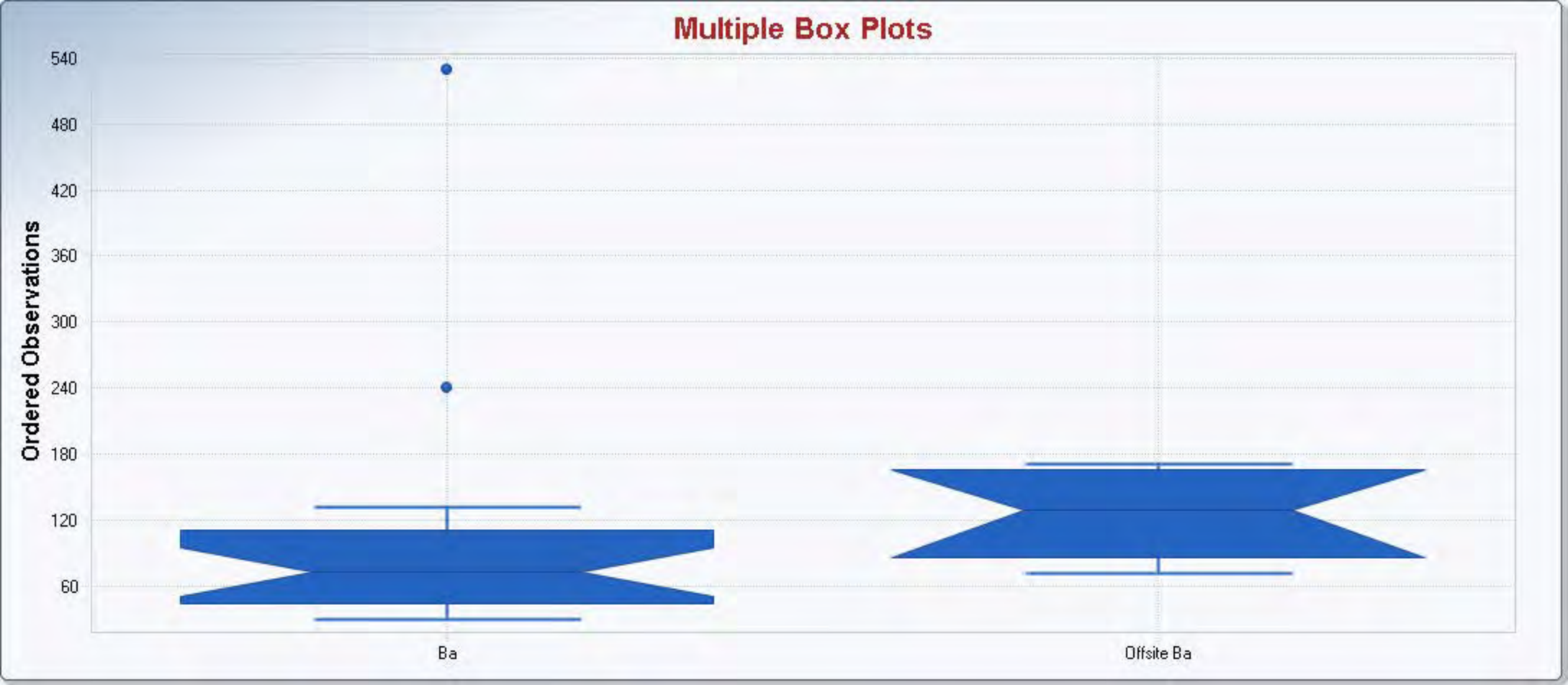
H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	269
Standardized WMW U-Stat	-2.948
Mean (U)	44
SD(U) - Adj ties	14.06
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.998

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)


Multiple Box Plots
Ordered Observations
540
480
420
360
300
240
180
120
60
Ba
Offsite Ba

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:07:51 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Ba

Sample 2 Data: Offsite Ba

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detect Data	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	30	73
Maximum Detect	530	170
Mean of Detects	102.6	125
Median of Detects	72	128.5
SD of Detects	106.6	47.39
KM Mean	102.6	125
KM SD	106.6	47.39

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

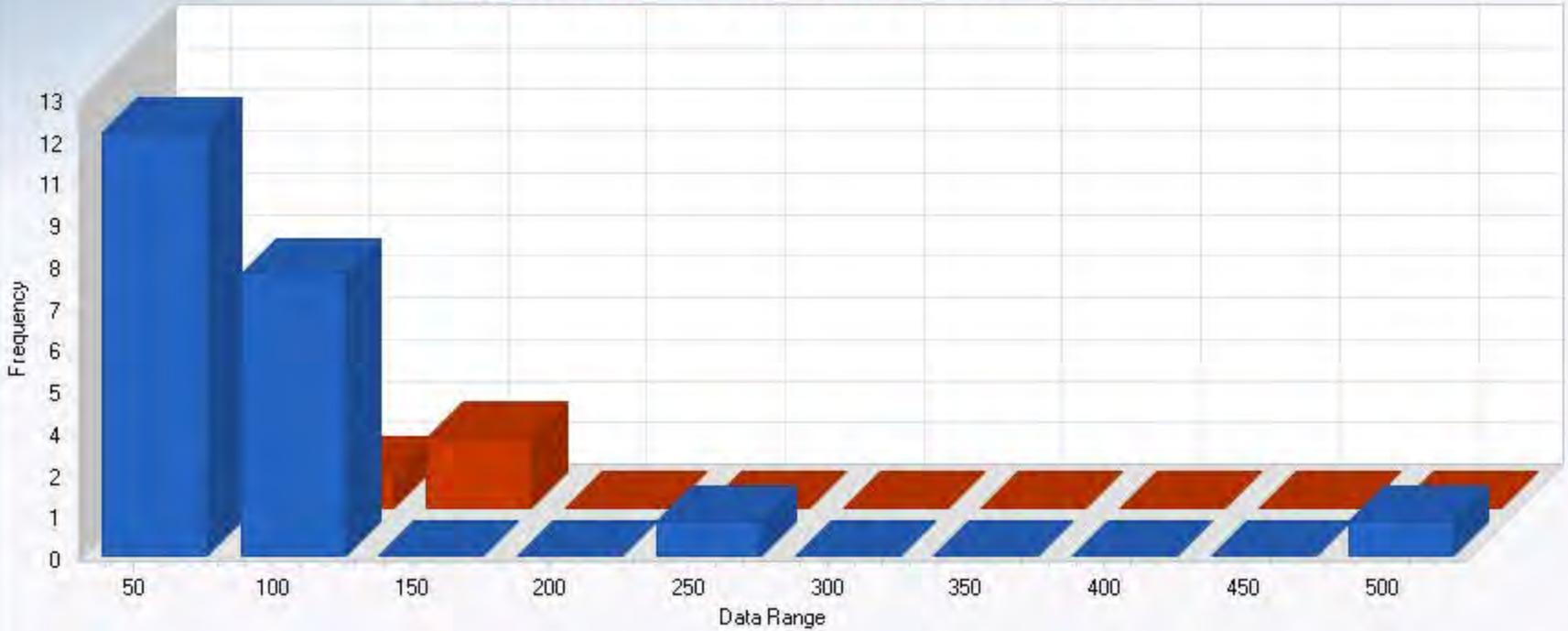
Gehan z Test Value	-1.563
Critical z (0.05)	1.645
P-Value	0.941

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Multiple Histogram
Reported values used for nondetects



☐ Normal Distribution

☐ Less Bins

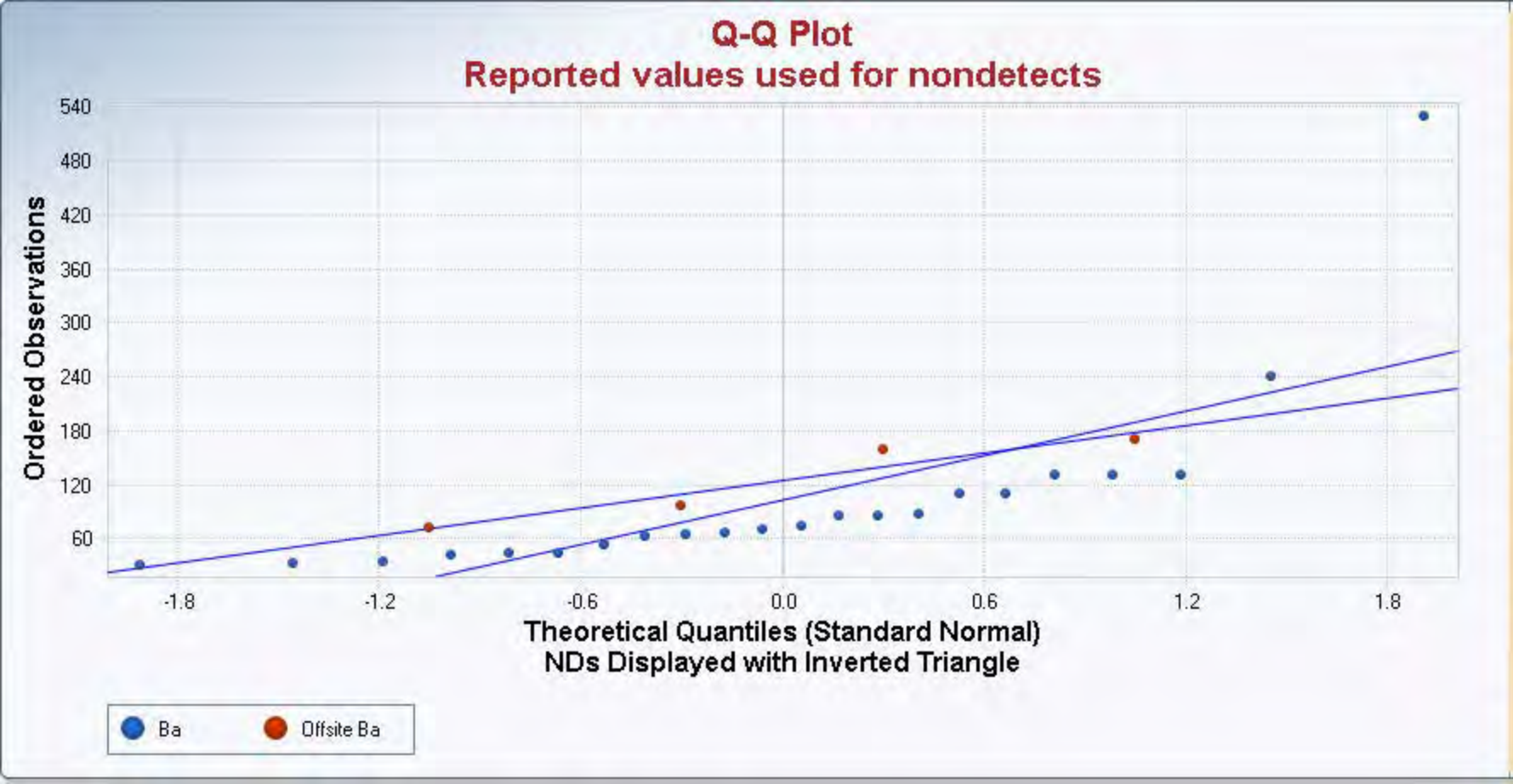
☐ More Bins

Ba

Number of Values	22
Number of Values	22
Mean	102.55
SD	106.61

Offsite Ba

Number of Values	4
Number of Values	4
Mean	125.00
SD	47.39


Q-Q Plot
Reported values used for nondetects
Ordered Observations
540
480
420
360
300
240
180
120
60
-1.8
-1.2
-0.6
0.0
0.6
1.2
1.8
Theoretical Quantiles (Standard Normal)
NDs Displayed with Inverted Triangle
Ba
Offsite Ba
Ba
Total Number of Data = 22
Number of Non-Detects = 0
Number of Detects = 22
Detected Mean = 102.6
Detected Sd = 106.6
Slope (displayed data) = 82.61
Intercept (displayed data)= 102.6
Correlation, R = 0.748
Offsite Ba
Total Number of Data = 4
Number of Non-Detects = 0
Number of Detects = 4
Detected Mean = 125
Detected Sd = 47.39
Slope (displayed data) = 50.67
Intercept (displayed data)= 125
Correlation, R = 0.952
Best Fit Line

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:08:38 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Ba

Sample 2 Data: Offsite Ba

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detects	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	30	73
Maximum Detect	530	170
Mean of Detects	102.6	125
Median of Detects	72	128.5
SD of Detects	106.6	47.39
KM Mean	102.6	125
KM SD	106.6	47.39

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

TW Statistic	-1.955
TW Critical Value (0.05)	1.645
P-Value	0.975

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:09:24 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Ba

Sample 2 Data: Offsite Ba

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detect Data	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	30	73
Maximum Detect	530	170
Mean of Detects	102.6	125
Median of Detects	72	128.5
SD of Detects	106.6	47.39

Wilcoxon-Mann-Whitney (WMW) Test

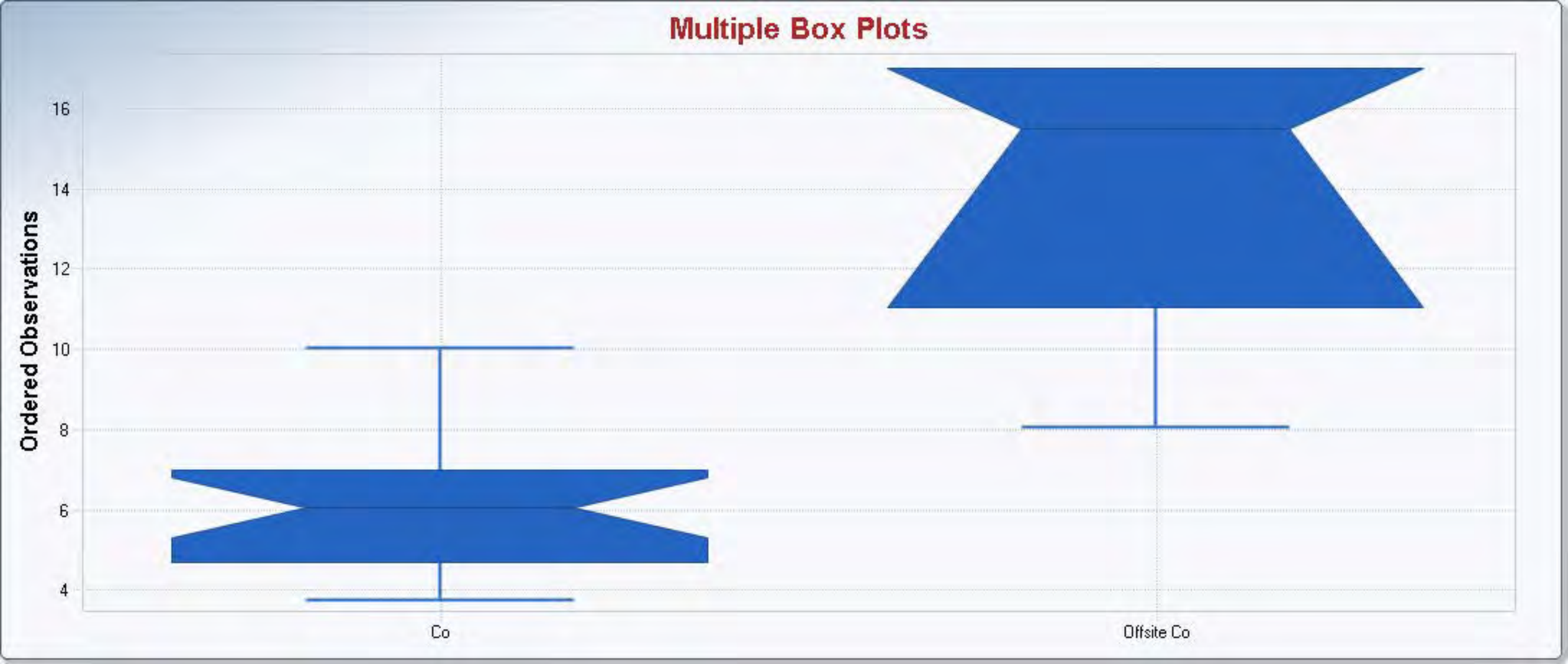
H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	275
Standardized WMW U-Stat	-1.6
Mean (U)	44
SD(U) - Adj ties	14.06
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.945

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)


Multiple Box Plots
Ordered Observations
16
14
12
10
8
6
4
Co
Offsite Co

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:10:15 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Co

Sample 2 Data: Offsite Co

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detect Data	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	3.8	8.1
Maximum Detect	10	17
Mean of Detects	6.129	14.03
Median of Detects	6.05	15.5
SD of Detects	1.586	4.196
KM Mean	6.129	14.03
KM SD	1.586	4.196

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

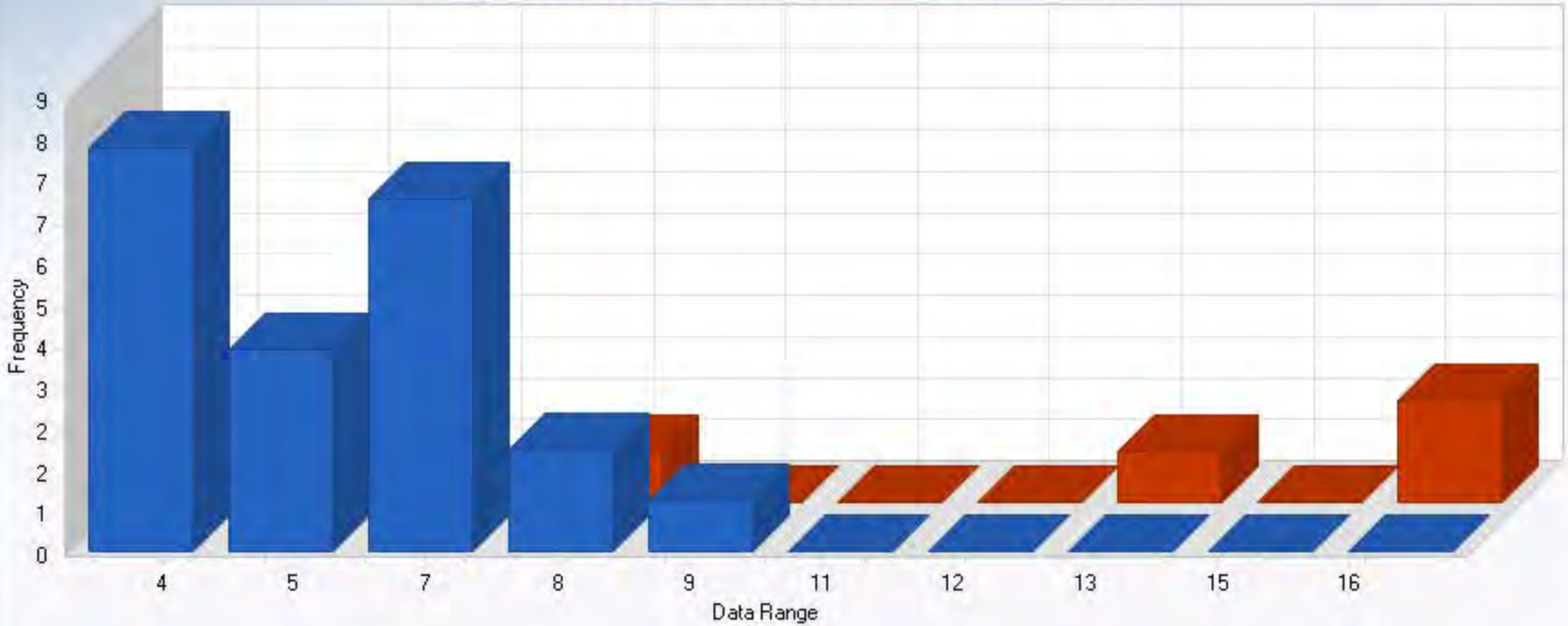
Gehan z Test Value	-2.985
Critical z (0.05)	1.645
P-Value	0.999

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

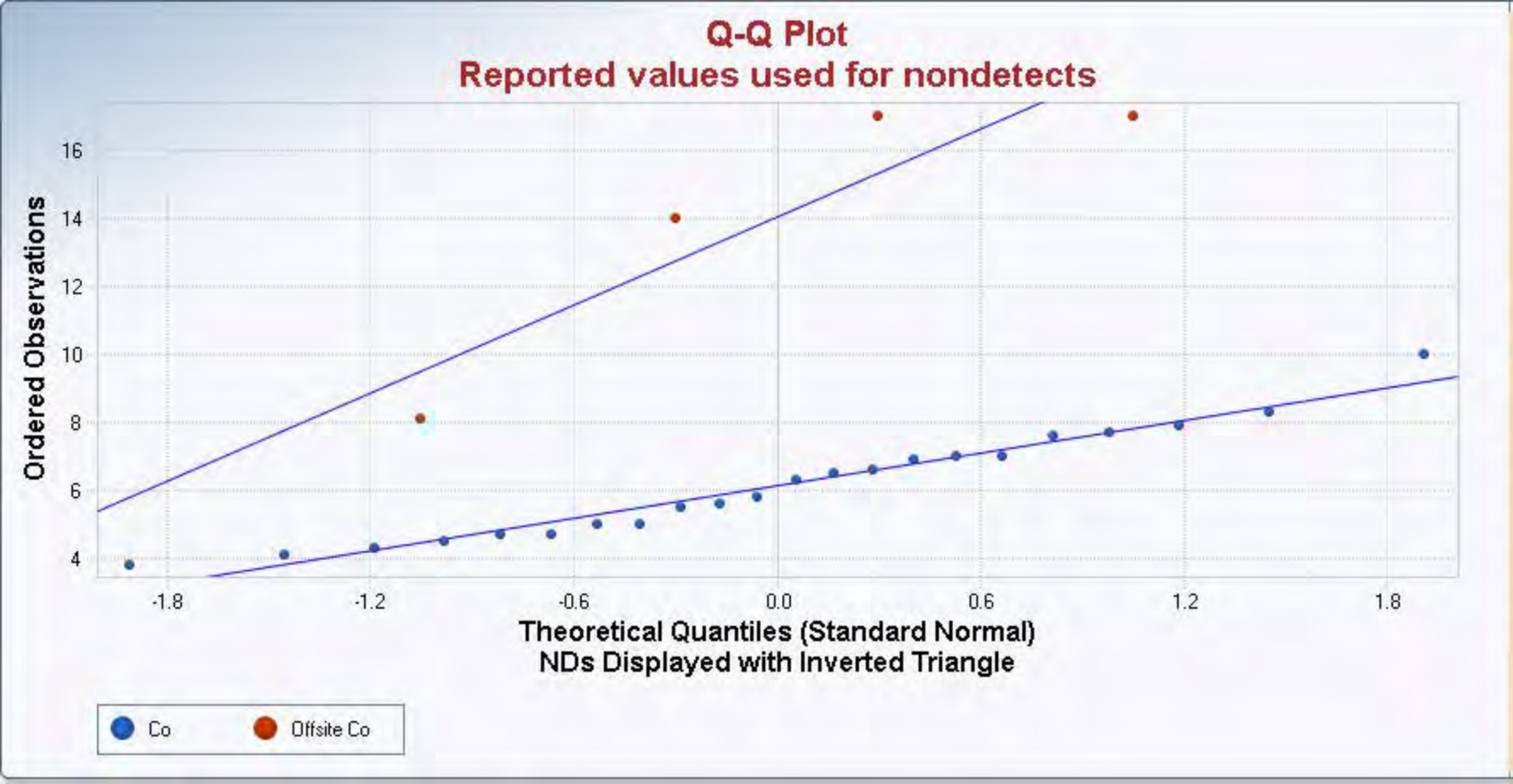
Multiple Histogram
Reported values used for nondetects



☐ Normal Distribution

☐ Less Bins
☐ More Bins

Co	
Number of Values	22
Number of Values	22
Mean	6.13
SD	1.59
Offsite Co	
Number of Values	4
Number of Values	4
Mean	14.03
SD	4.20


Q-Q Plot
Reported values used for nondetects
Ordered Observations
16
14
12
10
8
6
4
-1.8
-1.2
-0.6
0.0
0.6
1.2
1.8
Theoretical Quantiles (Standard Normal)
NDs Displayed with Inverted Triangle
Co
Offsite Co
Co
Total Number of Data = 22
Number of Non-Detects = 0
Number of Detects = 22
Detected Mean = 6.129
Detected Sd = 1.586
Slope (displayed data) = 1.61
Intercept (displayed data)= 6.129
Correlation, R = 0.98
Offsite Co
Total Number of Data = 4
Number of Non-Detects = 0
Number of Detects = 4
Detected Mean = 14.03
Detected Sd = 4.196
Slope (displayed data) = 4.3
Intercept (displayed data)= 14.03
Correlation, R = 0.913
Best Fit Line

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:11:09 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Co

Sample 2 Data: Offsite Co

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detects	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	3.8	8.1
Maximum Detect	10	17
Mean of Detects	6.129	14.03
Median of Detects	6.05	15.5
SD of Detects	1.586	4.196
KM Mean	6.129	14.03
KM SD	1.586	4.196

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

TW Statistic	-5.099
TW Critical Value (0.05)	1.645
P-Value	1

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:12:00 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Co

Sample 2 Data: Offsite Co

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detect Data	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	3.8	8.1
Maximum Detect	10	17
Mean of Detects	6.129	14.03
Median of Detects	6.05	15.5
SD of Detects	1.586	4.196

Wilcoxon-Mann-Whitney (WMW) Test

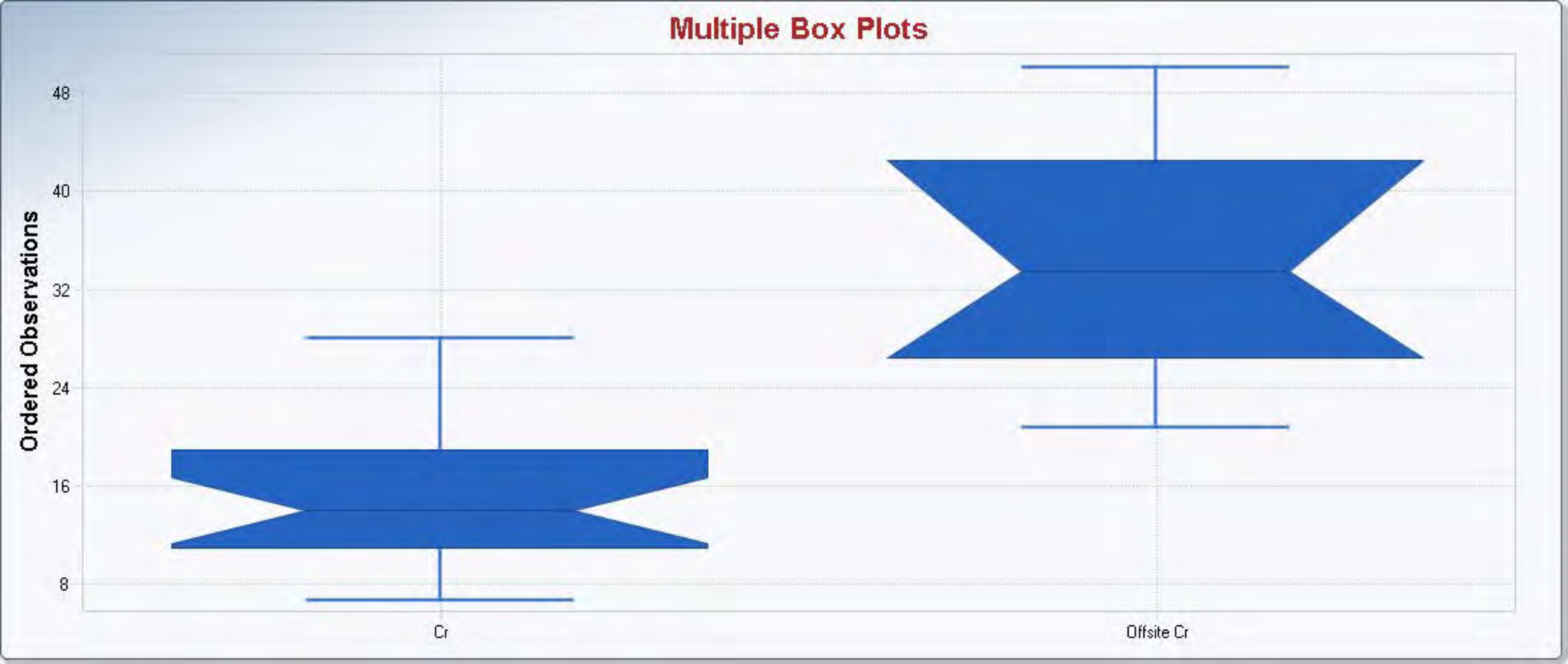
H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	255
Standardized WMW U-Stat	-3.022
Mean (U)	44
SD(U) - Adj ties	14.06
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.999

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)


Multiple Box Plots
Ordered Observations
48
40
32
24
16
8
Cr
Offsite Cr

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:20:10 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Cr

Sample 2 Data: Offsite Cr

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detect Data	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	6.9	21
Maximum Detect	28	50
Mean of Detects	15.32	34.5
Median of Detects	14	33.5
SD of Detects	6.179	11.96
KM Mean	15.32	34.5
KM SD	6.179	11.96

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

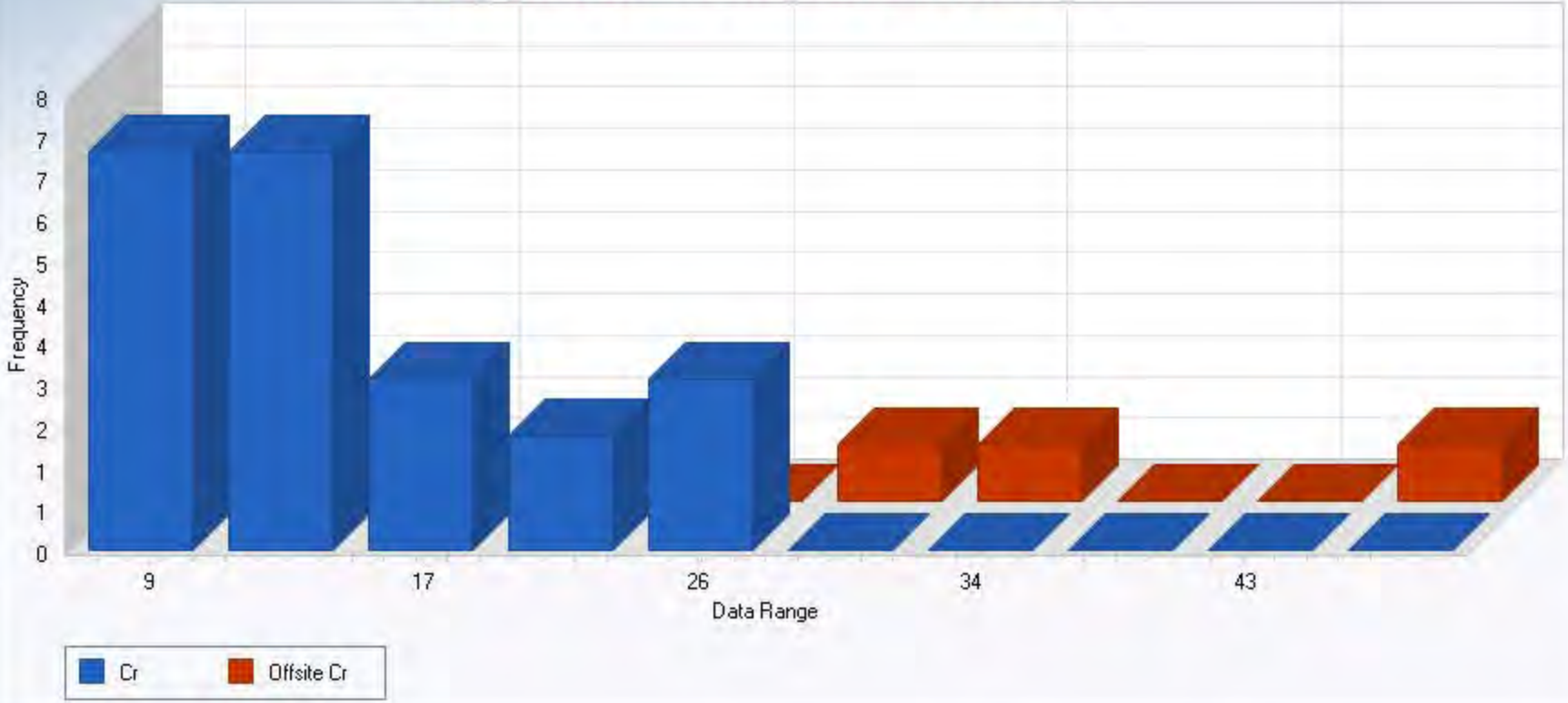
Gehan z Test Value	-2.843
Critical z (0.05)	1.645
P-Value	0.998

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Multiple Histogram
Reported values used for nondetects



☐ Normal Distribution

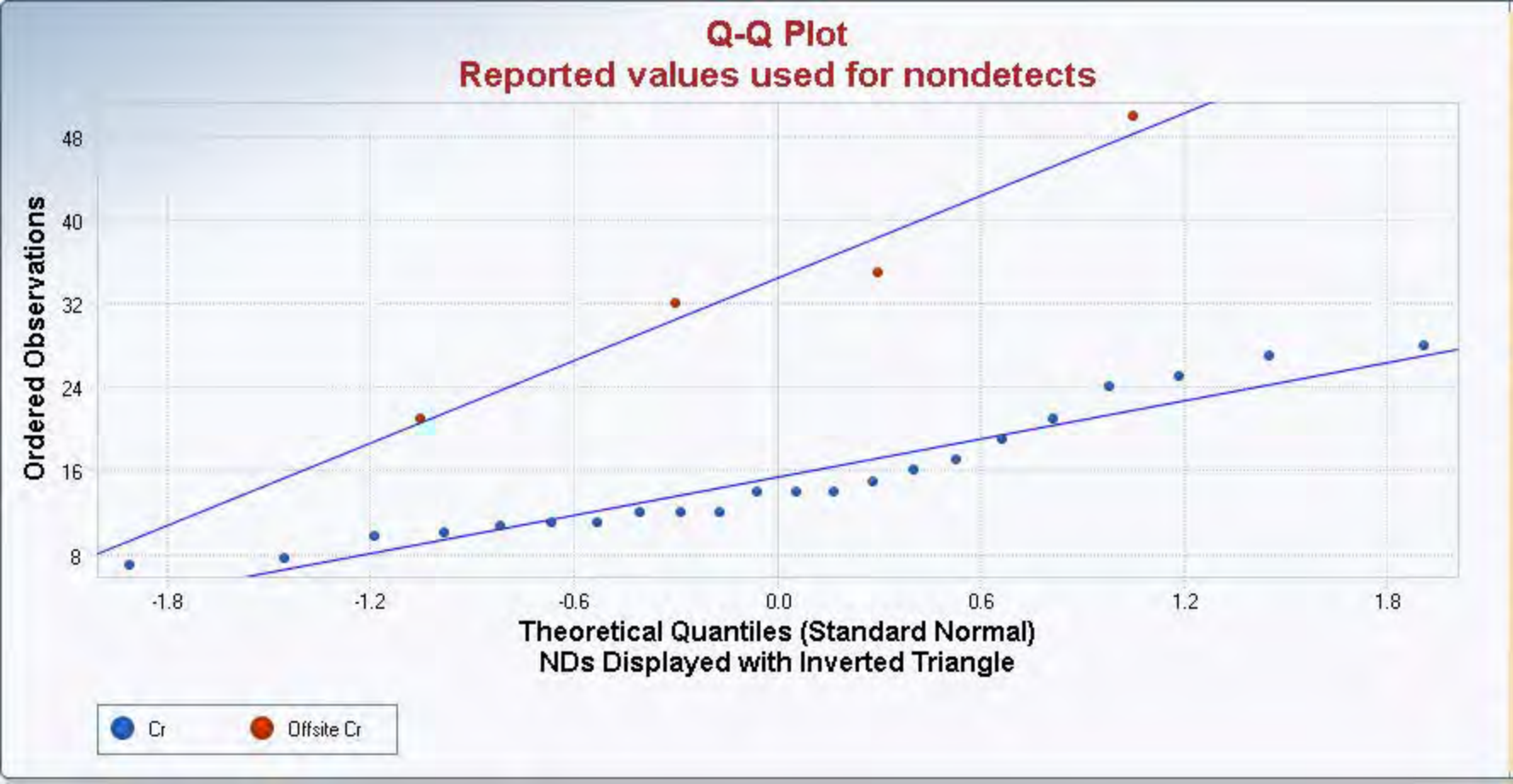
☐ Less Bins
☐ More Bins

Cr

Number of Values	22
Number of Values	22
Mean	15.32
SD	6.18

Offsite Cr

Number of Values	4
Number of Values	4
Mean	34.50
SD	11.96


Q-Q Plot
Reported values used for nondetects
Ordered Observations
48
40
32
24
16
8
-1.8
-1.2
-0.6
0.0
0.6
1.2
1.8
Theoretical Quantiles (Standard Normal)
NDs Displayed with Inverted Triangle
Cr
Offsite Cr
Cr
Total Number of Data = 22
Number of Non-Detects = 0
Number of Detects = 22
Detected Mean = 15.32
Detected Sd = 6.179
Slope (displayed data) = 6.124
Intercept (displayed data)= 15.32
Correlation, R = 0.957
Offsite Cr
Total Number of Data = 4
Number of Non-Detects = 0
Number of Detects = 4
Detected Mean = 34.5
Detected Sd = 11.96
Slope (displayed data) = 13.16
Intercept (displayed data)= 34.5
Correlation, R = 0.98
Best Fit Line

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:20:59 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Cr

Sample 2 Data: Offsite Cr

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detects	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	6.9	21
Maximum Detect	28	50
Mean of Detects	15.32	34.5
Median of Detects	14	33.5
SD of Detects	6.179	11.96
KM Mean	15.32	34.5
KM SD	6.179	11.96

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

TW Statistic	-4.427
TW Critical Value (0.05)	1.645
P-Value	1

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:21:43 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Cr

Sample 2 Data: Offsite Cr

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detect Data	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	6.9	21
Maximum Detect	28	50
Mean of Detects	15.32	34.5
Median of Detects	14	33.5
SD of Detects	6.179	11.96

Wilcoxon-Mann-Whitney (WMW) Test

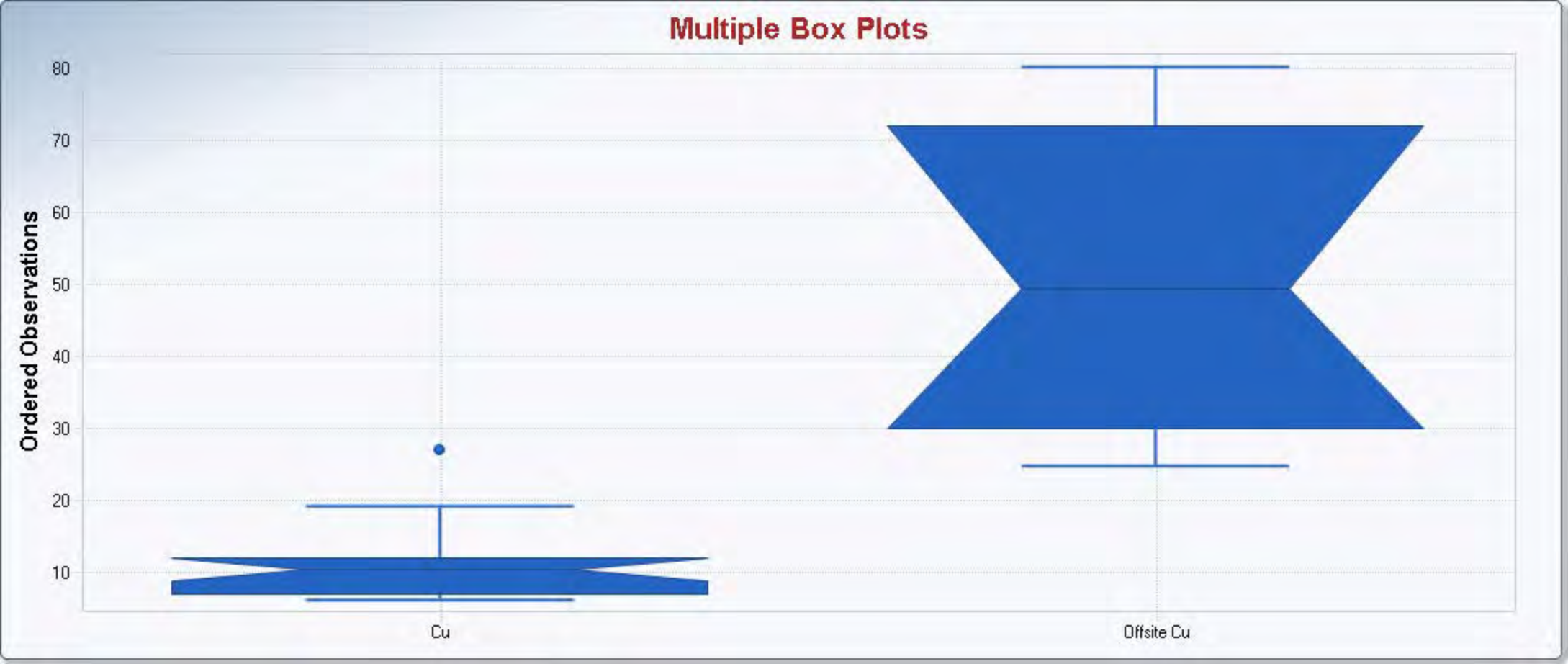
H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	257.5
Standardized WMW U-Stat	-2.848
Mean (U)	44
SD(U) - Adj ties	14.05
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.998

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)


Multiple Box Plots
Ordered Observations
80
70
60
50
40
30
20
10
Cu
Offsite Cu

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 9:22:20 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Cu

Sample 2 Data: Offsite Cu

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	3	0
Number of Detect Data	19	4
Minimum Non-Detect	7	N/A
Maximum Non-Detect	7	N/A
Percent Non-detects	13.64%	0.00%
Minimum Detect	6.4	25
Maximum Detect	27	80
Mean of Detects	11.32	51
Median of Detects	11	49.5
SD of Detects	4.909	25.44
KM Mean	10.66	51
KM SD	4.738	25.44

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

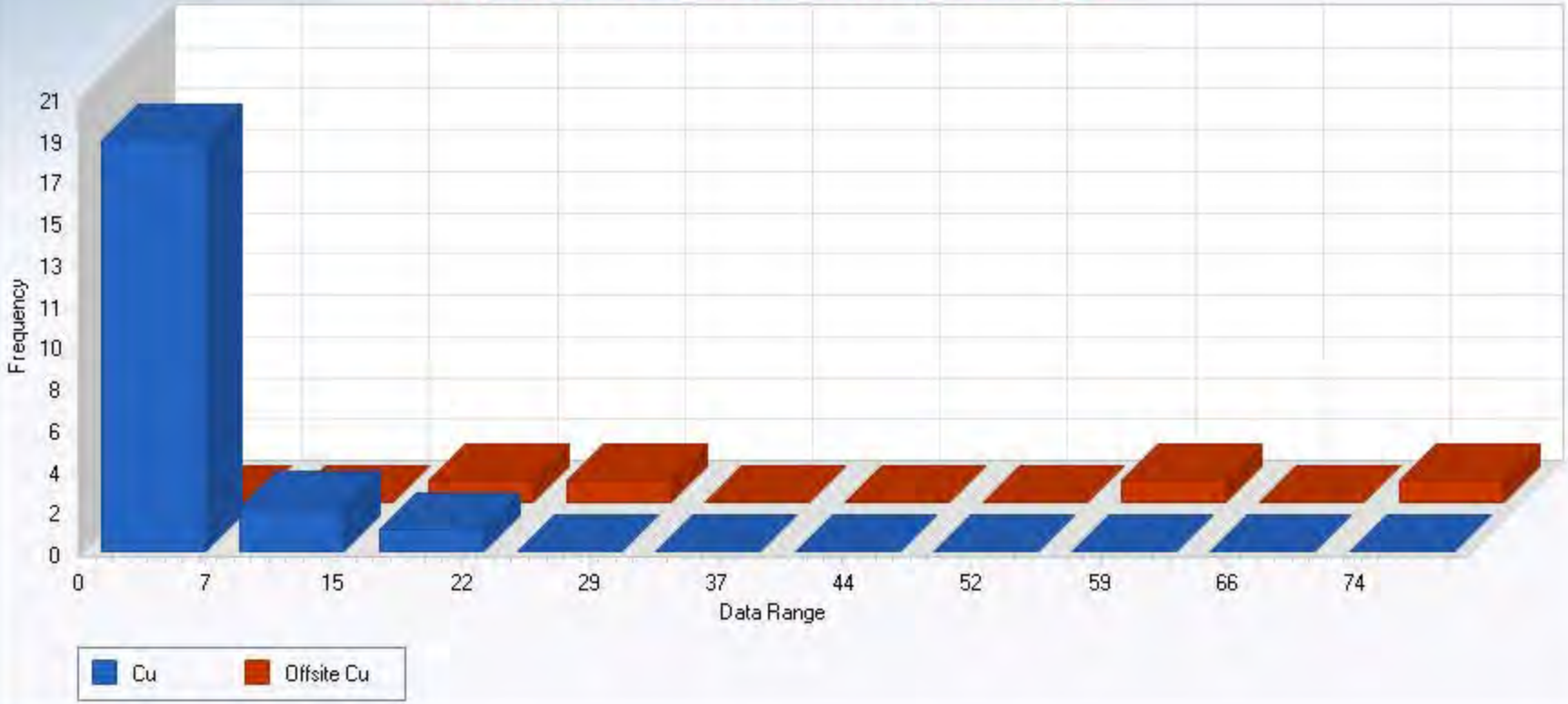
Gehan z Test Value	-3.066
Critical z (0.05)	1.645
P-Value	0.999

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Multiple Histogram
Reported values used for nondetects



☐ Normal Distribution

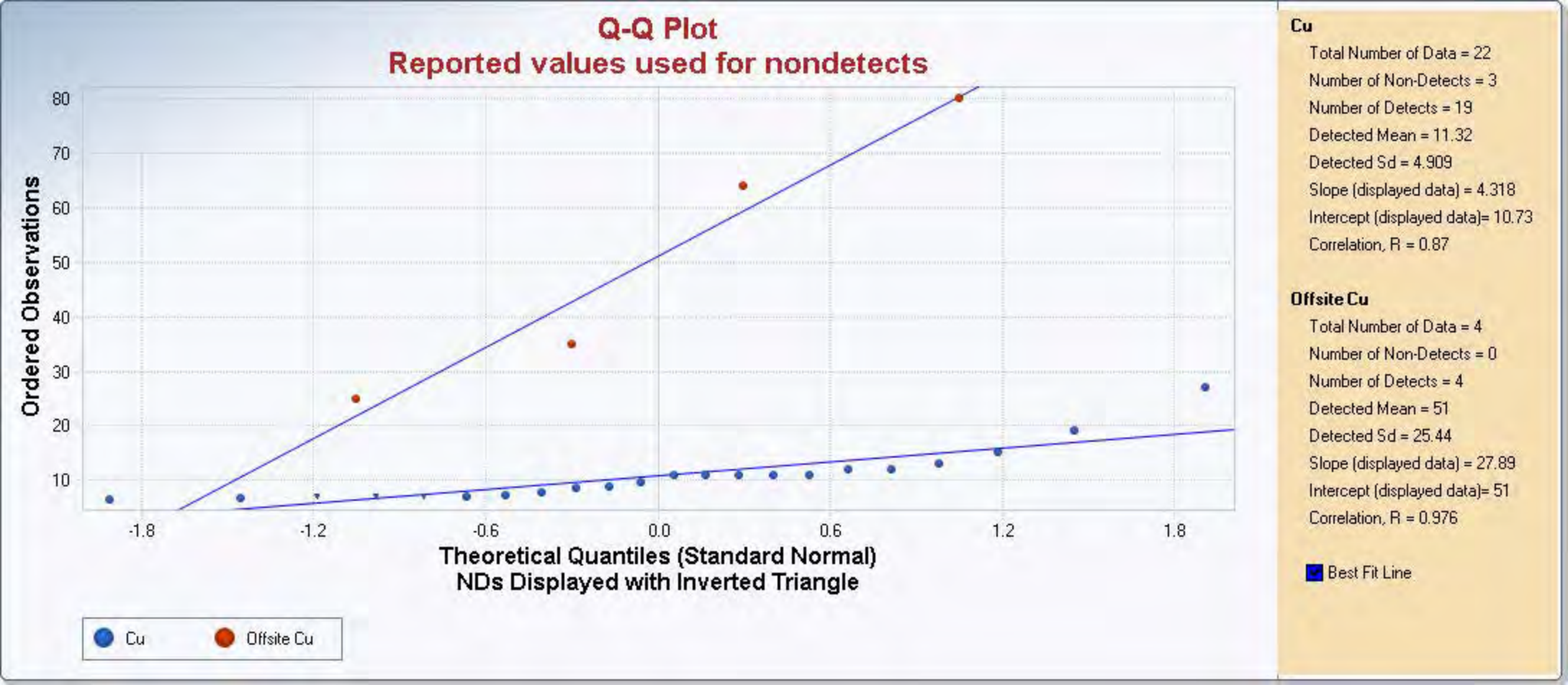
☐ Less Bins
☐ More Bins

Cu

Number of Values	22
Number of Values	22
Mean	10.73
SD	4.79

Offsite Cu

Number of Values	4
Number of Values	4
Mean	51.00
SD	25.44


Q-Q Plot
Reported values used for nondetects
Ordered Observations
80
70
60
50
40
30
20
10
-1.8
-1.2
-0.6
0.0
0.6
1.2
1.8
Theoretical Quantiles (Standard Normal)
NDs Displayed with Inverted Triangle
Cu
Offsite Cu
Cu
Total Number of Data = 22
Number of Non-Detects = 3
Number of Detects = 19
Detected Mean = 11.32
Detected Sd = 4.909
Slope (displayed data) = 4.318
Intercept (displayed data)= 10.73
Correlation, R = 0.87
Offsite Cu
Total Number of Data = 4
Number of Non-Detects = 0
Number of Detects = 4
Detected Mean = 51
Detected Sd = 25.44
Slope (displayed data) = 27.89
Intercept (displayed data)= 51
Correlation, R = 0.976
Best Fit Line

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 9:24:13 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Cu

Sample 2 Data: Offsite Cu

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	3	0
Number of Detects	19	4
Minimum Non-Detect	7	N/A
Maximum Non-Detect	7	N/A
Percent Non-detects	13.64%	0.00%
Minimum Detect	6.4	25
Maximum Detect	27	80
Mean of Detects	11.32	51
Median of Detects	11	49.5
SD of Detects	4.909	25.44
KM Mean	10.66	51
KM SD	4.738	25.44

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

TW Statistic	-5.591
TW Critical Value (0.05)	1.645
P-Value	1

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 9:25:30 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Cu

Sample 2 Data: Offsite Cu

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	3	0
Number of Detect Data	19	4
Minimum Non-Detect	7	N/A
Maximum Non-Detect	7	N/A
Percent Non-detects	13.64%	0.00%
Minimum Detect	6.4	25
Maximum Detect	27	80
Mean of Detects	11.32	51
Median of Detects	11	49.5
SD of Detects	4.909	25.44

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	254
Standardized WMW U-Stat	-3.121
Mean (U)	44
SD(U) - Adj ties	14.02
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.999

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)


Multiple Box Plots
Ordered Observations
0.200
0.180
0.160
0.140
0.120
0.100
0.080
0.060
0.040
0.020
Maximum Non-Detect Value 0.18
Hg
Offsite Hg

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 9:30:51 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Hg

Sample 2 Data: Offsite Hg

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	16	4
Number of Detect Data	6	0
Minimum Non-Detect	0.02	0.15
Maximum Non-Detect	0.1	0.18
Percent Non-detects	72.73%	100.00%
Minimum Detect	0.02	N/A
Maximum Detect	0.2	N/A
Mean of Detects	0.108	N/A
Median of Detects	0.09	N/A
SD of Detects	0.0719	N/A
KM Mean	0.0445	N/A
KM SD	0.0523	N/A

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

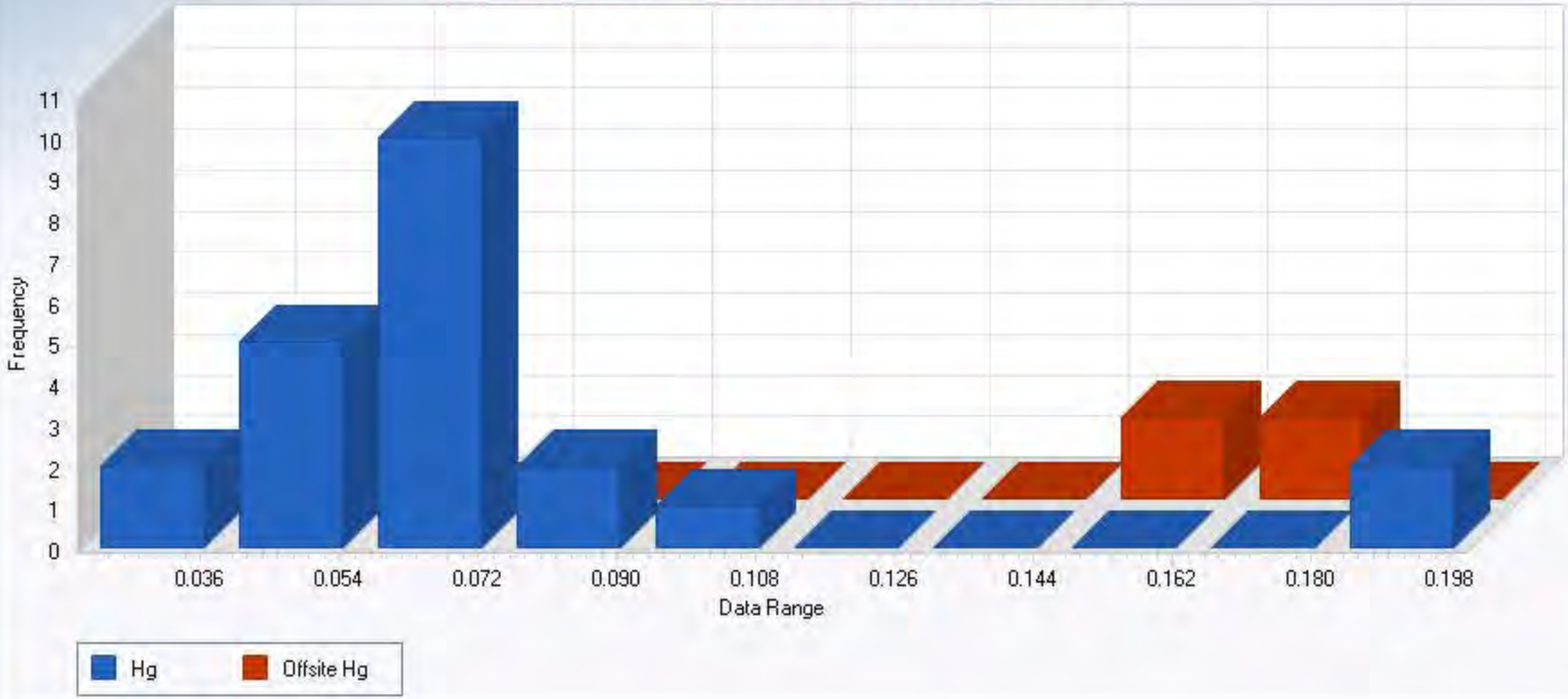
Gehan z Test Value	0.467
Critical z (0.05)	1.645
P-Value	0.32

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Multiple Histogram
Reported values used for nondetects

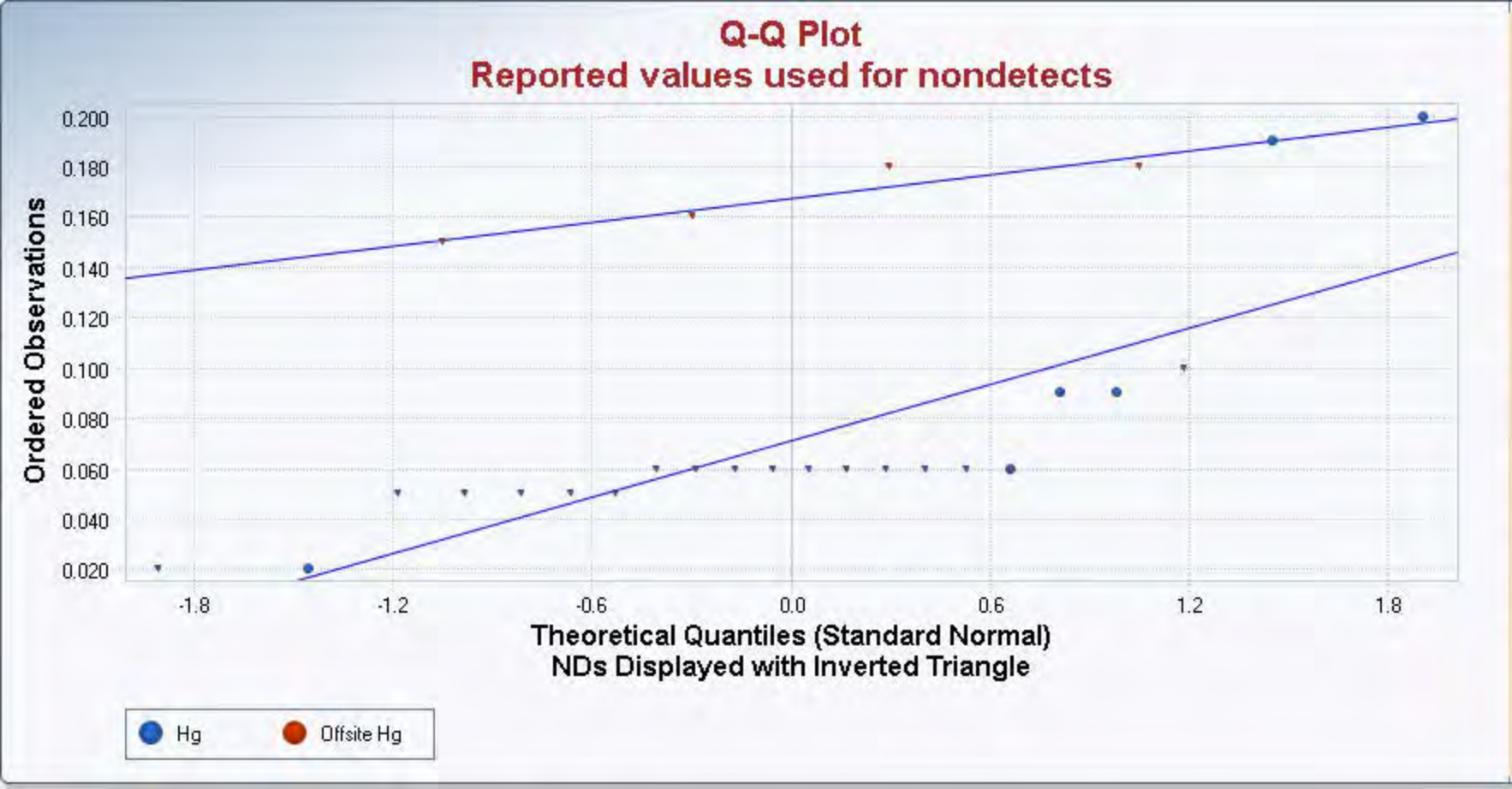


☐ Normal Distribution

☐ Less Bins

☐ More Bins

Hg	
Number of Values	22
Number of Values	22
Mean	0.07
SD	0.04
Offsite Hg	
Number of Values	4
Number of Values	4
Mean	0.17
SD	0.02



Hg

Total Number of Data = 22
Number of Non-Detects = 16
Number of Detects = 6
Detected Mean = 0.108
Detected Sd = 0.0719
Slope (displayed data) = 0.0375
Intercept (displayed data)= 0.0709
Correlation, R = 0.819

Offsite Hg

Total Number of Data = 4
Number of Non-Detects = 4
Number of Detects = 0
Detected Mean = N/A
Detected Sd = N/A
Slope (displayed data) = 0.0157
Intercept (displayed data)= 0.168
Correlation, R = 0.935

Best Fit Line

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 9:32:15 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Hg

Sample 2 Data: Offsite Hg

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	16	4
Number of Detects	6	0
Minimum Non-Detect	0.02	0.15
Maximum Non-Detect	0.1	0.18
Percent Non-detects	72.73%	100.00%
Minimum Detect	0.02	N/A
Maximum Detect	0.2	N/A
Mean of Detects	0.108	N/A
Median of Detects	0.09	N/A
SD of Detects	0.0719	N/A
KM Mean	0.0445	N/A
KM SD	0.0523	N/A

Sample 1 vs Sample 2 Tarone-Ware Test

There are no detects in at least on of the groups - no analysis will be performed!

Graphical displays may be helpful!

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 9:33:42 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Hg

Sample 2 Data: Offsite Hg

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	16	4
Number of Detect Data	6	0
Minimum Non-Detect	0.02	0.15
Maximum Non-Detect	0.1	0.18
Percent Non-detects	72.73%	100.00%
Minimum Detect	0.02	N/A
Maximum Detect	0.2	N/A
Mean of Detects	0.108	N/A
Median of Detects	0.09	N/A
SD of Detects	0.0719	N/A

WMW test is meant for a Single Detection Limit Case

Use of Gehan or T-W test is suggested when multiple detection limits are present

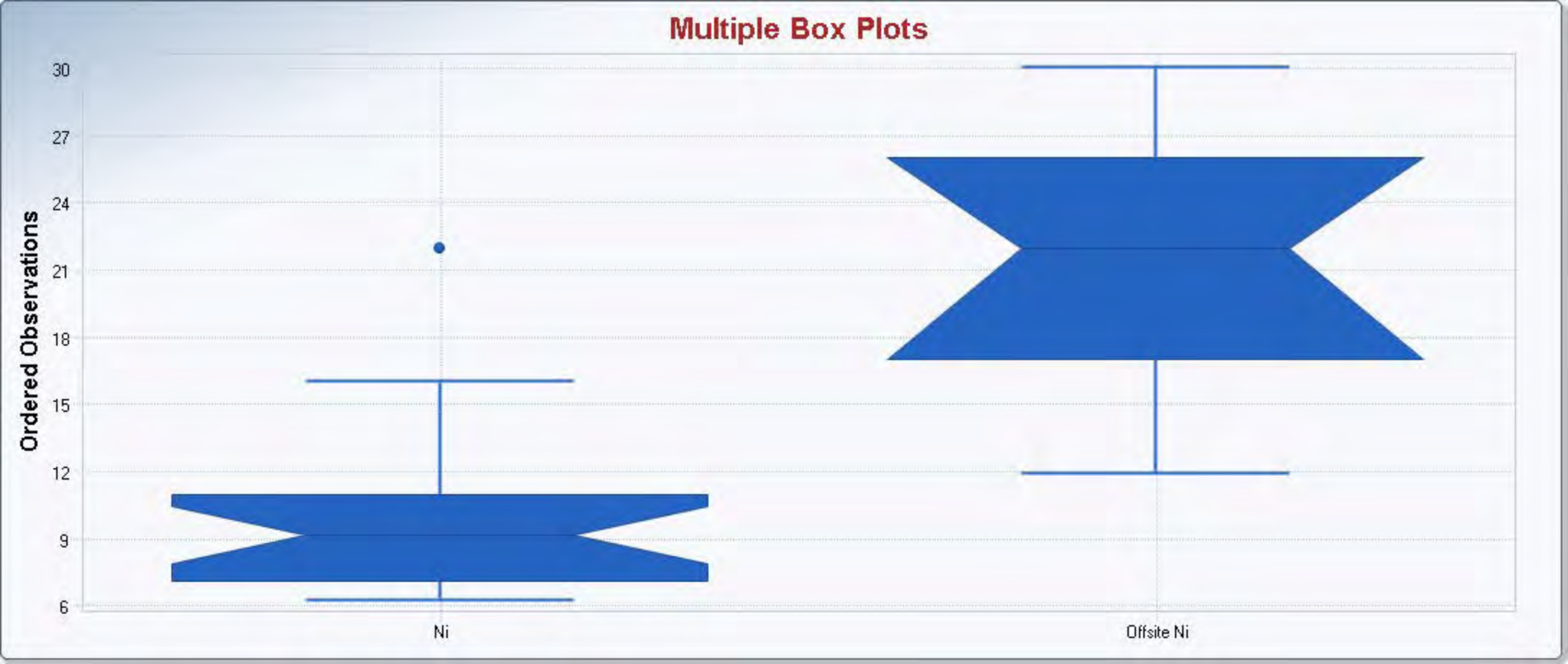
All observations <= 0.18 (Max DL) are ranked the same

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

There are no detects in at least on of the groups - no analysis will be performed

Graphical displays may be helpful!


Multiple Box Plots
Ordered Observations
30
27
24
21
18
15
12
9
6
Ni
Offsite Ni

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:41:54 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Ni

Sample 2 Data: Offsite Ni

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	3	0
Number of Detect Data	19	4
Minimum Non-Detect	6.8	N/A
Maximum Non-Detect	6.8	N/A
Percent Non-detects	13.64%	0.00%
Minimum Detect	6.36	12
Maximum Detect	22	30
Mean of Detects	10.46	21.5
Median of Detects	9.2	22
SD of Detects	3.92	7.371
KM Mean	9.902	21.5
KM SD	3.815	7.371

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

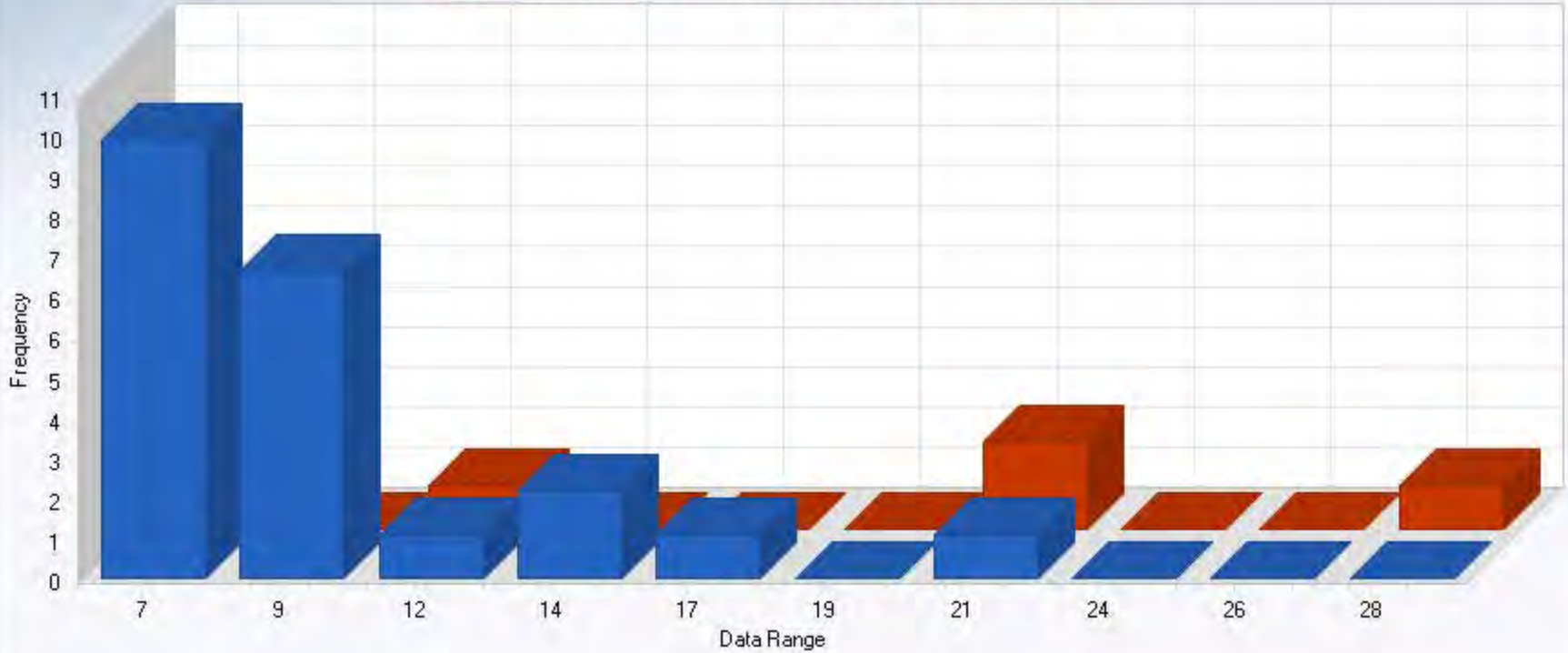
Gehan z Test Value	-2.848
Critical z (0.05)	1.645
P-Value	0.998

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Multiple Histogram
Reported values used for nondetects



☐ Normal Distribution

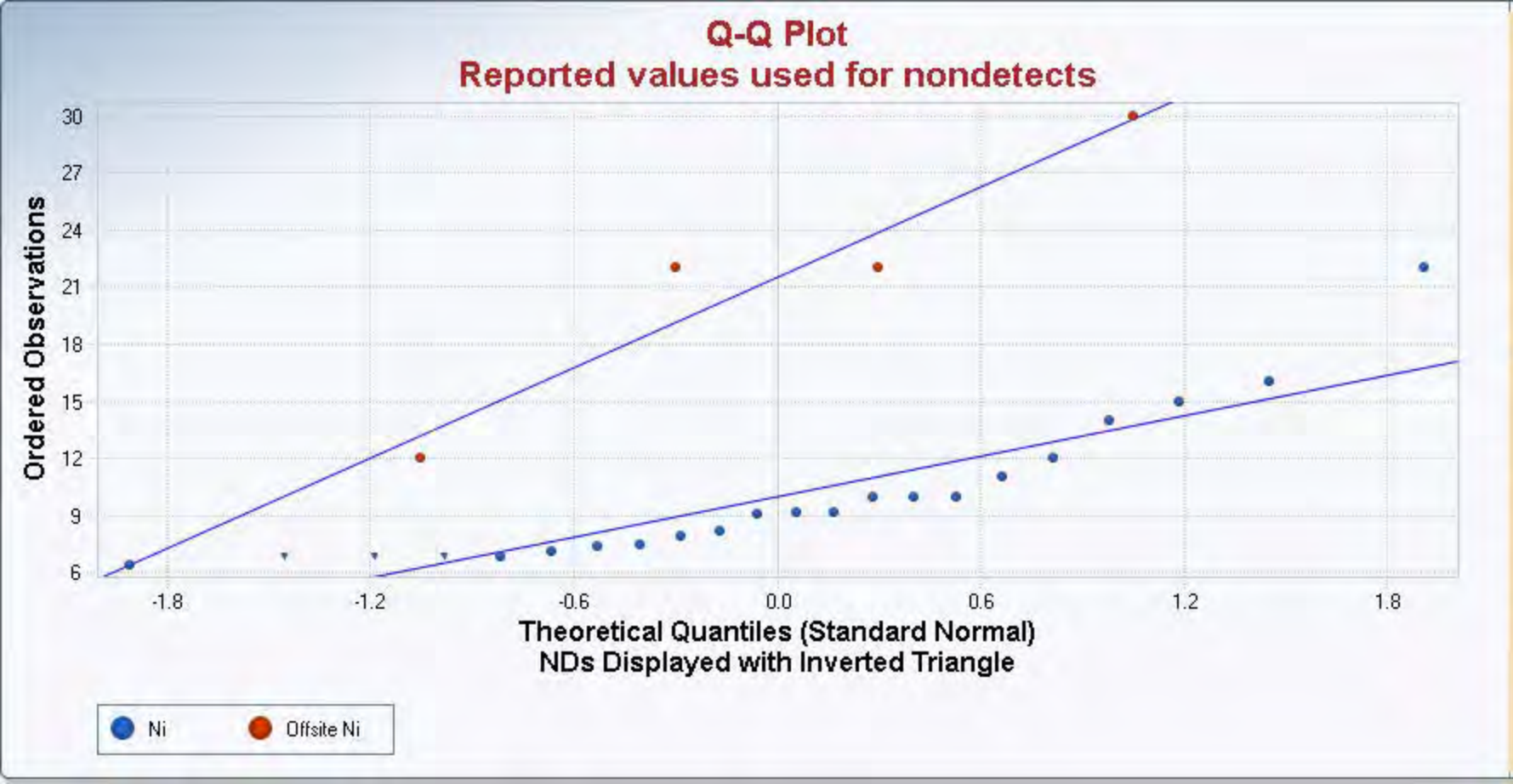
☐ Less Bins
☐ More Bins

Ni

Number of Values	22
Number of Values	22
Mean	9.96
SD	3.85

Offsite Ni

Number of Values	4
Number of Values	4
Mean	21.50
SD	7.37


Q-Q Plot
Reported values used for nondetects
Ordered Observations
30
27
24
21
18
15
12
9
6
-1.8
-1.2
-0.6
0.0
0.6
1.2
1.8
Theoretical Quantiles (Standard Normal)
NDs Displayed with Inverted Triangle
Ni
Offsite Ni
Ni
Total Number of Data = 22
Number of Non-Detects = 3
Number of Detects = 19
Detected Mean = 10.46
Detected Sd = 3.92
Slope (displayed data) = 3.575
Intercept (displayed data)= 9.962
Correlation, R = 0.897
Offsite Ni
Total Number of Data = 4
Number of Non-Detects = 0
Number of Detects = 4
Detected Mean = 21.5
Detected Sd = 7.371
Slope (displayed data) = 7.933
Intercept (displayed data)= 21.5
Correlation, R = 0.959
Best Fit Line

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:42:46 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Ni

Sample 2 Data: Offsite Ni

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	3	0
Number of Detects	19	4
Minimum Non-Detect	6.8	N/A
Maximum Non-Detect	6.8	N/A
Percent Non-detects	13.64%	0.00%
Minimum Detect	6.36	12
Maximum Detect	22	30
Mean of Detects	10.46	21.5
Median of Detects	9.2	22
SD of Detects	3.92	7.371
KM Mean	9.902	21.5
KM SD	3.815	7.371

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

TW Statistic	-4.03
TW Critical Value (0.05)	1.645
P-Value	1

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:43:29 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Ni

Sample 2 Data: Offsite Ni

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	3	0
Number of Detect Data	19	4
Minimum Non-Detect	6.8	N/A
Maximum Non-Detect	6.8	N/A
Percent Non-detects	13.64%	0.00%
Minimum Detect	6.36	12
Maximum Detect	22	30
Mean of Detects	10.46	21.5
Median of Detects	9.2	22
SD of Detects	3.92	7.371

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	258.5
Standardized WMW U-Stat	-2.786
Mean (U)	44
SD(U) - Adj ties	14.05
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.997

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)


Multiple Box Plots
Ordered Observations
30
25
20
15
10
5
Pb
Offsite Pb

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 9:35:06 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Pb

Sample 2 Data: Offsite Pb

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	4	0
Number of Detect Data	18	4
Minimum Non-Detect	2.6	N/A
Maximum Non-Detect	2.6	N/A
Percent Non-detects	18.18%	0.00%
Minimum Detect	2.44	5.6
Maximum Detect	33	12
Mean of Detects	7.647	8.925
Median of Detects	5.55	9.05
SD of Detects	7.373	2.729
KM Mean	6.7	8.925
KM SD	6.785	2.729

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

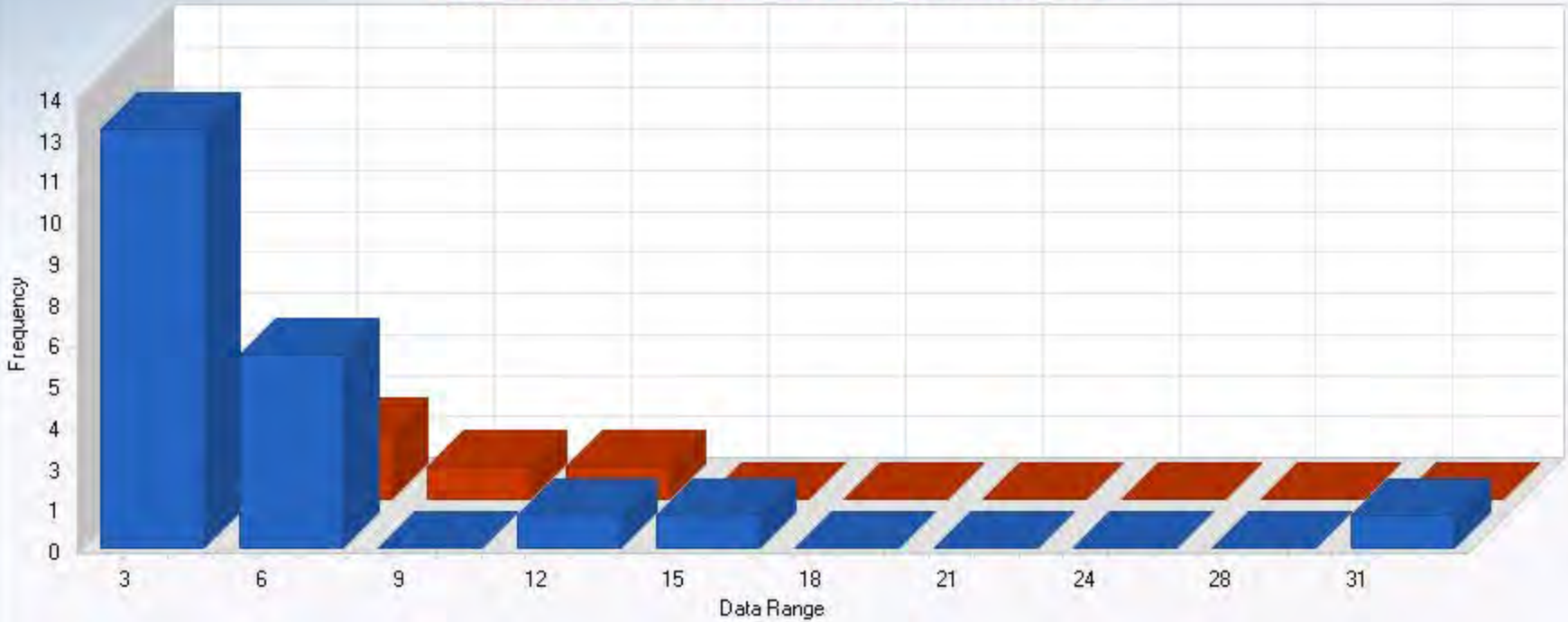
Gehan z Test Value	-1.783
Critical z (0.05)	1.645
P-Value	0.963

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Multiple Histogram
Reported values used for nondetects



☐ Normal Distribution

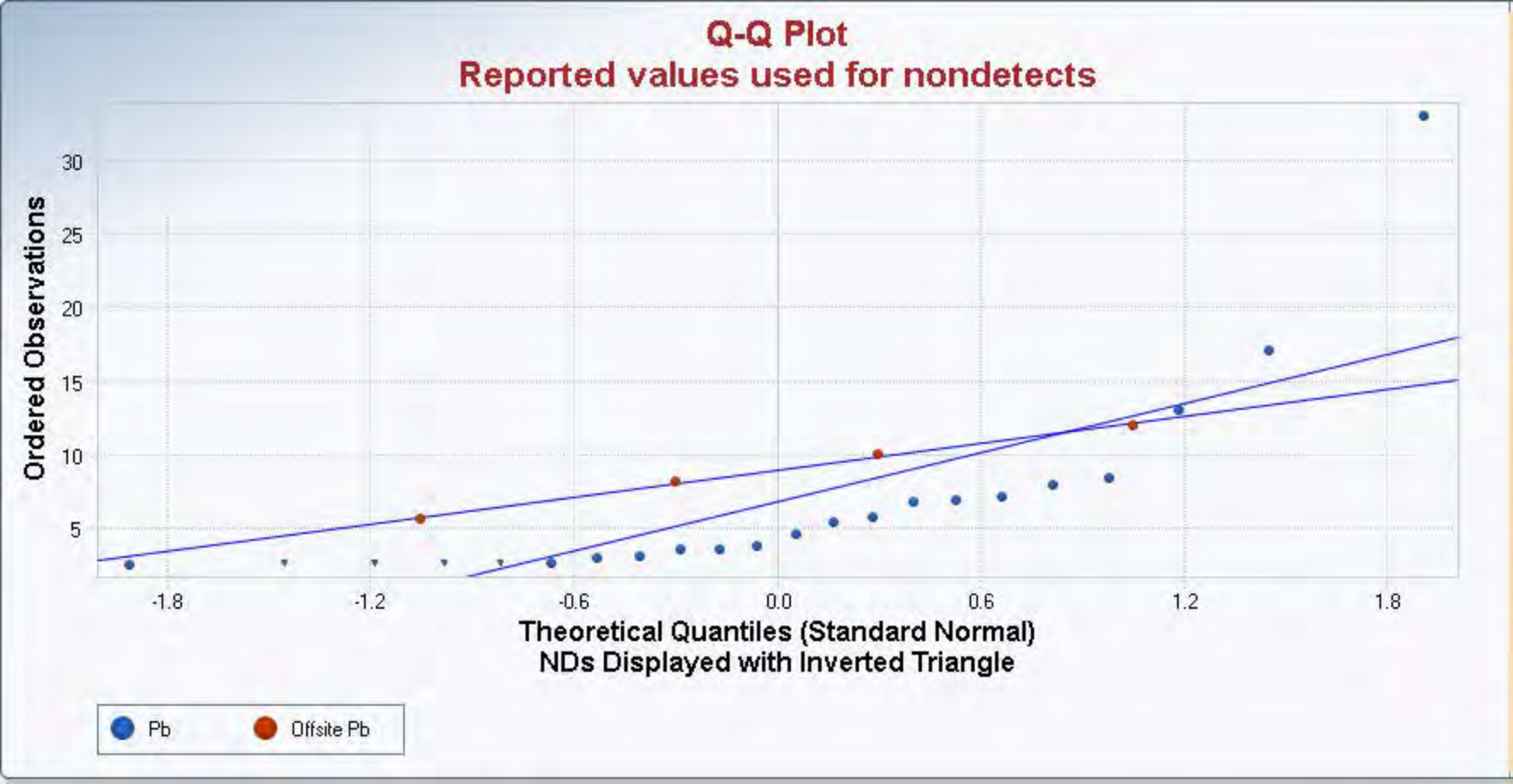
☐ Less Bins
☐ More Bins

Pb

Number of Values	22
Number of Values	22
Mean	6.73
SD	6.93

Offsite Pb

Number of Values	4
Number of Values	4
Mean	8.93
SD	2.73


Q-Q Plot
Reported values used for nondetects
Ordered Observations
30
25
20
15
10
5
-1.8
-1.2
-0.6
0.0
0.6
1.2
1.8
Theoretical Quantiles (Standard Normal)
NDs Displayed with Inverted Triangle
Pb
Offsite Pb
Pb
Total Number of Data = 22
Number of Non-Detects = 4
Number of Detects = 18
Detected Mean = 7.647
Detected Sd = 7.373
Slope (displayed data) = 5.574
Intercept (displayed data)= 6.729
Correlation, R = 0.777
Offsite Pb
Total Number of Data = 4
Number of Non-Detects = 0
Number of Detects = 4
Detected Mean = 8.925
Detected Sd = 2.729
Slope (displayed data) = 3.059
Intercept (displayed data)= 8.925
Correlation, R = 0.999
Best Fit Line

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 9:36:33 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Pb

Sample 2 Data: Offsite Pb

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	4	0
Number of Detects	18	4
Minimum Non-Detect	2.6	N/A
Maximum Non-Detect	2.6	N/A
Percent Non-detects	18.18%	0.00%
Minimum Detect	2.44	5.6
Maximum Detect	33	12
Mean of Detects	7.647	8.925
Median of Detects	5.55	9.05
SD of Detects	7.373	2.729
KM Mean	6.7	8.925
KM SD	6.785	2.729

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

TW Statistic	-2.282
TW Critical Value (0.05)	1.645
P-Value	0.989

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 9:39:43 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Pb

Sample 2 Data: Offsite Pb

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	4	0
Number of Detect Data	18	4
Minimum Non-Detect	2.6	N/A
Maximum Non-Detect	2.6	N/A
Percent Non-detects	18.18%	0.00%
Minimum Detect	2.44	5.6
Maximum Detect	33	12
Mean of Detects	7.647	8.925
Median of Detects	5.55	9.05
SD of Detects	7.373	2.729

Wilcoxon-Mann-Whitney (WMW) Test

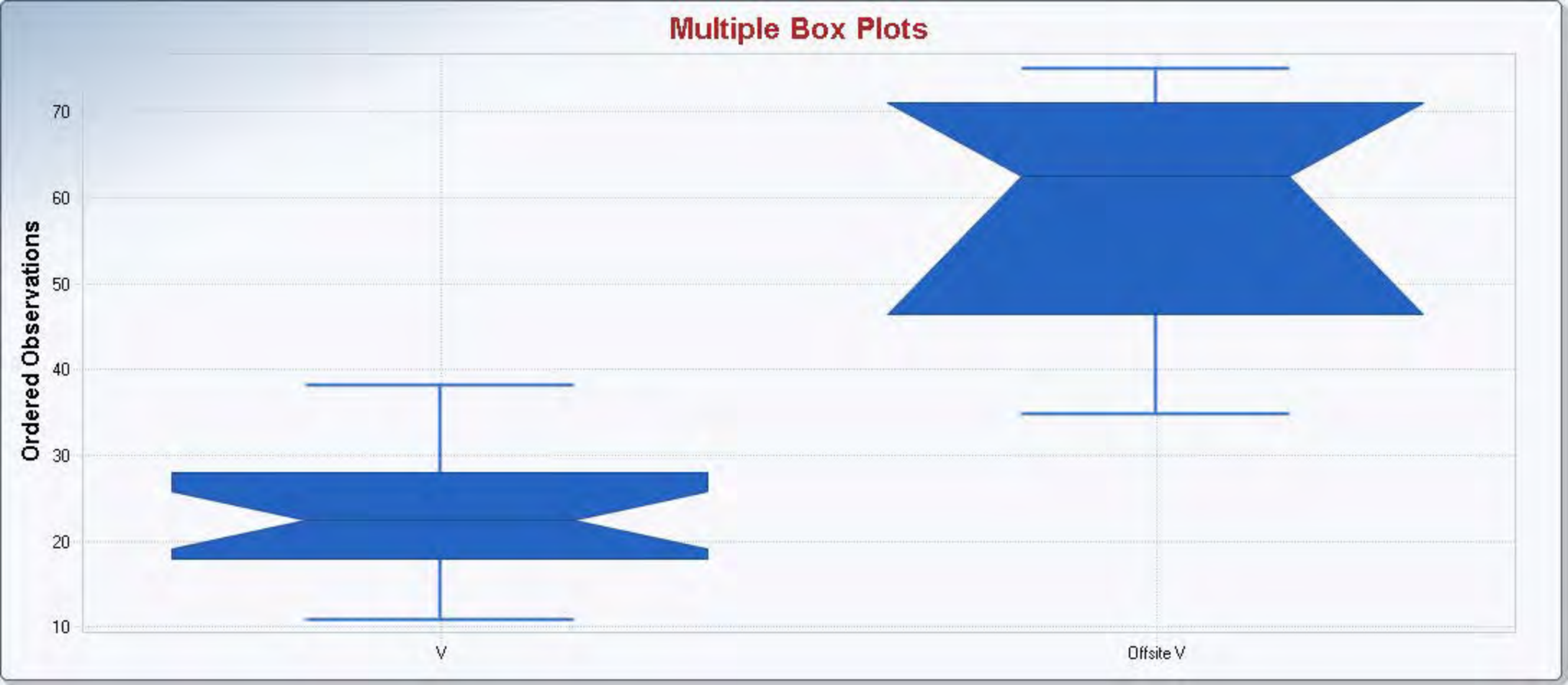
H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	272
Standardized WMW U-Stat	-1.823
Mean (U)	44
SD(U) - Adj ties	14.07
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.966

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)


Multiple Box Plots
Ordered Observations
70
60
50
40
30
20
10
V
Offsite V

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:35:59 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: V

Sample 2 Data: Offsite V

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detect Data	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	11	35
Maximum Detect	38	75
Mean of Detects	23.19	58.75
Median of Detects	22.5	62.5
SD of Detects	7.014	17.29
KM Mean	23.19	58.75
KM SD	7.014	17.29

Sample 1 vs Sample 2 Gehan Test

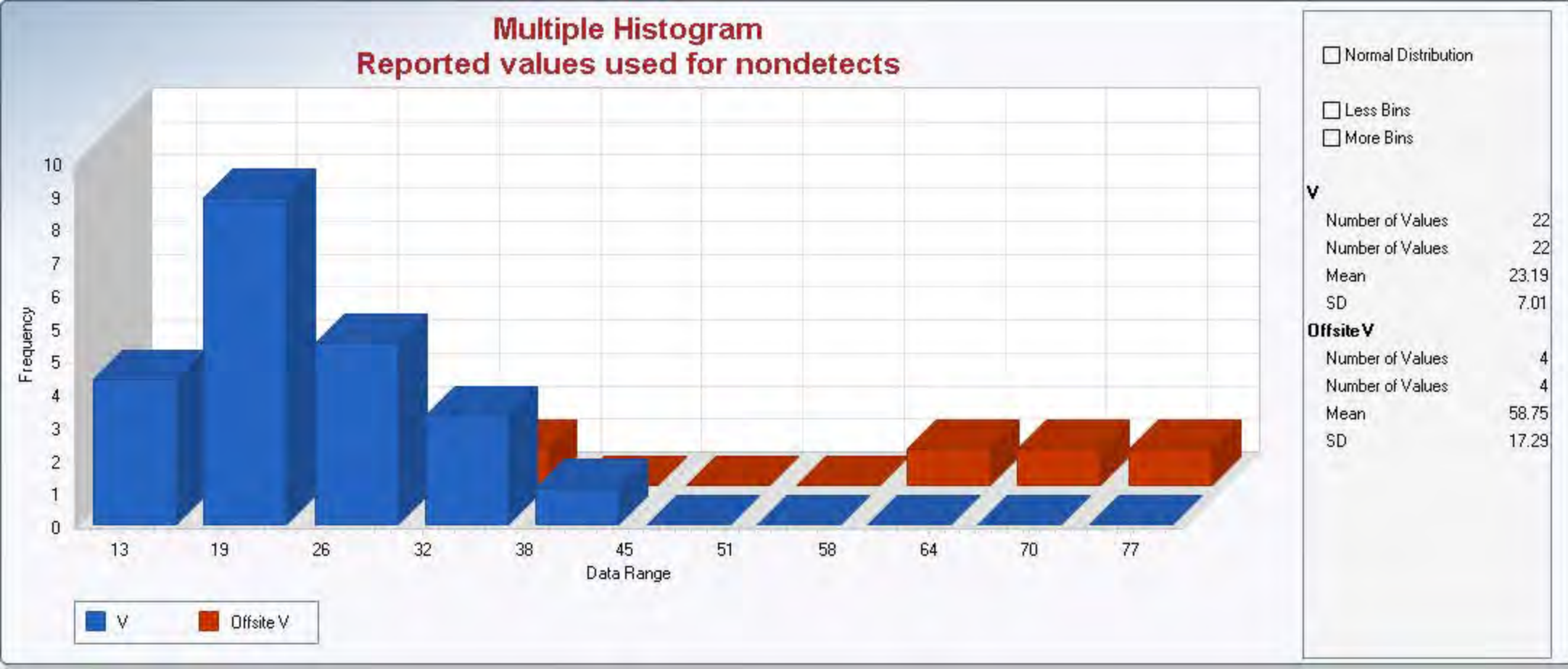
H0: Mean/Median of Sample 1 <= Mean/Median of background

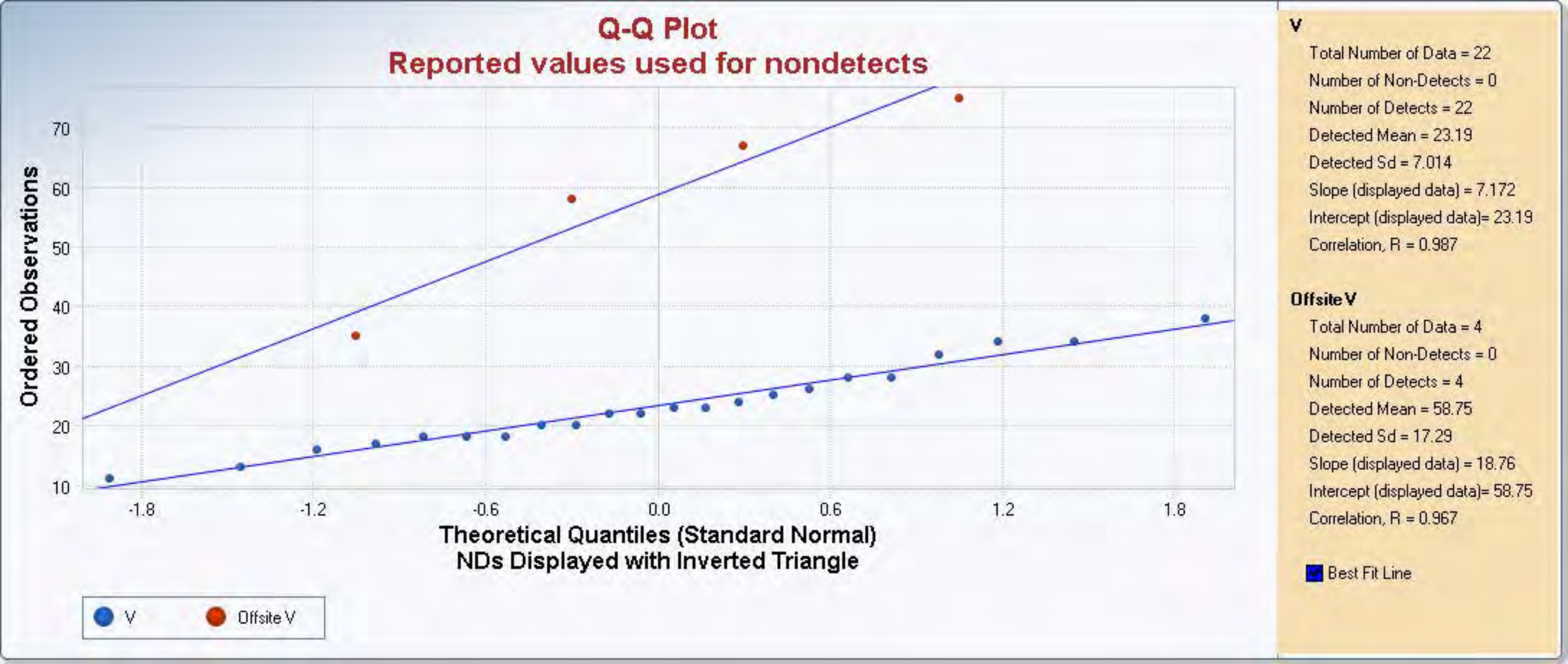
Gehan z Test Value	-3.056
Critical z (0.05)	1.645
P-Value	0.999

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)


Multiple Histogram
Reported values used for nondetects
Normal Distribution
Less Bins
More Bins
V
Number of Values 22
Number of Values 22
Mean 23.19
SD 7.01
Offsite V
Number of Values 4
Number of Values 4
Mean 58.75
SD 17.29
Frequency
0
1
2
3
4
5
6
7
8
9
10
13
19
26
32
38
45
51
58
64
70
77
Data Range
V
Offsite V


Q-Q Plot
Reported values used for nondetects
Ordered Observations
70
60
50
40
30
20
10
-1.8
-1.2
-0.6
0.0
0.6
1.2
1.8
Theoretical Quantiles (Standard Normal)
NDs Displayed with Inverted Triangle
V
Offsite V
V
Total Number of Data = 22
Number of Non-Detects = 0
Number of Detects = 22
Detected Mean = 23.19
Detected Sd = 7.014
Slope (displayed data) = 7.172
Intercept (displayed data)= 23.19
Correlation, R = 0.987
Offsite V
Total Number of Data = 4
Number of Non-Detects = 0
Number of Detects = 4
Detected Mean = 58.75
Detected Sd = 17.29
Slope (displayed data) = 18.76
Intercept (displayed data)= 58.75
Correlation, R = 0.967
Best Fit Line

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:36:46 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: V

Sample 2 Data: Offsite V

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detects	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	11	35
Maximum Detect	38	75
Mean of Detects	23.19	58.75
Median of Detects	22.5	62.5
SD of Detects	7.014	17.29
KM Mean	23.19	58.75
KM SD	7.014	17.29

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

TW Statistic	-5.591
TW Critical Value (0.05)	1.645
P-Value	1

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:37:30 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: V

Sample 2 Data: Offsite V

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detect Data	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	11	35
Maximum Detect	38	75
Mean of Detects	23.19	58.75
Median of Detects	22.5	62.5
SD of Detects	7.014	17.29

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	254
Standardized WMW U-Stat	-3.095
Mean (U)	44
SD(U) - Adj ties	14.06
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.999

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)


Multiple Box Plots
Ordered Observations
100
80
60
40
20
Zn
Offsite Zn

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:25:45 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Zn

Sample 2 Data: Offsite Zn

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detect Data	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	17	62
Maximum Detect	110	99
Mean of Detects	38.58	80.75
Median of Detects	35	81
SD of Detects	20.95	18.95
KM Mean	38.58	80.75
KM SD	20.95	18.95

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

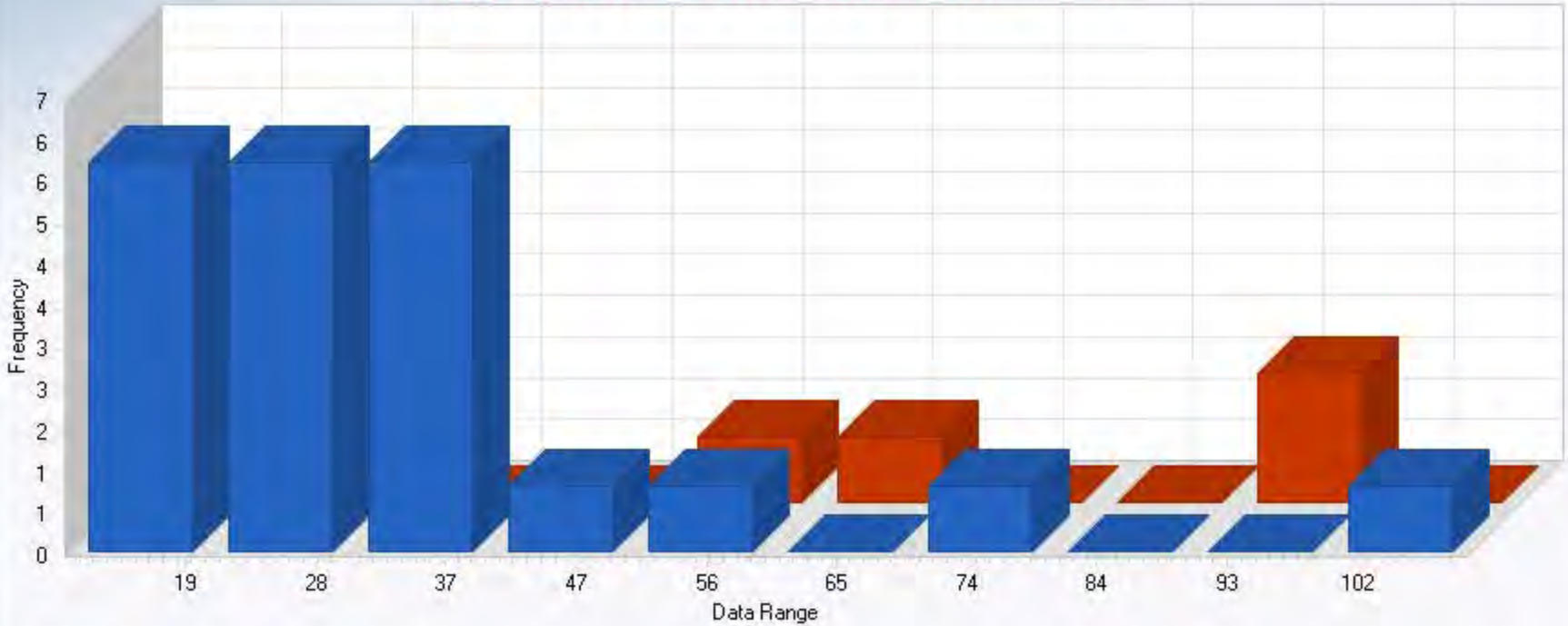
Gehan z Test Value	-2.701
Critical z (0.05)	1.645
P-Value	0.997

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Multiple Histogram
Reported values used for nondetects

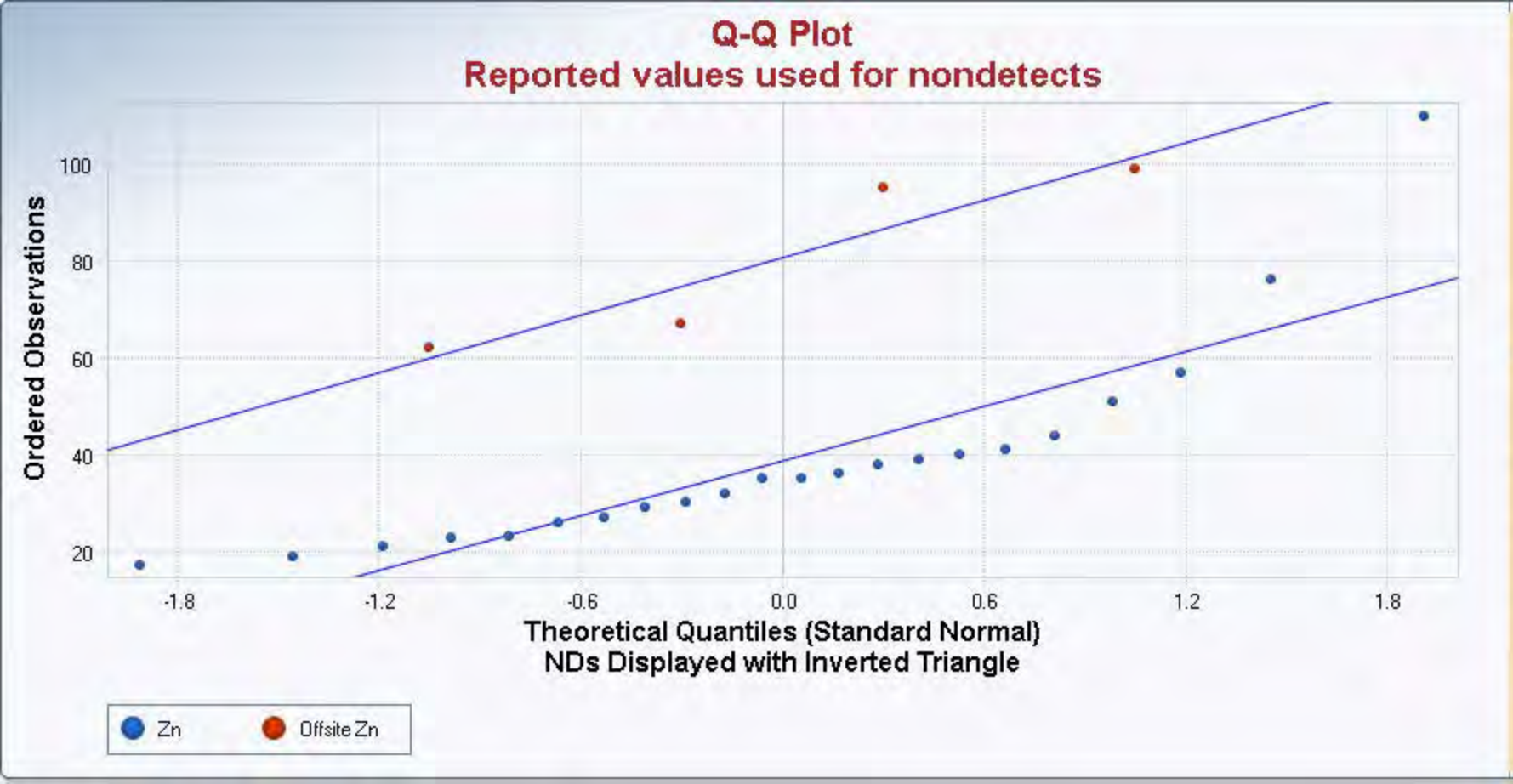


☐ Normal Distribution

☐ Less Bins

☐ More Bins

Zn	
Number of Values	22
Number of Values	22
Mean	38.58
SD	20.95
Offsite Zn	
Number of Values	4
Number of Values	4
Mean	80.75
SD	18.95


Q-Q Plot
Reported values used for nondetects
Ordered Observations
100
80
60
40
20
-1.8
-1.2
-0.6
0.0
0.6
1.2
1.8
Theoretical Quantiles (Standard Normal)
NDs Displayed with Inverted Triangle
Zn
Offsite Zn
Zn
Total Number of Data = 22
Number of Non-Detects = 0
Number of Detects = 22
Detected Mean = 38.58
Detected Sd = 20.95
Slope (displayed data) = 18.99
Intercept (displayed data)= 38.58
Correlation, R = 0.875
Offsite Zn
Total Number of Data = 4
Number of Non-Detects = 0
Number of Detects = 4
Detected Mean = 80.75
Detected Sd = 18.95
Slope (displayed data) = 19.83
Intercept (displayed data)= 80.75
Correlation, R = 0.932
Best Fit Line

Tarone-Ware Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:26:33 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Zn

Sample 2 Data: Offsite Zn

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detects	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	17	62
Maximum Detect	110	99
Mean of Detects	38.58	80.75
Median of Detects	35	81
SD of Detects	20.95	18.95
KM Mean	38.58	80.75
KM SD	20.95	18.95

Sample 1 vs Sample 2 Tarone-Ware Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

TW Statistic	-4.258
TW Critical Value (0.05)	1.645
P-Value	1

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/13/2020 8:31:46 AM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: Zn

Sample 2 Data: Offsite Zn

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	22	4
Number of Non-Detects	0	0
Number of Detect Data	22	4
Minimum Non-Detect	N/A	N/A
Maximum Non-Detect	N/A	N/A
Percent Non-detects	0.00%	0.00%
Minimum Detect	17	62
Maximum Detect	110	99
Mean of Detects	38.58	80.75
Median of Detects	35	81
SD of Detects	20.95	18.95

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	259
Standardized WMW U-Stat	-2.737
Mean (U)	44
SD(U) - Adj ties	14.07
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.997

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

APPENDIX F

ProUCL Statistics
Soil Matrix & Soil Vapor

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 2:59:55 PM								
5	From File			TPH in Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**Aliphatic C5-C8**											
11												
12	**General Statistics**											
13	Total Number of Observations				35		Number of Distinct Observations				3	
14	Number of Detects				1		Number of Non-Detects				34	
15	Number of Distinct Detects				1		Number of Distinct Non-Detects				2	
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable Aliphatic C5-C8 was not processed!**											
21												
22												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/6/2020 3:02:06 PM
From File	TPH in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aliphatic C9-C18

General Statistics

Total Number of Observations	47	Number of Distinct Observations	23
Number of Detects	23	Number of Non-Detects	24
Number of Distinct Detects	22	Number of Distinct Non-Detects	1
Minimum Detect	11	Minimum Non-Detect	10
Maximum Detect	2720	Maximum Non-Detect	10
Variance Detects	520019	Percent Non-Detects	51.06%
Mean Detects	285.5	SD Detects	721.1
Median Detects	56	CV Detects	2.526
Skewness Detects	3.138	Kurtosis Detects	8.732
Mean of Logged Detects	4.282	SD of Logged Detects	1.358

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.388	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.914	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.466	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.18	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	144.8	KM Standard Error of Mean	76.4
KM SD	512.2	95% KM (BCA) UCL	302.4
95% KM (t) UCL	273.1	95% KM (Percentile Bootstrap) UCL	289.7
95% KM (z) UCL	270.5	95% KM Bootstrap t UCL	1492
90% KM Chebyshev UCL	374	95% KM Chebyshev UCL	477.8
97.5% KM Chebyshev UCL	621.9	99% KM Chebyshev UCL	905

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	3.33	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.812	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.318	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.193	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.468	k star (bias corrected MLE)	0.436
Theta hat (MLE)	610.6	Theta star (bias corrected MLE)	655.4
nu hat (MLE)	21.51	nu star (bias corrected)	20.04
Mean (detects)	285.5		

51											
52	**Gamma ROS Statistics using Imputed Non-Detects**										
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs										
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)										
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs										
56	This is especially true when the sample size is small.										
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates										
58				Minimum	0.01			Mean	139.7		
59				Maximum	2720			Median	0.01		
60				SD	519.2			CV	3.715		
61				k hat (MLE)	0.148			k star (bias corrected MLE)	0.153		
62				Theta hat (MLE)	943			Theta star (bias corrected MLE)	913.8		
63				nu hat (MLE)	13.93			nu star (bias corrected)	14.37		
64				Adjusted Level of Significance (β)	0.0449						
65				Approximate Chi Square Value (14.37, α)	6.828			Adjusted Chi Square Value (14.37, β)	6.663		
66				95% Gamma Approximate UCL (use when n>=50)	294.1			95% Gamma Adjusted UCL (use when n<50)	301.4		
67											
68	**Estimates of Gamma Parameters using KM Estimates**										
69				Mean (KM)	144.8			SD (KM)	512.2		
70				Variance (KM)	262382			SE of Mean (KM)	76.4		
71				k hat (KM)	0.0799			k star (KM)	0.089		
72				nu hat (KM)	7.515			nu star (KM)	8.368		
73				theta hat (KM)	1812			theta star (KM)	1627		
74				80% gamma percentile (KM)	83.73			90% gamma percentile (KM)	365.1		
75				95% gamma percentile (KM)	843.9			99% gamma percentile (KM)	2437		
76											
77	**Gamma Kaplan-Meier (KM) Statistics**										
78				Approximate Chi Square Value (8.37, α)	2.95			Adjusted Chi Square Value (8.37, β)	2.849		
79				95% Gamma Approximate KM-UCL (use when n>=50)	410.8			95% Gamma Adjusted KM-UCL (use when n<50)	425.4		
80	95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)										
81											
82	**Lognormal GOF Test on Detected Observations Only**										
83				Shapiro Wilk Test Statistic	0.851			**Shapiro Wilk GOF Test**			
84				5% Shapiro Wilk Critical Value	0.914			Detected Data Not Lognormal at 5% Significance Level			
85				Lilliefors Test Statistic	0.155			**Lilliefors GOF Test**			
86				5% Lilliefors Critical Value	0.18			Detected Data appear Lognormal at 5% Significance Level			
87	**Detected Data appear Approximate Lognormal at 5% Significance Level**										
88											
89	**Lognormal ROS Statistics Using Imputed Non-Detects**										
90				Mean in Original Scale	141.4			Mean in Log Scale	2.388		
91				SD in Original Scale	518.7			SD in Log Scale	2.295		
92				95% t UCL (assumes normality of ROS data)	268.4			95% Percentile Bootstrap UCL	273.3		
93				95% BCA Bootstrap UCL	355.4			95% Bootstrap t UCL	1331		
94				95% H-UCL (Log ROS)	588.9						
95											
96	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**										
97				KM Mean (logged)	3.271			KM Geo Mean	26.34		
98				KM SD (logged)	1.357			95% Critical H Value (KM-Log)	2.742		
99				KM Standard Error of Mean (logged)	0.202			95% H-UCL (KM -Log)	114.6		
100				KM SD (logged)	1.357			95% Critical H Value (KM-Log)	2.742		

101	KM Standard Error of Mean (logged)					0.202						
102												
103	**DL/2 Statistics**											
104	**DL/2 Normal**						**DL/2 Log-Transformed**					
105	Mean in Original Scale					142.3	Mean in Log Scale					2.917
106	SD in Original Scale					518.5	SD in Log Scale					1.645
107	95% t UCL (Assumes normality)					269.2	95% H-Stat UCL					152
108	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
109												
110	**Nonparametric Distribution Free UCL Statistics**											
111	**Detected Data appear Approximate Lognormal Distributed at 5% Significance Level**											
112												
113	**Suggested UCL to Use**											
114	KM H-UCL					114.6						
115												
116	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
117	Recommendations are based upon data size, data distribution, and skewness.											
118	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
119	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
120												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/6/2020 3:02:47 PM
From File	TPH in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aliphatic C19-C32

General Statistics

Total Number of Observations	47	Number of Distinct Observations	20
Number of Detects	25	Number of Non-Detects	22
Number of Distinct Detects	19	Number of Distinct Non-Detects	1
Minimum Detect	21	Minimum Non-Detect	10
Maximum Detect	1390	Maximum Non-Detect	10
Variance Detects	117528	Percent Non-Detects	46.81%
Mean Detects	256.4	SD Detects	342.8
Median Detects	120	CV Detects	1.337
Skewness Detects	2.645	Kurtosis Detects	6.691
Mean of Logged Detects	5.006	SD of Logged Detects	1.012

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.605	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.304	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.173	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	141.1	KM Standard Error of Mean	40.81
KM SD	274.1	95% KM (BCA) UCL	216.4
95% KM (t) UCL	209.6	95% KM (Percentile Bootstrap) UCL	211.1
95% KM (z) UCL	208.2	95% KM Bootstrap t UCL	287.5
90% KM Chebyshev UCL	263.5	95% KM Chebyshev UCL	318.9
97.5% KM Chebyshev UCL	395.9	99% KM Chebyshev UCL	547.1

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.373	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.772	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.251	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.179	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.06	k star (bias corrected MLE)	0.959
Theta hat (MLE)	241.9	Theta star (bias corrected MLE)	267.3
nu hat (MLE)	52.99	nu star (bias corrected)	47.97
Mean (detects)	256.4		

51												
52	**Gamma ROS Statistics using Imputed Non-Detects**											
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58				Minimum	0.01				Mean	136.4		
59				Maximum	1390				Median	23		
60				SD	279.4				CV	2.048		
61				k hat (MLE)	0.171				k star (bias corrected MLE)	0.174		
62				Theta hat (MLE)	797.6				Theta star (bias corrected MLE)	782.7		
63				nu hat (MLE)	16.07				nu star (bias corrected)	16.38		
64				Adjusted Level of Significance (β)	0.0449							
65				Approximate Chi Square Value (16.38, α)	8.231				Adjusted Chi Square Value (16.38, β)	8.048		
66				95% Gamma Approximate UCL (use when n>=50)	271.4				95% Gamma Adjusted UCL (use when n<50)	277.6		
67												
68	**Estimates of Gamma Parameters using KM Estimates**											
69				Mean (KM)	141.1				SD (KM)	274.1		
70				Variance (KM)	75131				SE of Mean (KM)	40.81		
71				k hat (KM)	0.265				k star (KM)	0.262		
72				nu hat (KM)	24.9				nu star (KM)	24.64		
73				theta hat (KM)	532.6				theta star (KM)	538.1		
74				80% gamma percentile (KM)	208.2				90% gamma percentile (KM)	421.9		
75				95% gamma percentile (KM)	673.1				99% gamma percentile (KM)	1338		
76												
77	**Gamma Kaplan-Meier (KM) Statistics**											
78				Approximate Chi Square Value (24.64, α)	14.34				Adjusted Chi Square Value (24.64, β)	14.09		
79				95% Gamma Approximate KM-UCL (use when n>=50)	242.4				95% Gamma Adjusted KM-UCL (use when n<50)	246.7		
80												
81	**Lognormal GOF Test on Detected Observations Only**											
82				Shapiro Wilk Test Statistic	0.944				**Shapiro Wilk GOF Test**			
83				5% Shapiro Wilk Critical Value	0.918				Detected Data appear Lognormal at 5% Significance Level			
84				Lilliefors Test Statistic	0.183				**Lilliefors GOF Test**			
85				5% Lilliefors Critical Value	0.173				Detected Data Not Lognormal at 5% Significance Level			
86	**Detected Data appear Approximate Lognormal at 5% Significance Level**											
87												
88	**Lognormal ROS Statistics Using Imputed Non-Detects**											
89				Mean in Original Scale	143				Mean in Log Scale	3.753		
90				SD in Original Scale	276.2				SD in Log Scale	1.655		
91				95% t UCL (assumes normality of ROS data)	210.6				95% Percentile Bootstrap UCL	212.2		
92				95% BCA Bootstrap UCL	237.8				95% Bootstrap t UCL	287.1		
93				95% H-UCL (Log ROS)	359.4							
94												
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
96				KM Mean (logged)	3.74				KM Geo Mean	42.12		
97				KM SD (logged)	1.53				95% Critical H Value (KM-Log)	2.961		
98				KM Standard Error of Mean (logged)	0.228				95% H-UCL (KM -Log)	264.9		
99				KM SD (logged)	1.53				95% Critical H Value (KM-Log)	2.961		
100				KM Standard Error of Mean (logged)	0.228							

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104	Mean in Original Scale					138.7	Mean in Log Scale					3.416
105	SD in Original Scale					278.2	SD in Log Scale					1.862
106	95% t UCL (Assumes normality)					206.8	95% H-Stat UCL					438.8
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Detected Data appear Approximate Lognormal Distributed at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113	KM H-UCL					264.9						
114												
115	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
116	Recommendations are based upon data size, data distribution, and skewness.											
117	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
118	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
119												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/6/2020 3:04:35 PM
From File	TPH in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

aromatic C9-C18

General Statistics

Total Number of Observations	108	Number of Distinct Observations	4
Number of Detects	3	Number of Non-Detects	105
Number of Distinct Detects	3	Number of Distinct Non-Detects	1
Minimum Detect	8	Minimum Non-Detect	1
Maximum Detect	33	Maximum Non-Detect	1
Variance Detects	206.7	Percent Non-Detects	97.22%
Mean Detects	16.4	SD Detects	14.38
Median Detects	8.2	CV Detects	0.877
Skewness Detects	1.732	Kurtosis Detects	N/A
Mean of Logged Detects	2.56	SD of Logged Detects	0.811

Warning: Data set has only 3 Detected Values.

This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.756	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.382	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.428	KM Standard Error of Mean	0.377
KM SD	3.199	95% KM (BCA) UCL	N/A
95% KM (t) UCL	2.053	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	2.048	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	2.559	95% KM Chebyshev UCL	3.071
97.5% KM Chebyshev UCL	3.782	99% KM Chebyshev UCL	5.179

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	2.26	k star (bias corrected MLE)	N/A
Theta hat (MLE)	7.256	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	13.56	nu star (bias corrected)	N/A
Mean (detects)	16.4		

	A	B	C	D	E	F	G	H	I	J	K	L
51												
52	**Gamma ROS Statistics using Imputed Non-Detects**											
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58					Minimum	0.01				Mean	0.465	
59					Maximum	33				Median	0.01	
60					SD	3.345				CV	7.188	
61					k hat (MLE)	0.202				k star (bias corrected MLE)	0.202	
62					Theta hat (MLE)	2.305				Theta star (bias corrected MLE)	2.299	
63					nu hat (MLE)	43.6				nu star (bias corrected)	43.72	
64					Adjusted Level of Significance (β)	0.0478						
65					Approximate Chi Square Value (43.72, α)	29.56				Adjusted Chi Square Value (43.72, β)	29.4	
66					95% Gamma Approximate UCL (use when n>=50)	0.688				95% Gamma Adjusted UCL (use when n<50)	N/A	
67												
68	**Estimates of Gamma Parameters using KM Estimates**											
69					Mean (KM)	1.428				SD (KM)	3.199	
70					Variance (KM)	10.23				SE of Mean (KM)	0.377	
71					k hat (KM)	0.199				k star (KM)	0.2	
72					nu hat (KM)	43.03				nu star (KM)	43.17	
73					theta hat (KM)	7.167				theta star (KM)	7.144	
74					80% gamma percentile (KM)	1.881				90% gamma percentile (KM)	4.318	
75					95% gamma percentile (KM)	7.358				99% gamma percentile (KM)	15.73	
76												
77	**Gamma Kaplan-Meier (KM) Statistics**											
78					Approximate Chi Square Value (43.17, α)	29.11				Adjusted Chi Square Value (43.17, β)	28.95	
79					95% Gamma Approximate KM-UCL (use when n>=50)	2.118				95% Gamma Adjusted KM-UCL (use when n<50)	2.129	
80												
81	**Lognormal GOF Test on Detected Observations Only**											
82					Shapiro Wilk Test Statistic	0.763				**Shapiro Wilk GOF Test**		
83					5% Shapiro Wilk Critical Value	0.767				Detected Data Not Lognormal at 5% Significance Level		
84					Lilliefors Test Statistic	0.38				**Lilliefors GOF Test**		
85					5% Lilliefors Critical Value	0.425				Detected Data appear Lognormal at 5% Significance Level		
86	**Detected Data appear Approximate Lognormal at 5% Significance Level**											
87												
88	**Lognormal ROS Statistics Using Imputed Non-Detects**											
89					Mean in Original Scale	0.571				Mean in Log Scale	-5.315	
90					SD in Original Scale	3.35				SD in Log Scale	3.44	
91					95% t UCL (assumes normality of ROS data)	1.106				95% Percentile Bootstrap UCL	1.151	
92					95% BCA Bootstrap UCL	1.578				95% Bootstrap t UCL	2.397	
93					95% H-UCL (Log ROS)	10.22						
94												
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
96					KM Mean (logged)	0.0711				KM Geo Mean	1.074	
97					KM SD (logged)	0.435				95% Critical H Value (KM-Log)	1.797	
98					KM Standard Error of Mean (logged)	0.0513				95% H-UCL (KM -Log)	1.273	
99					KM SD (logged)	0.435				95% Critical H Value (KM-Log)	1.797	
100					KM Standard Error of Mean (logged)	0.0513						

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104	Mean in Original Scale					0.942	Mean in Log Scale					-0.603
105	SD in Original Scale					3.279	SD in Log Scale					0.548
106	95% t UCL (Assumes normality)					1.465	95% H-Stat UCL					0.702
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Detected Data appear Approximate Normal Distributed at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113	95% KM (t) UCL					2.053						
114												
115	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test											
116	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL											
117												
118	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
119	Recommendations are based upon data size, data distribution, and skewness.											
120	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
121	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
122												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/6/2020 3:05:17 PM
From File	TPH in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Aromtic C19-C32

General Statistics

Total Number of Observations	90	Number of Distinct Observations	11
Number of Detects	10	Number of Non-Detects	80
Number of Distinct Detects	10	Number of Distinct Non-Detects	1
Minimum Detect	2.3	Minimum Non-Detect	1
Maximum Detect	19	Maximum Non-Detect	1
Variance Detects	29.22	Percent Non-Detects	88.89%
Mean Detects	10.17	SD Detects	5.406
Median Detects	9.7	CV Detects	0.532
Skewness Detects	0.159	Kurtosis Detects	-0.876
Mean of Logged Detects	2.152	SD of Logged Detects	0.665

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.12	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.019	KM Standard Error of Mean	0.372
KM SD	3.351	95% KM (BCA) UCL	2.652
95% KM (t) UCL	2.638	95% KM (Percentile Bootstrap) UCL	2.614
95% KM (z) UCL	2.631	95% KM Bootstrap t UCL	2.799
90% KM Chebyshev UCL	3.136	95% KM Chebyshev UCL	3.642
97.5% KM Chebyshev UCL	4.344	99% KM Chebyshev UCL	5.723

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.221	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.732	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.138	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.268	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.146	k star (bias corrected MLE)	2.269
Theta hat (MLE)	3.233	Theta star (bias corrected MLE)	4.482
nu hat (MLE)	62.92	nu star (bias corrected)	45.38
Mean (detects)	10.17		

51												
52	**Gamma ROS Statistics using Imputed Non-Detects**											
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58				Minimum	0.01			Mean	1.228			
59				Maximum	19			Median	0.01			
60				SD	3.639			CV	2.963			
61				k hat (MLE)	0.195			k star (bias corrected MLE)	0.196			
62				Theta hat (MLE)	6.296			Theta star (bias corrected MLE)	6.267			
63				nu hat (MLE)	35.11			nu star (bias corrected)	35.27			
64				Adjusted Level of Significance (β)	0.0473							
65				Approximate Chi Square Value (35.27, α)	22.68			Adjusted Chi Square Value (35.27, β)	22.52			
66				95% Gamma Approximate UCL (use when n>=50)	1.909			95% Gamma Adjusted UCL (use when n<50)	1.923			
67												
68	**Estimates of Gamma Parameters using KM Estimates**											
69				Mean (KM)	2.019			SD (KM)	3.351			
70				Variance (KM)	11.23			SE of Mean (KM)	0.372			
71				k hat (KM)	0.363			k star (KM)	0.358			
72				nu hat (KM)	65.35			nu star (KM)	64.5			
73				theta hat (KM)	5.561			theta star (KM)	5.634			
74				80% gamma percentile (KM)	3.209			90% gamma percentile (KM)	5.809			
75				95% gamma percentile (KM)	8.71			99% gamma percentile (KM)	16.09			
76												
77	**Gamma Kaplan-Meier (KM) Statistics**											
78				Approximate Chi Square Value (64.50, α)	47.02			Adjusted Chi Square Value (64.50, β)	46.78			
79				95% Gamma Approximate KM-UCL (use when n>=50)	2.769			95% Gamma Adjusted KM-UCL (use when n<50)	2.784			
80												
81	**Lognormal GOF Test on Detected Observations Only**											
82				Shapiro Wilk Test Statistic	0.931			**Shapiro Wilk GOF Test**				
83				5% Shapiro Wilk Critical Value	0.842			Detected Data appear Lognormal at 5% Significance Level				
84				Lilliefors Test Statistic	0.178			**Lilliefors GOF Test**				
85				5% Lilliefors Critical Value	0.262			Detected Data appear Lognormal at 5% Significance Level				
86	**Detected Data appear Lognormal at 5% Significance Level**											
87												
88	**Lognormal ROS Statistics Using Imputed Non-Detects**											
89				Mean in Original Scale	1.758			Mean in Log Scale	-0.76			
90				SD in Original Scale	3.537			SD in Log Scale	1.701			
91				95% t UCL (assumes normality of ROS data)	2.378			95% Percentile Bootstrap UCL	2.4			
92				95% BCA Bootstrap UCL	2.531			95% Bootstrap t UCL	2.573			
93				95% H-UCL (Log ROS)	3.421							
94												
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
96				KM Mean (logged)	0.239			KM Geo Mean	1.27			
97				KM SD (logged)	0.708			95% Critical H Value (KM-Log)	2.02			
98				KM Standard Error of Mean (logged)	0.0787			95% H-UCL (KM -Log)	1.9			
99				KM SD (logged)	0.708			95% Critical H Value (KM-Log)	2.02			
100				KM Standard Error of Mean (logged)	0.0787							

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104	Mean in Original Scale					1.574	Mean in Log Scale					-0.377
105	SD in Original Scale					3.506	SD in Log Scale					0.924
106	95% t UCL (Assumes normality)					2.189	95% H-Stat UCL					1.3
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Detected Data appear Normal Distributed at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113	95% KM (t) UCL					2.638						
114												
115	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
116	Recommendations are based upon data size, data distribution, and skewness.											
117	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
118	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
119												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/14/2020 11:39:48 AM
From File	TPH in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

TPHd

General Statistics

Total Number of Observations	18	Number of Distinct Observations	3
Number of Detects	2	Number of Non-Detects	16
Number of Distinct Detects	2	Number of Distinct Non-Detects	1
Minimum Detect	48	Minimum Non-Detect	5
Maximum Detect	69	Maximum Non-Detect	5
Variance Detects	220.5	Percent Non-Detects	88.89%
Mean Detects	58.5	SD Detects	14.85
Median Detects	58.5	CV Detects	0.254
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	4.053	SD of Logged Detects	0.257

Warning: Data set has only 2 Detected Values.

This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	10.94	KM Standard Error of Mean	5.725
KM SD	17.17	95% KM (BCA) UCL	N/A
95% KM (t) UCL	20.9	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	20.36	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	28.12	95% KM Chebyshev UCL	35.9
97.5% KM Chebyshev UCL	46.69	99% KM Chebyshev UCL	67.9

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	30.7	k star (bias corrected MLE)	N/A
Theta hat (MLE)	1.905	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	122.8	nu star (bias corrected)	N/A
Mean (detects)	58.5		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	10.94	SD (KM)	17.17
Variance (KM)	294.9	SE of Mean (KM)	5.725

51					k hat (KM)	0.406					k star (KM)	0.375
52					nu hat (KM)	14.62					nu star (KM)	13.52
53					theta hat (KM)	26.95					theta star (KM)	29.15
54					80% gamma percentile (KM)	17.52					90% gamma percentile (KM)	31.25
55					95% gamma percentile (KM)	46.47					99% gamma percentile (KM)	85.01
56												
57	**Gamma Kaplan-Meier (KM) Statistics**											
58											Adjusted Level of Significance (β)	0.0357
59					Approximate Chi Square Value (13.52, α)	6.242					Adjusted Chi Square Value (13.52, β)	5.772
60					95% Gamma Approximate KM-UCL (use when n>=50)	23.7					95% Gamma Adjusted KM-UCL (use when n<50)	25.63
61												
62	**Lognormal GOF Test on Detected Observations Only**											
63	**Not Enough Data to Perform GOF Test**											
64												
65	**Lognormal ROS Statistics Using Imputed Non-Detects**											
66					Mean in Original Scale	16.28					Mean in Log Scale	2.341
67					SD in Original Scale	17.47					SD in Log Scale	0.979
68					95% t UCL (assumes normality of ROS data)	23.45					95% Percentile Bootstrap UCL	23.71
69					95% BCA Bootstrap UCL	25.51					95% Bootstrap t UCL	29.53
70					95% H-UCL (Log ROS)	31.14						
71												
72	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
73					KM Mean (logged)	1.881					KM Geo Mean	6.559
74					KM SD (logged)	0.77					95% Critical H Value (KM-Log)	2.324
75					KM Standard Error of Mean (logged)	0.257					95% H-UCL (KM -Log)	13.62
76					KM SD (logged)	0.77					95% Critical H Value (KM-Log)	2.324
77					KM Standard Error of Mean (logged)	0.257						
78												
79	**DL/2 Statistics**											
80	**DL/2 Normal**										**DL/2 Log-Transformed**	
81					Mean in Original Scale	8.722					Mean in Log Scale	1.265
82					SD in Original Scale	18.46					SD in Log Scale	1.016
83					95% t UCL (Assumes normality)	16.29					95% H-Stat UCL	11.44
84	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
85												
86	**Nonparametric Distribution Free UCL Statistics**											
87	**Data do not follow a Discernible Distribution at 5% Significance Level**											
88												
89	**Suggested UCL to Use**											
90					95% KM (t) UCL	20.9					KM H-UCL	13.62
91					95% KM (BCA) UCL	N/A						
92	**Warning: One or more Recommended UCL(s) not available!**											
93												
94	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
95	Recommendations are based upon data size, data distribution, and skewness.											
96	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
97	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
98												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/14/2020 11:40:25 AM
From File	TPH in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

TPHo

General Statistics

Total Number of Observations	18	Number of Distinct Observations	3
Number of Detects	2	Number of Non-Detects	16
Number of Distinct Detects	2	Number of Distinct Non-Detects	1
Minimum Detect	33	Minimum Non-Detect	5
Maximum Detect	45	Maximum Non-Detect	5
Variance Detects	72	Percent Non-Detects	88.89%
Mean Detects	39	SD Detects	8.485
Median Detects	39	CV Detects	0.218
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	3.652	SD of Logged Detects	0.219

Warning: Data set has only 2 Detected Values.

This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	8.778	KM Standard Error of Mean	3.624
KM SD	10.87	95% KM (BCA) UCL	N/A
95% KM (t) UCL	15.08	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	14.74	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	19.65	95% KM Chebyshev UCL	24.57
97.5% KM Chebyshev UCL	31.41	99% KM Chebyshev UCL	44.83

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	41.91	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.93	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	167.7	nu star (bias corrected)	N/A
Mean (detects)	39		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.778	SD (KM)	10.87
Variance (KM)	118.2	SE of Mean (KM)	3.624

51					k hat (KM)	0.652					k star (KM)	0.58
52					nu hat (KM)	23.47					nu star (KM)	20.89
53					theta hat (KM)	13.46					theta star (KM)	15.12
54					80% gamma percentile (KM)	14.47					90% gamma percentile (KM)	23
55					95% gamma percentile (KM)	31.97					99% gamma percentile (KM)	53.72
56												
57	**Gamma Kaplan-Meier (KM) Statistics**											
58											Adjusted Level of Significance (β)	0.0357
59					Approximate Chi Square Value (20.89, α)	11.51					Adjusted Chi Square Value (20.89, β)	10.85
60					95% Gamma Approximate KM-UCL (use when n>=50)	15.93					95% Gamma Adjusted KM-UCL (use when n<50)	16.91
61												
62	**Lognormal GOF Test on Detected Observations Only**											
63	**Not Enough Data to Perform GOF Test**											
64												
65	**Lognormal ROS Statistics Using Imputed Non-Detects**											
66					Mean in Original Scale	12.42					Mean in Log Scale	2.188
67					SD in Original Scale	11.26					SD in Log Scale	0.836
68					95% t UCL (assumes normality of ROS data)	17.03					95% Percentile Bootstrap UCL	17.01
69					95% BCA Bootstrap UCL	18.4					95% Bootstrap t UCL	20.31
70					95% H-UCL (Log ROS)	20.64						
71												
72	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
73					KM Mean (logged)	1.836					KM Geo Mean	6.274
74					KM SD (logged)	0.644					95% Critical H Value (KM-Log)	2.173
75					KM Standard Error of Mean (logged)	0.215					95% H-UCL (KM -Log)	10.84
76					KM SD (logged)	0.644					95% Critical H Value (KM-Log)	2.173
77					KM Standard Error of Mean (logged)	0.215						
78												
79	**DL/2 Statistics**											
80	**DL/2 Normal**						**DL/2 Log-Transformed**					
81					Mean in Original Scale	6.556					Mean in Log Scale	1.22
82					SD in Original Scale	11.98					SD in Log Scale	0.886
83					95% t UCL (Assumes normality)	11.47					95% H-Stat UCL	8.543
84	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
85												
86	**Nonparametric Distribution Free UCL Statistics**											
87	**Data do not follow a Discernible Distribution at 5% Significance Level**											
88												
89	**Suggested UCL to Use**											
90					95% KM (t) UCL	15.08					KM H-UCL	10.84
91					95% KM (BCA) UCL	N/A						
92	**Warning: One or more Recommended UCL(s) not available!**											
93												
94	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
95	Recommendations are based upon data size, data distribution, and skewness.											
96	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
97	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
98												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 4:35:53 PM								
5	From File			VOCs in Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**Naphthalene**											
11												
12	**General Statistics**											
13	Total Number of Observations					4	Number of Distinct Observations					2
14	Number of Detects					1	Number of Non-Detects					3
15	Number of Distinct Detects					1	Number of Distinct Non-Detects					1
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable Naphthalene was not processed!**											
21												
22												

1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 4:36:43 PM								
5	From File			VOCs in Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**n-Propylbenzene**											
11												
12	**General Statistics**											
13	Total Number of Observations			4			Number of Distinct Observations			2		
14	Number of Detects			1			Number of Non-Detects			3		
15	Number of Distinct Detects			1			Number of Distinct Non-Detects			1		
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable n-Propylbenzene was not processed!**											
21												
22												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 4:29:31 PM								
5	From File			SVOCs in Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**2-Methylnaphthalene**											
11												
12	**General Statistics**											
13	Total Number of Observations				4		Number of Distinct Observations				3	
14	Number of Detects				1		Number of Non-Detects				3	
15	Number of Distinct Detects				1		Number of Distinct Non-Detects				2	
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable 2-Methylnaphthalene was not processed!**											
21												
22												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 4:31:54 PM								
5	From File			SVOCs in Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**Benzo(a)pyrene**											
11												
12	**General Statistics**											
13	Total Number of Observations					18	Number of Distinct Observations					2
14	Number of Detects					1	Number of Non-Detects					17
15	Number of Distinct Detects					1	Number of Distinct Non-Detects					1
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable Benzo(a)pyrene was not processed!**											
21												
22												

1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation	ProUCL 5.14/6/2020 4:30:26 PM										
5	From File	SVOCs in Soil.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10	**Benzo(b)fluoranthene**											
11												
12	**General Statistics**											
13	Total Number of Observations	18	Number of Distinct Observations	2								
14	Number of Detects	1	Number of Non-Detects	17								
15	Number of Distinct Detects	1	Number of Distinct Non-Detects	1								
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable Benzo(b)fluoranthene was not processed!**											
21												
22												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 4:31:12 PM								
5	From File			SVOCs in Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**Benzo(k)fluoranthene**											
11												
12	**General Statistics**											
13	Total Number of Observations					18	Number of Distinct Observations					2
14	Number of Detects					1	Number of Non-Detects					17
15	Number of Distinct Detects					1	Number of Distinct Non-Detects					1
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable Benzo(k)fluoranthene was not processed!**											
21												
22												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 4:32:40 PM								
5	From File			SVOCs in Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**Chrysene**											
11												
12	**General Statistics**											
13	Total Number of Observations			18		Number of Distinct Observations			2			
14	Number of Detects			1		Number of Non-Detects			17			
15	Number of Distinct Detects			1		Number of Distinct Non-Detects			1			
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable Chrysene was not processed!**											
21												
22												

1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation	ProUCL 5.14/6/2020 4:33:14 PM										
5	From File	SVOCs in Soil.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10	**Fluoranthene**											
11												
12	**General Statistics**											
13	Total Number of Observations	18	Number of Distinct Observations	2								
14	Number of Detects	1	Number of Non-Detects	17								
15	Number of Distinct Detects	1	Number of Distinct Non-Detects	1								
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable Fluoranthene was not processed!**											
21												
22												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 4:28:36 PM								
5	From File			SVOCs in Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**Fluorene**											
11												
12	**General Statistics**											
13	Total Number of Observations				4		Number of Distinct Observations				3	
14	Number of Detects				1		Number of Non-Detects				3	
15	Number of Distinct Detects				1		Number of Distinct Non-Detects				2	
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable Fluorene was not processed!**											
21												
22												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 4:33:53 PM								
5	From File			SVOCs in Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**Phenanthrene**											
11												
12	**General Statistics**											
13	Total Number of Observations					18	Number of Distinct Observations					2
14	Number of Detects					1	Number of Non-Detects					17
15	Number of Distinct Detects					1	Number of Distinct Non-Detects					1
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable Phenanthrene was not processed!**											
21												
22												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 4:34:30 PM								
5	From File			SVOCs in Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**Pyrene**											
11												
12	**General Statistics**											
13	Total Number of Observations					18	Number of Distinct Observations					2
14	Number of Detects					1	Number of Non-Detects					17
15	Number of Distinct Detects					1	Number of Distinct Non-Detects					1
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable Pyrene was not processed!**											
21												
22												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/14/2020 12:10:29 PM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Pb

General Statistics

Total Number of Observations	22	Number of Distinct Observations	17
Number of Detects	18	Number of Non-Detects	4
Number of Distinct Detects	17	Number of Distinct Non-Detects	1
Minimum Detect	2.44	Minimum Non-Detect	2.6
Maximum Detect	33	Maximum Non-Detect	2.6
Variance Detects	54.36	Percent Non-Detects	18.18%
Mean Detects	7.647	SD Detects	7.373
Median Detects	5.55	CV Detects	0.964
Skewness Detects	2.733	Kurtosis Detects	8.442
Mean of Logged Detects	1.763	SD of Logged Detects	0.692

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.663	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.293	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.202	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.7	KM Standard Error of Mean	1.488
KM SD	6.785	95% KM (BCA) UCL	9.314
95% KM (t) UCL	9.261	95% KM (Percentile Bootstrap) UCL	9.265
95% KM (z) UCL	9.148	95% KM Bootstrap t UCL	12.26
90% KM Chebyshev UCL	11.17	95% KM Chebyshev UCL	13.19
97.5% KM Chebyshev UCL	16	99% KM Chebyshev UCL	21.51

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.855	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.753	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.189	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.206	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.997	k star (bias corrected MLE)	1.701
Theta hat (MLE)	3.829	Theta star (bias corrected MLE)	4.495
nu hat (MLE)	71.89	nu star (bias corrected)	61.24
Mean (detects)	7.647		

51											
52	**Gamma ROS Statistics using Imputed Non-Detects**										
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs										
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)										
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs										
56	This is especially true when the sample size is small.										
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates										
58					Minimum	0.01			Mean	6.258	
59					Maximum	33			Median	4.15	
60					SD	7.286			CV	1.164	
61					k hat (MLE)	0.515			k star (bias corrected MLE)	0.475	
62					Theta hat (MLE)	12.16			Theta star (bias corrected MLE)	13.18	
63					nu hat (MLE)	22.65			nu star (bias corrected)	20.89	
64					Adjusted Level of Significance (β)	0.0386					
65					Approximate Chi Square Value (20.89, α)	11.51			Adjusted Chi Square Value (20.89, β)	10.99	
66					95% Gamma Approximate UCL (use when n>=50)	11.36			95% Gamma Adjusted UCL (use when n<50)	11.89	
67											
68	**Estimates of Gamma Parameters using KM Estimates**										
69					Mean (KM)	6.7			SD (KM)	6.785	
70					Variance (KM)	46.04			SE of Mean (KM)	1.488	
71					k hat (KM)	0.975			k star (KM)	0.872	
72					nu hat (KM)	42.9			nu star (KM)	38.39	
73					theta hat (KM)	6.871			theta star (KM)	7.68	
74					80% gamma percentile (KM)	10.89			90% gamma percentile (KM)	15.95	
75					95% gamma percentile (KM)	21.07			99% gamma percentile (KM)	33.07	
76											
77	**Gamma Kaplan-Meier (KM) Statistics**										
78					Approximate Chi Square Value (38.39, α)	25.2			Adjusted Chi Square Value (38.39, β)	24.4	
79					95% Gamma Approximate KM-UCL (use when n>=50)	10.21			95% Gamma Adjusted KM-UCL (use when n<50)	10.54	
80											
81	**Lognormal GOF Test on Detected Observations Only**										
82					Shapiro Wilk Test Statistic	0.925			**Shapiro Wilk GOF Test**		
83					5% Shapiro Wilk Critical Value	0.897			Detected Data appear Lognormal at 5% Significance Level		
84					Lilliefors Test Statistic	0.133			**Lilliefors GOF Test**		
85					5% Lilliefors Critical Value	0.202			Detected Data appear Lognormal at 5% Significance Level		
86	**Detected Data appear Lognormal at 5% Significance Level**										
87											
88	**Lognormal ROS Statistics Using Imputed Non-Detects**										
89					Mean in Original Scale	6.536			Mean in Log Scale	1.515	
90					SD in Original Scale	7.06			SD in Log Scale	0.832	
91					95% t UCL (assumes normality of ROS data)	9.126			95% Percentile Bootstrap UCL	9.214	
92					95% BCA Bootstrap UCL	10.18			95% Bootstrap t UCL	11.69	
93					95% H-UCL (Log ROS)	9.871					
94											
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**										
96					KM Mean (logged)	1.605			KM Geo Mean	4.978	
97					KM SD (logged)	0.695			95% Critical H Value (KM-Log)	2.198	
98					KM Standard Error of Mean (logged)	0.153			95% H-UCL (KM -Log)	8.848	
99					KM SD (logged)	0.695			95% Critical H Value (KM-Log)	2.198	
100					KM Standard Error of Mean (logged)	0.153					

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104	Mean in Original Scale					6.493	Mean in Log Scale					1.491
105	SD in Original Scale					7.091	SD in Log Scale					0.86
106	95% t UCL (Assumes normality)					9.094	95% H-Stat UCL					10.07
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Detected Data appear Approximate Gamma Distributed at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113	95% KM Adjusted Gamma UCL					10.54	95% GROS Adjusted Gamma UCL					11.89
114												
115	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test											
116	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL											
117												
118	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
119	Recommendations are based upon data size, data distribution, and skewness.											
120	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
121	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
122												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/14/2020 12:09:41 PM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Hg

General Statistics

Total Number of Observations	22	Number of Distinct Observations	7
Number of Detects	6	Number of Non-Detects	16
Number of Distinct Detects	5	Number of Distinct Non-Detects	4
Minimum Detect	0.02	Minimum Non-Detect	0.02
Maximum Detect	0.2	Maximum Non-Detect	0.1
Variance Detects	0.00518	Percent Non-Detects	72.73%
Mean Detects	0.108	SD Detects	0.0719
Median Detects	0.09	CV Detects	0.664
Skewness Detects	0.403	Kurtosis Detects	-1.505
Mean of Logged Detects	-2.469	SD of Logged Detects	0.849

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.895	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.267	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0445	KM Standard Error of Mean	0.0123
KM SD	0.0523	95% KM (BCA) UCL	0.0792
95% KM (t) UCL	0.0656	95% KM (Percentile Bootstrap) UCL	0.0718
95% KM (z) UCL	0.0647	95% KM Bootstrap t UCL	0.0714
90% KM Chebyshev UCL	0.0813	95% KM Chebyshev UCL	0.098
97.5% KM Chebyshev UCL	0.121	99% KM Chebyshev UCL	0.166

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.323	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.704	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.205	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.336	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.184	k star (bias corrected MLE)	1.203
Theta hat (MLE)	0.0496	Theta star (bias corrected MLE)	0.09
nu hat (MLE)	26.21	nu star (bias corrected)	14.44
Mean (detects)	0.108		

51												
52	**Gamma ROS Statistics using Imputed Non-Detects**											
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58					Minimum	0.01			Mean	0.0391		
59					Maximum	0.2			Median	0.01		
60					SD	0.0562			CV	1.439		
61					k hat (MLE)	0.896			k star (bias corrected MLE)	0.804		
62					Theta hat (MLE)	0.0436			Theta star (bias corrected MLE)	0.0486		
63					nu hat (MLE)	39.41			nu star (bias corrected)	35.37		
64					Adjusted Level of Significance (β)	0.0386						
65					Approximate Chi Square Value (35.37, α)	22.76			Adjusted Chi Square Value (35.37, β)	22		
66					95% Gamma Approximate UCL (use when n>=50)	0.0607			95% Gamma Adjusted UCL (use when n<50)	0.0628		
67												
68	**Estimates of Gamma Parameters using KM Estimates**											
69					Mean (KM)	0.0445			SD (KM)	0.0523		
70					Variance (KM)	0.00273			SE of Mean (KM)	0.0123		
71					k hat (KM)	0.726			k star (KM)	0.657		
72					nu hat (KM)	31.94			nu star (KM)	28.92		
73					theta hat (KM)	0.0613			theta star (KM)	0.0677		
74					80% gamma percentile (KM)	0.0733			90% gamma percentile (KM)	0.113		
75					95% gamma percentile (KM)	0.155			99% gamma percentile (KM)	0.255		
76												
77	**Gamma Kaplan-Meier (KM) Statistics**											
78					Approximate Chi Square Value (28.92, α)	17.64			Adjusted Chi Square Value (28.92, β)	16.99		
79					95% Gamma Approximate KM-UCL (use when n>=50)	0.073			95% Gamma Adjusted KM-UCL (use when n<50)	0.0758		
80												
81	**Lognormal GOF Test on Detected Observations Only**											
82					Shapiro Wilk Test Statistic	0.904			**Shapiro Wilk GOF Test**			
83					5% Shapiro Wilk Critical Value	0.788			Detected Data appear Lognormal at 5% Significance Level			
84					Lilliefors Test Statistic	0.195			**Lilliefors GOF Test**			
85					5% Lilliefors Critical Value	0.325			Detected Data appear Lognormal at 5% Significance Level			
86	**Detected Data appear Lognormal at 5% Significance Level**											
87												
88	**Lognormal ROS Statistics Using Imputed Non-Detects**											
89					Mean in Original Scale	0.0397			Mean in Log Scale	-3.98		
90					SD in Original Scale	0.0562			SD in Log Scale	1.237		
91					95% t UCL (assumes normality of ROS data)	0.0603			95% Percentile Bootstrap UCL	0.06		
92					95% BCA Bootstrap UCL	0.064			95% Bootstrap t UCL	0.0763		
93					95% H-UCL (Log ROS)	0.0885						
94												
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
96					KM Mean (logged)	-3.509			KM Geo Mean	0.0299		
97					KM SD (logged)	0.763			95% Critical H Value (KM-Log)	2.277		
98					KM Standard Error of Mean (logged)	0.18			95% H-UCL (KM -Log)	0.0586		
99					KM SD (logged)	0.763			95% Critical H Value (KM-Log)	2.277		
100					KM Standard Error of Mean (logged)	0.18						

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104	Mean in Original Scale					0.0502	Mean in Log Scale					-3.292
105	SD in Original Scale					0.051	SD in Log Scale					0.713
106	95% t UCL (Assumes normality)					0.0689	95% H-Stat UCL					0.0677
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Detected Data appear Normal Distributed at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113	95% KM (t) UCL					0.0656						
114												
115	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
116	Recommendations are based upon data size, data distribution, and skewness.											
117	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
118	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
119												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/14/2020 12:11:04 PM
From File	Metals in Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Ag

General Statistics

Total Number of Observations	18	Number of Distinct Observations	4
Number of Detects	8	Number of Non-Detects	10
Number of Distinct Detects	4	Number of Distinct Non-Detects	1
Minimum Detect	1	Minimum Non-Detect	1
Maximum Detect	1.5	Maximum Non-Detect	1
Variance Detects	0.0255	Percent Non-Detects	55.56%
Mean Detects	1.138	SD Detects	0.16
Median Detects	1.1	CV Detects	0.14
Skewness Detects	1.982	Kurtosis Detects	4.567
Mean of Logged Detects	0.121	SD of Logged Detects	0.129

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.749	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.343	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.061	KM Standard Error of Mean	0.0304
KM SD	0.121	95% KM (BCA) UCL	N/A
95% KM (t) UCL	1.114	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	1.111	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	1.152	95% KM Chebyshev UCL	1.194
97.5% KM Chebyshev UCL	1.251	99% KM Chebyshev UCL	1.364

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.868	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.715	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.34	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.293	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	65.06	k star (bias corrected MLE)	40.75
Theta hat (MLE)	0.0175	Theta star (bias corrected MLE)	0.0279
nu hat (MLE)	1041	nu star (bias corrected)	652
Mean (detects)	1.138		

	A	B	C	D	E	F	G	H	I	J	K	L
51												
52	**Gamma ROS Statistics using Imputed Non-Detects**											
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58					Minimum	0.453				Mean		0.898
59					Maximum	1.5				Median		0.874
60					SD	0.264				CV		0.294
61					k hat (MLE)	11.88				k star (bias corrected MLE)		9.934
62					Theta hat (MLE)	0.0756				Theta star (bias corrected MLE)		0.0904
63					nu hat (MLE)	427.5				nu star (bias corrected)		357.6
64					Adjusted Level of Significance (β)	0.0357						
65					Approximate Chi Square Value (357.61, α)	314.8				Adjusted Chi Square Value (357.61, β)		310.9
66					95% Gamma Approximate UCL (use when n>=50)	1.02				95% Gamma Adjusted UCL (use when n<50)		1.033
67												
68	**Estimates of Gamma Parameters using KM Estimates**											
69					Mean (KM)	1.061				SD (KM)		0.121
70					Variance (KM)	0.0146				SE of Mean (KM)		0.0304
71					k hat (KM)	77.13				k star (KM)		64.31
72					nu hat (KM)	2777				nu star (KM)		2315
73					theta hat (KM)	0.0138				theta star (KM)		0.0165
74					80% gamma percentile (KM)	1.171				90% gamma percentile (KM)		1.234
75					95% gamma percentile (KM)	1.288				99% gamma percentile (KM)		1.393
76												
77	**Gamma Kaplan-Meier (KM) Statistics**											
78					Approximate Chi Square Value (N/A, α)	2204				Adjusted Chi Square Value (N/A, β)		2194
79					95% Gamma Approximate KM-UCL (use when n>=50)	1.114				95% Gamma Adjusted KM-UCL (use when n<50)		1.12
80												
81	**Lognormal GOF Test on Detected Observations Only**											
82					Shapiro Wilk Test Statistic	0.788				**Shapiro Wilk GOF Test**		
83					5% Shapiro Wilk Critical Value	0.818				Detected Data Not Lognormal at 5% Significance Level		
84					Lilliefors Test Statistic	0.329				**Lilliefors GOF Test**		
85					5% Lilliefors Critical Value	0.283				Detected Data Not Lognormal at 5% Significance Level		
86	**Detected Data Not Lognormal at 5% Significance Level**											
87												
88	**Lognormal ROS Statistics Using Imputed Non-Detects**											
89					Mean in Original Scale	0.938				Mean in Log Scale		-0.0892
90					SD in Original Scale	0.222				SD in Log Scale		0.232
91					95% t UCL (assumes normality of ROS data)	1.03				95% Percentile Bootstrap UCL		1.027
92					95% BCA Bootstrap UCL	1.034				95% Bootstrap t UCL		1.041
93					95% H-UCL (Log ROS)	1.04						
94												
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
96					KM Mean (logged)	0.0538				KM Geo Mean		1.055
97					KM SD (logged)	0.101				95% Critical H Value (KM-Log)		1.733
98					KM Standard Error of Mean (logged)	0.0253				95% H-UCL (KM -Log)		1.106
99					KM SD (logged)	0.101				95% Critical H Value (KM-Log)		1.733
100					KM Standard Error of Mean (logged)	0.0253						

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104	Mean in Original Scale					0.783	Mean in Log Scale					-0.331
105	SD in Original Scale					0.342	SD in Log Scale					0.425
106	95% t UCL (Assumes normality)					0.923	95% H-Stat UCL					0.961
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Data do not follow a Discernible Distribution at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113	95% KM (t) UCL					1.114	KM H-UCL					1.106
114	95% KM (BCA) UCL					N/A						
115	**Warning: One or more Recommended UCL(s) not available!**											
116												
117	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
118	Recommendations are based upon data size, data distribution, and skewness.											
119	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
120	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
121												

1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation	ProUCL 5.14/6/2020 4:18:03 PM										
5	From File	Soil Vapor.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10	**1,2,4-Trimethylbenzene**											
11												
12	**General Statistics**											
13	Total Number of Observations	20					Number of Distinct Observations	5				
14	Number of Detects	6					Number of Non-Detects	14				
15	Number of Distinct Detects	5					Number of Distinct Non-Detects	1				
16	Minimum Detect	8					Minimum Non-Detect	8				
17	Maximum Detect	123					Maximum Non-Detect	8				
18	Variance Detects	2068					Percent Non-Detects	70%				
19	Mean Detects	30.33					SD Detects	45.47				
20	Median Detects	12					CV Detects	1.499				
21	Skewness Detects	2.431					Kurtosis Detects	5.929				
22	Mean of Logged Detects	2.837					SD of Logged Detects	0.994				
23												
24	**Normal GOF Test on Detects Only**											
25	Shapiro Wilk Test Statistic	0.552					**Shapiro Wilk GOF Test**					
26	5% Shapiro Wilk Critical Value	0.788					Detected Data Not Normal at 5% Significance Level					
27	Lilliefors Test Statistic	0.457					**Lilliefors GOF Test**					
28	5% Lilliefors Critical Value	0.325					Detected Data Not Normal at 5% Significance Level					
29	**Detected Data Not Normal at 5% Significance Level**											
30												
31	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
32	KM Mean	14.7					KM Standard Error of Mean	6.108				
33	KM SD	24.93					95% KM (BCA) UCL	26.2				
34	95% KM (t) UCL	25.26					95% KM (Percentile Bootstrap) UCL	25.95				
35	95% KM (z) UCL	24.75					95% KM Bootstrap t UCL	112.5				
36	90% KM Chebyshev UCL	33.02					95% KM Chebyshev UCL	41.32				
37	97.5% KM Chebyshev UCL	52.84					99% KM Chebyshev UCL	75.47				
38												
39	**Gamma GOF Tests on Detected Observations Only**											
40	A-D Test Statistic	1.181					**Anderson-Darling GOF Test**					
41	5% A-D Critical Value	0.715					Detected Data Not Gamma Distributed at 5% Significance Level					
42	K-S Test Statistic	0.424					**Kolmogorov-Smirnov GOF**					
43	5% K-S Critical Value	0.341					Detected Data Not Gamma Distributed at 5% Significance Level					
44	**Detected Data Not Gamma Distributed at 5% Significance Level**											
45												
46	**Gamma Statistics on Detected Data Only**											
47	k hat (MLE)	1.004					k star (bias corrected MLE)	0.613				
48	Theta hat (MLE)	30.22					Theta star (bias corrected MLE)	49.48				
49	nu hat (MLE)	12.05					nu star (bias corrected)	7.356				
50	Mean (detects)	30.33										

51												
52	**Gamma ROS Statistics using Imputed Non-Detects**											
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58				Minimum	0.01			Mean	9.107			
59				Maximum	123			Median	0.01			
60				SD	27.34			CV	3.002			
61				k hat (MLE)	0.165			k star (bias corrected MLE)	0.174			
62				Theta hat (MLE)	55.07			Theta star (bias corrected MLE)	52.37			
63				nu hat (MLE)	6.615			nu star (bias corrected)	6.956			
64				Adjusted Level of Significance (β)	0.038							
65				Approximate Chi Square Value (6.96, α)	2.146			Adjusted Chi Square Value (6.96, β)	1.942			
66				95% Gamma Approximate UCL (use when n>=50)	29.51			95% Gamma Adjusted UCL (use when n<50)	32.63			
67												
68	**Estimates of Gamma Parameters using KM Estimates**											
69				Mean (KM)	14.7			SD (KM)	24.93			
70				Variance (KM)	621.7			SE of Mean (KM)	6.108			
71				k hat (KM)	0.348			k star (KM)	0.329			
72				nu hat (KM)	13.9			nu star (KM)	13.15			
73				theta hat (KM)	42.29			theta star (KM)	44.71			
74				80% gamma percentile (KM)	23.01			90% gamma percentile (KM)	42.84			
75				95% gamma percentile (KM)	65.27			99% gamma percentile (KM)	122.9			
76												
77	**Gamma Kaplan-Meier (KM) Statistics**											
78				Approximate Chi Square Value (13.15, α)	5.994			Adjusted Chi Square Value (13.15, β)	5.615			
79				95% Gamma Approximate KM-UCL (use when n>=50)	32.25			95% Gamma Adjusted KM-UCL (use when n<50)	34.43			
80												
81	**Lognormal GOF Test on Detected Observations Only**											
82				Shapiro Wilk Test Statistic	0.713			**Shapiro Wilk GOF Test**				
83				5% Shapiro Wilk Critical Value	0.788			Detected Data Not Lognormal at 5% Significance Level				
84				Lilliefors Test Statistic	0.359			**Lilliefors GOF Test**				
85				5% Lilliefors Critical Value	0.325			Detected Data Not Lognormal at 5% Significance Level				
86	**Detected Data Not Lognormal at 5% Significance Level**											
87												
88	**Lognormal ROS Statistics Using Imputed Non-Detects**											
89				Mean in Original Scale	9.807			Mean in Log Scale	0.378			
90				SD in Original Scale	27.11			SD in Log Scale	2.076			
91				95% t UCL (assumes normality of ROS data)	20.29			95% Percentile Bootstrap UCL	21.51			
92				95% BCA Bootstrap UCL	28.76			95% Bootstrap t UCL	56.38			
93				95% H-UCL (Log ROS)	104.6							
94												
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
96				KM Mean (logged)	2.307			KM Geo Mean	10.04			
97				KM SD (logged)	0.606			95% Critical H Value (KM-Log)	2.129			
98				KM Standard Error of Mean (logged)	0.149			95% H-UCL (KM -Log)	16.23			
99				KM SD (logged)	0.606			95% Critical H Value (KM-Log)	2.129			
100				KM Standard Error of Mean (logged)	0.149							

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104	Mean in Original Scale					11.9	Mean in Log Scale					1.822
105	SD in Original Scale					26.41	SD in Log Scale					0.852
106	95% t UCL (Assumes normality)					22.11	95% H-Stat UCL					14.28
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Data do not follow a Discernible Distribution at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113	95% KM (Chebyshev) UCL					41.32						
114												
115	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
116	Recommendations are based upon data size, data distribution, and skewness.											
117	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
118	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
119												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/6/2020 4:18:47 PM
From File	Soil Vapor.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

1,3,5-Trimethylbenzene

General Statistics

Total Number of Observations	20	Number of Distinct Observations	3
Number of Detects	2	Number of Non-Detects	18
Number of Distinct Detects	2	Number of Distinct Non-Detects	1
Minimum Detect	9	Minimum Non-Detect	8
Maximum Detect	40	Maximum Non-Detect	8
Variance Detects	480.5	Percent Non-Detects	90%
Mean Detects	24.5	SD Detects	21.92
Median Detects	24.5	CV Detects	0.895
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	2.943	SD of Logged Detects	1.055

Warning: Data set has only 2 Detected Values.

This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	9.65	KM Standard Error of Mean	2.203
KM SD	6.966	95% KM (BCA) UCL	N/A
95% KM (t) UCL	13.46	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	13.27	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	16.26	95% KM Chebyshev UCL	19.25
97.5% KM Chebyshev UCL	23.41	99% KM Chebyshev UCL	31.57

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	2.108	k star (bias corrected MLE)	N/A
Theta hat (MLE)	11.62	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	8.43	nu star (bias corrected)	N/A
Mean (detects)	24.5		

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	9.65	SD (KM)	6.966
Variance (KM)	48.53	SE of Mean (KM)	2.203

51					k hat (KM)	1.919					k star (KM)	1.664
52					nu hat (KM)	76.76					nu star (KM)	66.58
53					theta hat (KM)	5.029					theta star (KM)	5.798
54					80% gamma percentile (KM)	14.76					90% gamma percentile (KM)	19.61
55					95% gamma percentile (KM)	24.29					99% gamma percentile (KM)	34.78
56												
57					**Gamma Kaplan-Meier (KM) Statistics**							
58											Adjusted Level of Significance (β)	0.038
59					Approximate Chi Square Value (66.58, α)	48.8					Adjusted Chi Square Value (66.58, β)	47.6
60					95% Gamma Approximate KM-UCL (use when n>=50)	13.17					95% Gamma Adjusted KM-UCL (use when n<50)	13.5
61												
62					**Lognormal GOF Test on Detected Observations Only**							
63					**Not Enough Data to Perform GOF Test**							
64												
65					**Lognormal ROS Statistics Using Imputed Non-Detects**							
66					Mean in Original Scale	2.562					Mean in Log Scale	-4.48
67					SD in Original Scale	9.036					SD in Log Scale	4.131
68					95% t UCL (assumes normality of ROS data)	6.056					95% Percentile Bootstrap UCL	6.16
69					95% BCA Bootstrap UCL	8.999					95% Bootstrap t UCL	87.26
70					95% H-UCL (Log ROS)	108239						
71												
72					**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**							
73					KM Mean (logged)	2.166					KM Geo Mean	8.722
74					KM SD (logged)	0.35					95% Critical H Value (KM-Log)	1.889
75					KM Standard Error of Mean (logged)	0.111					95% H-UCL (KM -Log)	10.79
76					KM SD (logged)	0.35					95% Critical H Value (KM-Log)	1.889
77					KM Standard Error of Mean (logged)	0.111						
78												
79					**DL/2 Statistics**							
80					**DL/2 Normal**						**DL/2 Log-Transformed**	
81					Mean in Original Scale	6.05					Mean in Log Scale	1.542
82					SD in Original Scale	8.069					SD in Log Scale	0.537
83					95% t UCL (Assumes normality)	9.17					95% H-Stat UCL	6.953
84					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							
85												
86					**Nonparametric Distribution Free UCL Statistics**							
87					**Data do not follow a Discernible Distribution at 5% Significance Level**							
88												
89					**Suggested UCL to Use**							
90					95% KM (Chebyshev) UCL	19.25						
91												
92					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
93					Recommendations are based upon data size, data distribution, and skewness.							
94					These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).							
95					However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.							
96												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 4:13:41 PM								
5	From File			Soil Vapor.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**Benzene**											
11												
12	**General Statistics**											
13	Total Number of Observations					20	Number of Distinct Observations					2
14	Number of Detects					2	Number of Non-Detects					18
15	Number of Distinct Detects					1	Number of Distinct Non-Detects					1
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable Benzene was not processed!**											
21												
22												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/6/2020 4:14:29 PM
From File	Soil Vapor.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Chloroform

General Statistics

Total Number of Observations	20	Number of Distinct Observations	5
Number of Detects	5	Number of Non-Detects	15
Number of Distinct Detects	5	Number of Distinct Non-Detects	1
Minimum Detect	8	Minimum Non-Detect	8
Maximum Detect	34	Maximum Non-Detect	8
Variance Detects	110	Percent Non-Detects	75%
Mean Detects	17	SD Detects	10.49
Median Detects	12	CV Detects	0.617
Skewness Detects	1.398	Kurtosis Detects	1.513
Mean of Logged Detects	2.697	SD of Logged Detects	0.569

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.86	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.283	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	10.25	KM Standard Error of Mean	1.525
KM SD	6.098	95% KM (BCA) UCL	13
95% KM (t) UCL	12.89	95% KM (Percentile Bootstrap) UCL	12.9
95% KM (z) UCL	12.76	95% KM Bootstrap t UCL	17.44
90% KM Chebyshev UCL	14.82	95% KM Chebyshev UCL	16.9
97.5% KM Chebyshev UCL	19.77	99% KM Chebyshev UCL	25.42

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.335	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.681	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.28	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.359	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.826	k star (bias corrected MLE)	1.664
Theta hat (MLE)	4.443	Theta star (bias corrected MLE)	10.22
nu hat (MLE)	38.26	nu star (bias corrected)	16.64
Mean (detects)	17		

51												
52	**Gamma ROS Statistics using Imputed Non-Detects**											
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58				Minimum	0.01			Mean	4.258			
59				Maximum	34			Median	0.01			
60				SD	8.952			CV	2.103			
61				k hat (MLE)	0.177			k star (bias corrected MLE)	0.184			
62				Theta hat (MLE)	24.01			Theta star (bias corrected MLE)	23.13			
63				nu hat (MLE)	7.092			nu star (bias corrected)	7.362			
64				Adjusted Level of Significance (β)	0.038							
65				Approximate Chi Square Value (7.36, α)	2.371			Adjusted Chi Square Value (7.36, β)	2.153			
66				95% Gamma Approximate UCL (use when n>=50)	13.22			95% Gamma Adjusted UCL (use when n<50)	14.55			
67												
68	**Estimates of Gamma Parameters using KM Estimates**											
69				Mean (KM)	10.25			SD (KM)	6.098			
70				Variance (KM)	37.19			SE of Mean (KM)	1.525			
71				k hat (KM)	2.825			k star (KM)	2.435			
72				nu hat (KM)	113			nu star (KM)	97.39			
73				theta hat (KM)	3.628			theta star (KM)	4.21			
74				80% gamma percentile (KM)	14.99			90% gamma percentile (KM)	19.05			
75				95% gamma percentile (KM)	22.88			99% gamma percentile (KM)	31.27			
76												
77	**Gamma Kaplan-Meier (KM) Statistics**											
78				Approximate Chi Square Value (97.39, α)	75.63			Adjusted Chi Square Value (97.39, β)	74.11			
79				95% Gamma Approximate KM-UCL (use when n>=50)	13.2			95% Gamma Adjusted KM-UCL (use when n<50)	13.47			
80												
81	**Lognormal GOF Test on Detected Observations Only**											
82				Shapiro Wilk Test Statistic	0.946			**Shapiro Wilk GOF Test**				
83				5% Shapiro Wilk Critical Value	0.762			Detected Data appear Lognormal at 5% Significance Level				
84				Lilliefors Test Statistic	0.245			**Lilliefors GOF Test**				
85				5% Lilliefors Critical Value	0.343			Detected Data appear Lognormal at 5% Significance Level				
86	**Detected Data appear Lognormal at 5% Significance Level**											
87												
88	**Lognormal ROS Statistics Using Imputed Non-Detects**											
89				Mean in Original Scale	5.617			Mean in Log Scale	0.823			
90				SD in Original Scale	8.386			SD in Log Scale	1.435			
91				95% t UCL (assumes normality of ROS data)	8.86			95% Percentile Bootstrap UCL	8.631			
92				95% BCA Bootstrap UCL	9.814			95% Bootstrap t UCL	12.06			
93				95% H-UCL (Log ROS)	19.01							
94												
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
96				KM Mean (logged)	2.234			KM Geo Mean	9.335			
97				KM SD (logged)	0.369			95% Critical H Value (KM-Log)	1.903			
98				KM Standard Error of Mean (logged)	0.0922			95% H-UCL (KM -Log)	11.74			
99				KM SD (logged)	0.369			95% Critical H Value (KM-Log)	1.903			
100				KM Standard Error of Mean (logged)	0.0922							

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104	Mean in Original Scale					7.25	Mean in Log Scale					1.714
105	SD in Original Scale					7.518	SD in Log Scale					0.638
106	95% t UCL (Assumes normality)					10.16	95% H-Stat UCL					9.34
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Detected Data appear Normal Distributed at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113	95% KM (t) UCL					12.89						
114												
115	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
116	Recommendations are based upon data size, data distribution, and skewness.											
117	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
118	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
119												

1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation	ProUCL 5.14/6/2020 4:15:11 PM										
5	From File	Soil Vapor.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10	**Ethylbenzene**											
11												
12	**General Statistics**											
13	Total Number of Observations	20					Number of Distinct Observations	4				
14	Number of Detects	3					Number of Non-Detects	17				
15	Number of Distinct Detects	3					Number of Distinct Non-Detects	1				
16	Minimum Detect	18					Minimum Non-Detect	8				
17	Maximum Detect	99					Maximum Non-Detect	8				
18	Variance Detects	2060					Percent Non-Detects	85%				
19	Mean Detects	46.67					SD Detects	45.39				
20	Median Detects	23					CV Detects	0.973				
21	Skewness Detects	1.708					Kurtosis Detects	N/A				
22	Mean of Logged Detects	3.54					SD of Logged Detects	0.922				
23												
24	**Warning: Data set has only 3 Detected Values.**											
25	**This is not enough to compute meaningful or reliable statistics and estimates.**											
26												
27												
28	**Normal GOF Test on Detects Only**											
29	Shapiro Wilk Test Statistic	0.796					**Shapiro Wilk GOF Test**					
30	5% Shapiro Wilk Critical Value	0.767					Detected Data appear Normal at 5% Significance Level					
31	Lilliefors Test Statistic	0.366					**Lilliefors GOF Test**					
32	5% Lilliefors Critical Value	0.425					Detected Data appear Normal at 5% Significance Level					
33	**Detected Data appear Normal at 5% Significance Level**											
34												
35	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
36	KM Mean	13.8					KM Standard Error of Mean	5.454				
37	KM SD	19.92					95% KM (BCA) UCL	N/A				
38	95% KM (t) UCL	23.23					95% KM (Percentile Bootstrap) UCL	N/A				
39	95% KM (z) UCL	22.77					95% KM Bootstrap t UCL	N/A				
40	90% KM Chebyshev UCL	30.16					95% KM Chebyshev UCL	37.57				
41	97.5% KM Chebyshev UCL	47.86					99% KM Chebyshev UCL	68.07				
42												
43	**Gamma GOF Tests on Detected Observations Only**											
44	**Not Enough Data to Perform GOF Test**											
45												
46	**Gamma Statistics on Detected Data Only**											
47	k hat (MLE)	1.801					k star (bias corrected MLE)	N/A				
48	Theta hat (MLE)	25.92					Theta star (bias corrected MLE)	N/A				
49	nu hat (MLE)	10.8					nu star (bias corrected)	N/A				
50	Mean (detects)	46.67										

51												
52	**Gamma ROS Statistics using Imputed Non-Detects**											
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58				Minimum	0.01			Mean	7.009			
59				Maximum	99			Median	0.01			
60				SD	22.56			CV	3.219			
61				k hat (MLE)	0.145			k star (bias corrected MLE)	0.157			
62				Theta hat (MLE)	48.37			Theta star (bias corrected MLE)	44.78			
63				nu hat (MLE)	5.796			nu star (bias corrected)	6.26			
64				Adjusted Level of Significance (β)	0.038							
65				Approximate Chi Square Value (6.26, α)	1.774			Adjusted Chi Square Value (6.26, β)	1.593			
66				95% Gamma Approximate UCL (use when n>=50)	24.73			95% Gamma Adjusted UCL (use when n<50)	N/A			
67												
68	**Estimates of Gamma Parameters using KM Estimates**											
69				Mean (KM)	13.8			SD (KM)	19.92			
70				Variance (KM)	396.7			SE of Mean (KM)	5.454			
71				k hat (KM)	0.48			k star (KM)	0.441			
72				nu hat (KM)	19.2			nu star (KM)	17.66			
73				theta hat (KM)	28.74			theta star (KM)	31.26			
74				80% gamma percentile (KM)	22.49			90% gamma percentile (KM)	38.28			
75				95% gamma percentile (KM)	55.4			99% gamma percentile (KM)	98.03			
76												
77	**Gamma Kaplan-Meier (KM) Statistics**											
78				Approximate Chi Square Value (17.66, α)	9.143			Adjusted Chi Square Value (17.66, β)	8.661			
79				95% Gamma Approximate KM-UCL (use when n>=50)	26.65			95% Gamma Adjusted KM-UCL (use when n<50)	28.13			
80												
81	**Lognormal GOF Test on Detected Observations Only**											
82				Shapiro Wilk Test Statistic	0.855			**Shapiro Wilk GOF Test**				
83				5% Shapiro Wilk Critical Value	0.767			Detected Data appear Lognormal at 5% Significance Level				
84				Lilliefors Test Statistic	0.336			**Lilliefors GOF Test**				
85				5% Lilliefors Critical Value	0.425			Detected Data appear Lognormal at 5% Significance Level				
86	**Detected Data appear Lognormal at 5% Significance Level**											
87												
88	**Lognormal ROS Statistics Using Imputed Non-Detects**											
89				Mean in Original Scale	7.69			Mean in Log Scale	-1.021			
90				SD in Original Scale	22.37			SD in Log Scale	2.865			
91				95% t UCL (assumes normality of ROS data)	16.34			95% Percentile Bootstrap UCL	16.72			
92				95% BCA Bootstrap UCL	23.54			95% Bootstrap t UCL	42.61			
93				95% H-UCL (Log ROS)	1060							
94												
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
96				KM Mean (logged)	2.299			KM Geo Mean	9.96			
97				KM SD (logged)	0.598			95% Critical H Value (KM-Log)	2.12			
98				KM Standard Error of Mean (logged)	0.164			95% H-UCL (KM -Log)	15.92			
99				KM SD (logged)	0.598			95% Critical H Value (KM-Log)	2.12			
100				KM Standard Error of Mean (logged)	0.164							

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104	Mean in Original Scale					10.4	Mean in Log Scale					1.709
105	SD in Original Scale					21.48	SD in Log Scale					0.844
106	95% t UCL (Assumes normality)					18.7	95% H-Stat UCL					12.6
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Detected Data appear Normal Distributed at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113	95% KM (t) UCL					23.23						
114												
115	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
116	Recommendations are based upon data size, data distribution, and skewness.											
117	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
118	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
119												

1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation	ProUCL 5.14/6/2020 4:19:29 PM										
5	From File	Soil Vapor.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10	**m,p-xylenes**											
11												
12	**General Statistics**											
13	Total Number of Observations	20					Number of Distinct Observations	5				
14	Number of Detects	4					Number of Non-Detects	16				
15	Number of Distinct Detects	4					Number of Distinct Non-Detects	1				
16	Minimum Detect	19					Minimum Non-Detect	16				
17	Maximum Detect	322					Maximum Non-Detect	16				
18	Variance Detects	17666					Percent Non-Detects	80%				
19	Mean Detects	129.3					SD Detects	132.9				
20	Median Detects	88					CV Detects	1.028				
21	Skewness Detects	1.603					Kurtosis Detects	2.914				
22	Mean of Logged Detects	4.414					SD of Logged Detects	1.162				
23												
24	**Normal GOF Test on Detects Only**											
25	Shapiro Wilk Test Statistic	0.85					**Shapiro Wilk GOF Test**					
26	5% Shapiro Wilk Critical Value	0.748					Detected Data appear Normal at 5% Significance Level					
27	Lilliefors Test Statistic	0.337					**Lilliefors GOF Test**					
28	5% Lilliefors Critical Value	0.375					Detected Data appear Normal at 5% Significance Level					
29	**Detected Data appear Normal at 5% Significance Level**											
30												
31	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
32	KM Mean	38.65					KM Standard Error of Mean	17.71				
33	KM SD	68.57					95% KM (BCA) UCL	N/A				
34	95% KM (t) UCL	69.26					95% KM (Percentile Bootstrap) UCL	N/A				
35	95% KM (z) UCL	67.77					95% KM Bootstrap t UCL	N/A				
36	90% KM Chebyshev UCL	91.77					95% KM Chebyshev UCL	115.8				
37	97.5% KM Chebyshev UCL	149.2					99% KM Chebyshev UCL	214.8				
38												
39	**Gamma GOF Tests on Detected Observations Only**											
40	A-D Test Statistic	0.258					**Anderson-Darling GOF Test**					
41	5% A-D Critical Value	0.664					Detected data appear Gamma Distributed at 5% Significance Level					
42	K-S Test Statistic	0.238					**Kolmogorov-Smirnov GOF**					
43	5% K-S Critical Value	0.401					Detected data appear Gamma Distributed at 5% Significance Level					
44	**Detected data appear Gamma Distributed at 5% Significance Level**											
45												
46	**Gamma Statistics on Detected Data Only**											
47	k hat (MLE)	1.257					k star (bias corrected MLE)	0.481				
48	Theta hat (MLE)	102.9					Theta star (bias corrected MLE)	268.8				
49	nu hat (MLE)	10.05					nu star (bias corrected)	3.846				
50	Mean (detects)	129.3										

	A	B	C	D	E	F	G	H	I	J	K	L
51												
52	**Gamma ROS Statistics using Imputed Non-Detects**											
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58					Minimum	0.01				Mean		25.86
59					Maximum	322				Median		0.01
60					SD	74.85				CV		2.895
61					k hat (MLE)	0.13				k star (bias corrected MLE)		0.144
62					Theta hat (MLE)	199.5				Theta star (bias corrected MLE)		180.2
63					nu hat (MLE)	5.185				nu star (bias corrected)		5.74
64					Adjusted Level of Significance (β)	0.038						
65					Approximate Chi Square Value (5.74, α)	1.509				Adjusted Chi Square Value (5.74, β)		1.345
66					95% Gamma Approximate UCL (use when n>=50)	98.39				95% Gamma Adjusted UCL (use when n<50)		N/A
67												
68	**Estimates of Gamma Parameters using KM Estimates**											
69					Mean (KM)	38.65				SD (KM)		68.57
70					Variance (KM)	4702				SE of Mean (KM)		17.71
71					k hat (KM)	0.318				k star (KM)		0.303
72					nu hat (KM)	12.71				nu star (KM)		12.14
73					theta hat (KM)	121.7				theta star (KM)		127.4
74					80% gamma percentile (KM)	59.43				90% gamma percentile (KM)		113.8
75					95% gamma percentile (KM)	176.2				99% gamma percentile (KM)		337.9
76												
77	**Gamma Kaplan-Meier (KM) Statistics**											
78					Approximate Chi Square Value (12.14, α)	5.316				Adjusted Chi Square Value (12.14, β)		4.963
79					95% Gamma Approximate KM-UCL (use when n>=50)	88.23				95% Gamma Adjusted KM-UCL (use when n<50)		94.51
80												
81	**Lognormal GOF Test on Detected Observations Only**											
82					Shapiro Wilk Test Statistic	0.978				**Shapiro Wilk GOF Test**		
83					5% Shapiro Wilk Critical Value	0.748				Detected Data appear Lognormal at 5% Significance Level		
84					Lilliefors Test Statistic	0.222				**Lilliefors GOF Test**		
85					5% Lilliefors Critical Value	0.375				Detected Data appear Lognormal at 5% Significance Level		
86	**Detected Data appear Lognormal at 5% Significance Level**											
87												
88	**Lognormal ROS Statistics Using Imputed Non-Detects**											
89					Mean in Original Scale	27.09				Mean in Log Scale		-0.112
90					SD in Original Scale	74.44				SD in Log Scale		3.154
91					95% t UCL (assumes normality of ROS data)	55.87				95% Percentile Bootstrap UCL		57.63
92					95% BCA Bootstrap UCL	71.44				95% Bootstrap t UCL		125.3
93					95% H-UCL (Log ROS)	13814						
94												
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
96					KM Mean (logged)	3.101				KM Geo Mean		22.22
97					KM SD (logged)	0.796				95% Critical H Value (KM-Log)		2.354
98					KM Standard Error of Mean (logged)	0.206				95% H-UCL (KM -Log)		46.88
99					KM SD (logged)	0.796				95% Critical H Value (KM-Log)		2.354
100					KM Standard Error of Mean (logged)	0.206						

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104	Mean in Original Scale					32.25	Mean in Log Scale					2.546
105	SD in Original Scale					72.56	SD in Log Scale					1.064
106	95% t UCL (Assumes normality)					60.31	95% H-Stat UCL					43.7
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Detected Data appear Normal Distributed at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113	95% KM (t) UCL					69.26						
114												
115	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
116	Recommendations are based upon data size, data distribution, and skewness.											
117	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
118	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
119												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 4:15:56 PM								
5	From File			Soil Vapor.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**n-Propylbenzene**											
11												
12	**General Statistics**											
13	Total Number of Observations					20	Number of Distinct Observations					2
14	Number of Detects					1	Number of Non-Detects					19
15	Number of Distinct Detects					1	Number of Distinct Non-Detects					1
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable n-Propylbenzene was not processed!**											
21												
22												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/6/2020 4:20:06 PM
From File	Soil Vapor.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

o-xylene

General Statistics

Total Number of Observations	20	Number of Distinct Observations	5
Number of Detects	4	Number of Non-Detects	16
Number of Distinct Detects	4	Number of Distinct Non-Detects	1
Minimum Detect	9	Minimum Non-Detect	8
Maximum Detect	151	Maximum Non-Detect	8
Variance Detects	3983	Percent Non-Detects	80%
Mean Detects	58.5	SD Detects	63.11
Median Detects	37	CV Detects	1.079
Skewness Detects	1.722	Kurtosis Detects	3.244
Mean of Logged Detects	3.607	SD of Logged Detects	1.153

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.813	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.365	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	18.1	KM Standard Error of Mean	8.187
KM SD	31.71	95% KM (BCA) UCL	N/A
95% KM (t) UCL	32.26	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	31.57	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	42.66	95% KM Chebyshev UCL	53.79
97.5% KM Chebyshev UCL	69.23	99% KM Chebyshev UCL	99.56

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.312	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.665	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.283	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.401	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.223	k star (bias corrected MLE)	0.472
Theta hat (MLE)	47.83	Theta star (bias corrected MLE)	123.8
nu hat (MLE)	9.784	nu star (bias corrected)	3.779
Mean (detects)	58.5		

	A	B	C	D	E	F	G	H	I	J	K	L
51												
52	**Gamma ROS Statistics using Imputed Non-Detects**											
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58					Minimum	0.01				Mean		11.71
59					Maximum	151				Median		0.01
60					SD	34.71				CV		2.965
61					k hat (MLE)	0.143				k star (bias corrected MLE)		0.155
62					Theta hat (MLE)	82.02				Theta star (bias corrected MLE)		75.7
63					nu hat (MLE)	5.71				nu star (bias corrected)		6.187
64					Adjusted Level of Significance (β)	0.038						
65					Approximate Chi Square Value (6.19, α)	1.736				Adjusted Chi Square Value (6.19, β)		1.557
66					95% Gamma Approximate UCL (use when n>=50)	41.72				95% Gamma Adjusted UCL (use when n<50)		N/A
67												
68	**Estimates of Gamma Parameters using KM Estimates**											
69					Mean (KM)	18.1				SD (KM)		31.71
70					Variance (KM)	1005				SE of Mean (KM)		8.187
71					k hat (KM)	0.326				k star (KM)		0.31
72					nu hat (KM)	13.03				nu star (KM)		12.41
73					theta hat (KM)	55.55				theta star (KM)		58.33
74					80% gamma percentile (KM)	27.98				90% gamma percentile (KM)		53.16
75					95% gamma percentile (KM)	81.9				99% gamma percentile (KM)		156.3
76												
77	**Gamma Kaplan-Meier (KM) Statistics**											
78					Approximate Chi Square Value (12.41, α)	5.499				Adjusted Chi Square Value (12.41, β)		5.139
79					95% Gamma Approximate KM-UCL (use when n>=50)	40.85				95% Gamma Adjusted KM-UCL (use when n<50)		43.72
80												
81	**Lognormal GOF Test on Detected Observations Only**											
82					Shapiro Wilk Test Statistic	0.968				**Shapiro Wilk GOF Test**		
83					5% Shapiro Wilk Critical Value	0.748				Detected Data appear Lognormal at 5% Significance Level		
84					Lilliefors Test Statistic	0.222				**Lilliefors GOF Test**		
85					5% Lilliefors Critical Value	0.375				Detected Data appear Lognormal at 5% Significance Level		
86	**Detected Data appear Lognormal at 5% Significance Level**											
87												
88	**Lognormal ROS Statistics Using Imputed Non-Detects**											
89					Mean in Original Scale	12.26				Mean in Log Scale		-0.887
90					SD in Original Scale	34.53				SD in Log Scale		3.132
91					95% t UCL (assumes normality of ROS data)	25.62				95% Percentile Bootstrap UCL		26.37
92					95% BCA Bootstrap UCL	32.99				95% Bootstrap t UCL		123.2
93					95% H-UCL (Log ROS)	5568						
94												
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
96					KM Mean (logged)	2.385				KM Geo Mean		10.86
97					KM SD (logged)	0.757				95% Critical H Value (KM-Log)		2.305
98					KM Standard Error of Mean (logged)	0.195				95% H-UCL (KM -Log)		21.58
99					KM SD (logged)	0.757				95% Critical H Value (KM-Log)		2.305
100					KM Standard Error of Mean (logged)	0.195						

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104	Mean in Original Scale					14.9	Mean in Log Scale					1.831
105	SD in Original Scale					33.6	SD in Log Scale					1.02
106	95% t UCL (Assumes normality)					27.89	95% H-Stat UCL					19.58
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Detected Data appear Normal Distributed at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113	95% KM (t) UCL					32.26						
114												
115	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
116	Recommendations are based upon data size, data distribution, and skewness.											
117	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
118	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
119												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.14/6/2020 4:16:43 PM								
5	From File			Soil Vapor.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**Tetrachloroethene**											
11												
12	**General Statistics**											
13	Total Number of Observations					20	Number of Distinct Observations					1
14	Number of Detects					1	Number of Non-Detects					19
15	Number of Distinct Detects					1	Number of Distinct Non-Detects					1
16												
17	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
18	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
19												
20	**The data set for variable Tetrachloroethene was not processed!**											
21												
22												

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.14/6/2020 4:17:26 PM
From File	Soil Vapor.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Toluene

General Statistics

Total Number of Observations	20	Number of Distinct Observations	8
Number of Detects	7	Number of Non-Detects	13
Number of Distinct Detects	7	Number of Distinct Non-Detects	1
Minimum Detect	10	Minimum Non-Detect	8
Maximum Detect	45	Maximum Non-Detect	8
Variance Detects	158.6	Percent Non-Detects	65%
Mean Detects	25.57	SD Detects	12.59
Median Detects	27	CV Detects	0.493
Skewness Detects	0.122	Kurtosis Detects	-0.734
Mean of Logged Detects	3.116	SD of Logged Detects	0.571

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.162	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	14.15	KM Standard Error of Mean	2.622
KM SD	10.85	95% KM (BCA) UCL	18.35
95% KM (t) UCL	18.68	95% KM (Percentile Bootstrap) UCL	18.5
95% KM (z) UCL	18.46	95% KM Bootstrap t UCL	18.95
90% KM Chebyshev UCL	22.02	95% KM Chebyshev UCL	25.58
97.5% KM Chebyshev UCL	30.52	99% KM Chebyshev UCL	40.24

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.346	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.71	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.194	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.313	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	4.134	k star (bias corrected MLE)	2.458
Theta hat (MLE)	6.186	Theta star (bias corrected MLE)	10.41
nu hat (MLE)	57.88	nu star (bias corrected)	34.41
Mean (detects)	25.57		

51												
52	**Gamma ROS Statistics using Imputed Non-Detects**											
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58					Minimum	0.01				Mean	9.52	
59					Maximum	45				Median	0.632	
60					SD	14.09				CV	1.48	
61					k hat (MLE)	0.22				k star (bias corrected MLE)	0.22	
62					Theta hat (MLE)	43.28				Theta star (bias corrected MLE)	43.21	
63					nu hat (MLE)	8.798				nu star (bias corrected)	8.811	
64					Adjusted Level of Significance (β)	0.038						
65					Approximate Chi Square Value (8.81, α)	3.213				Adjusted Chi Square Value (8.81, β)	2.951	
66					95% Gamma Approximate UCL (use when n>=50)	26.1				95% Gamma Adjusted UCL (use when n<50)	28.42	
67												
68	**Estimates of Gamma Parameters using KM Estimates**											
69					Mean (KM)	14.15				SD (KM)	10.85	
70					Variance (KM)	117.8				SE of Mean (KM)	2.622	
71					k hat (KM)	1.699				k star (KM)	1.478	
72					nu hat (KM)	67.97				nu star (KM)	59.11	
73					theta hat (KM)	8.327				theta star (KM)	9.576	
74					80% gamma percentile (KM)	21.93				90% gamma percentile (KM)	29.59	
75					95% gamma percentile (KM)	37.04				99% gamma percentile (KM)	53.89	
76												
77	**Gamma Kaplan-Meier (KM) Statistics**											
78					Approximate Chi Square Value (59.11, α)	42.43				Adjusted Chi Square Value (59.11, β)	41.32	
79					95% Gamma Approximate KM-UCL (use when n>=50)	19.71				95% Gamma Adjusted KM-UCL (use when n<50)	20.24	
80												
81	**Lognormal GOF Test on Detected Observations Only**											
82					Shapiro Wilk Test Statistic	0.902				**Shapiro Wilk GOF Test**		
83					5% Shapiro Wilk Critical Value	0.803				Detected Data appear Lognormal at 5% Significance Level		
84					Lilliefors Test Statistic	0.195				**Lilliefors GOF Test**		
85					5% Lilliefors Critical Value	0.304				Detected Data appear Lognormal at 5% Significance Level		
86	**Detected Data appear Lognormal at 5% Significance Level**											
87												
88	**Lognormal ROS Statistics Using Imputed Non-Detects**											
89					Mean in Original Scale	11.64				Mean in Log Scale	1.872	
90					SD in Original Scale	12.82				SD in Log Scale	1.148	
91					95% t UCL (assumes normality of ROS data)	16.59				95% Percentile Bootstrap UCL	16.26	
92					95% BCA Bootstrap UCL	17.11				95% Bootstrap t UCL	18.66	
93					95% H-UCL (Log ROS)	26.68						
94												
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
96					KM Mean (logged)	2.442				KM Geo Mean	11.5	
97					KM SD (logged)	0.585				95% Critical H Value (KM-Log)	2.106	
98					KM Standard Error of Mean (logged)	0.141				95% H-UCL (KM -Log)	18.1	
99					KM SD (logged)	0.585				95% Critical H Value (KM-Log)	2.106	
100					KM Standard Error of Mean (logged)	0.141						

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104	Mean in Original Scale					11.55	Mean in Log Scale					1.992
105	SD in Original Scale					12.71	SD in Log Scale					0.905
106	95% t UCL (Assumes normality)					16.46	95% H-Stat UCL					18.54
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Detected Data appear Normal Distributed at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113	95% KM (t) UCL					18.68						
114												
115	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
116	Recommendations are based upon data size, data distribution, and skewness.											
117	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
118	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
119												

APPENDIX G

ESL Model Residential
AF 0.03 & AF 0.001

2019 (Rev. 2)	Table T2-1: Tier 2 ESLs Site-Specific Input and Output

Click in cell and use pull-down boxes to make selection.

Tier 2 Scenario Toggles

Land Use:	Residential
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth: (Shallow ≤ 10ft bgs < Deep)	Shallow Soil

California Water Boards

Environmental Screening Levels

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Jared Blumenfeld, Secretary for Environmental Protection

Select Site Contaminants:	Contaminant 1	Contaminant 2	Contaminant 3	Contaminant 4	Contaminant 5
	Benzene	Chloroform	Ethylbenzene	Tetrachloroethene	Toluene

Tier 2 ESLs:	ESL	Basis	ESL	Basis	ESL	Basis	ESL	Basis	ESL	Basis
Soil (mg/kg):	2.5E-02	Leaching	2.3E-02	Leaching	4.3E-01	Leaching	8.0E-02	Leaching	1.0E+01	Leaching
Groundwater (µg/L):	4.2E-01	VI HHR	8.1E-01	VI HHR	3.5E+00	VI HHR	6.4E-01	VI HHR	4.0E+02	Odor/Nuis
Subslab/ Soil Gas (µg/m³):	3.2E+00	VI HHR	4.1E+00	VI HHR	3.7E+01	VI HHR	1.5E+01	VI HHR	1.0E+04	VI HHR
Indoor Air (µg/m³):	9.7E-02	Dir Exp	1.2E-01	Dir Exp	1.1E+00	Dir Exp	4.6E-01	Dir Exp	3.1E+02	Dir Exp

Note:
Groundwater depth is no longer a toggle for evaluating vapor intrusion. See the notes in Workbook Table GW-3 and the User's Guide Chapter 5 for further information.

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2019 (Rev. 2)	Table T2-2: Tier 2 – Site-Specific Cumulative Risk and Hazard Calculator

Enter Site Data (Leave blank when no data exits)

	Contaminant 1	Contaminant 2	Contaminant 3	Contaminant 4	Contaminant 5
Contaminant inputs from T2-1:	**Benzene**	**Chloroform**	**Ethylbenzene**	**Tetrachloroethene**	**Toluene**
Soil Concentration (mg/kg) - dry weight:					
Groundwater Concentration (µg/L):					
Subslab/ Soil Gas Concentration (µg/m^3):	19.00	13	23	8	19
Indoor Air Concentration (µg/m^3):					

Soil Gas VI Attenuation Factor (Use 0.03 for Screening): 0.0300

Selected Site Scenario (from T2-1)

Land Use:	Residential
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth:	Shallow Soil

Cancer Risk:	Benzene	Chloroform	Ethylbenzene	Tetrachloroethene	Toluene	Cumulative Risk
Soil Exposure Risk:	--	--	--	--	--	--
Tapwater Exposure Risk:	--	--	--	--	--	--
Current* Vapor Intrusion Exposure Risk:	5.9E-06	3.2E-06	6.2E-07	5.2E-07	--	1.0E-05
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Risk:	5.9E-06	3.2E-06	6.2E-07	5.2E-07	--	1.0E-05
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI

Noncancer Hazard:	Benzene	Chloroform	Ethylbenzene	Tetrachloroethene	Toluene	Cumulative Hazard
Soil Exposure Hazard:	--	--	--	--	--	--
Tap Water Exposure Hazard:	--	--	--	--	--	--
Current* Vapor Intrusion Exposure Hazard:	1.8E-01	3.8E-03	6.7E-04	5.8E-03	1.8E-03	1.9E-01
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Hazard:	1.8E-01	3.8E-03	6.7E-04	5.8E-03	1.8E-03	1.9E-01
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI

Notes:

Cumulative cancer risk and noncancer hazard are not automatically calculated across pathways because exposure via multiple pathways typically is not simultaneous. This may be performed separately as part of a site-specific evaluation. See the User's Guide Section 3.3 (Addressing Cumulative Risk and Hazard).

* **Current** (VI exposure to current occupants of existing buildings) – Primarily based on indoor air data. See User's Guide Chapter 5 for further information.
In the absence of indoor air data, subslab/soil gas or groundwater data is used to predict current indoor air concentrations.
Subslab/soil gas data is given priority over groundwater data for current exposure calculations. The cumulative risk calculation follows the same hierarchy.

** **Future** (VI exposure to future occupants of existing or future buildings) – Primarily based on subslab/soil gas data. See User's Guide Chapter 5 for further information.
In the absence of subslab/soil gas data, groundwater data is used to predict future indoor air concentrations. The cumulative risk calculation follows the same hierarchy.

2019 (Rev. 2)	Table T2-1: Tier 2 ESLs Site-Specific Input and Output

Click in cell and use pull-down boxes to make selection.

Tier 2 Scenario Toggles

Land Use:	Residential
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth: (Shallow ≤ 10ft bgs < Deep)	Shallow Soil

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Jared Blumenfeld, Secretary for Environmental Protection

Select Site Contaminants:	Contaminant 1	Contaminant 2	Contaminant 3	Contaminant 4	Contaminant 5
	Xylenes				

Tier 2 ESLs:	ESL	Basis	ESL	Basis	ESL	Basis	ESL	Basis	ESL	Basis
Soil (mg/kg):	1.0E+01	Leaching	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Groundwater (µg/L):	3.9E+02	VI HHR	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Subslab/ Soil Gas (µg/m³):	3.5E+03	VI HHR	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Indoor Air (µg/m³):	1.0E+02	Dir Exp	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Note:
Groundwater depth is no longer a toggle for evaluating vapor intrusion. See the notes in Workbook Table GW-3 and the User's Guide Chapter 5 for further information.

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2019 (Rev. 2) | **Table T2-2: Tier 2 – Site-Specific Cumulative Risk and Hazard Calculator**

Enter Site Data (Leave blank when no data exits)

	Contaminant 1	Contaminant 2	Contaminant 3	Contaminant 4	Contaminant 5
Contaminant inputs from T2-1:	Xylenes	0	0	0	0
Soil Concentration (mg/kg) - dry weight:					
Groundwater Concentration (µg/L):					
Subslab/ Soil Gas Concentration (µg/m^3):	101.52				
Indoor Air Concentration (µg/m^3):					
Soil Gas VI Attenuation Factor (Use 0.03 for Screening):					0.0300

Selected Site Scenario (from T2-1)

Land Use:	Residential
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth:	Shallow Soil

Cancer Risk:

	Xylenes	0.00	0.00	0.00	0.00	Cumulative Risk
Soil Exposure Risk:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Tapwater Exposure Risk:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Current* Vapor Intrusion Exposure Risk:	--	--	--	--	--	--
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Risk:	--	--	--	--	--	--
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI

Noncancer Hazard:

	Xylenes	0	0	0	0	Cumulative Hazard
Soil Exposure Hazard:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Tap Water Exposure Hazard:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Current* Vapor Intrusion Exposure Hazard:	2.9E-02	--	--	--	--	2.9E-02
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Hazard:	2.9E-02	--	--	--	--	2.9E-02
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI

Notes:

Cumulative cancer risk and noncancer hazard are not automatically calculated across pathways because exposure via multiple pathways typically is not simultaneous. This may be performed separately as part of a site-specific evaluation. See the User's Guide Section 3.3 (Addressing Cumulative Risk and Hazard).

* **Current** (VI exposure to current occupants of existing buildings) – Primarily based on indoor air data. See User's Guide Chapter 5 for further information.
In the absence of indoor air data, subslab/soil gas or groundwater data is used to predict current indoor air concentrations.
Subslab/soil gas data is given priority over groundwater data for current exposure calculations. The cumulative risk calculation follows the same hierarchy.

** **Future** (VI exposure to future occupants of existing or future buildings) – Primarily based on subslab/soil gas data. See User's Guide Chapter 5 for further information.
In the absence of subslab/soil gas data, groundwater data is used to predict future indoor air concentrations. The cumulative risk calculation follows the same hierarchy.

2019 (Rev. 2)	Table T2-1: Tier 2 ESLs Site-Specific Input and Output

Click in cell and use pull-down boxes to make selection.

Tier 2 Scenario Toggles

Land Use:	Residential
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth: (Shallow ≤ 10ft bgs < Deep)	Shallow Soil

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Select Site Contaminants:	Contaminant 1	Contaminant 2	Contaminant 3	Contaminant 4	Contaminant 5
	Benzene	Chloroform	Ethylbenzene	Tetrachloroethene	Toluene

Tier 2 ESLs:	ESL	Basis	ESL	Basis	ESL	Basis	ESL	Basis	ESL	Basis
Soil (mg/kg):	2.5E-02	Leaching	2.3E-02	Leaching	4.3E-01	Leaching	8.0E-02	Leaching	1.0E+01	Leaching
Groundwater (µg/L):	4.2E-01	VI HHR	8.1E-01	VI HHR	3.5E+00	VI HHR	6.4E-01	VI HHR	4.0E+02	Odor/Nuis
Subslab/ Soil Gas (µg/m³):	3.2E+00	VI HHR	4.1E+00	VI HHR	3.7E+01	VI HHR	1.5E+01	VI HHR	1.0E+04	VI HHR
Indoor Air (µg/m³):	9.7E-02	Dir Exp	1.2E-01	Dir Exp	1.1E+00	Dir Exp	4.6E-01	Dir Exp	3.1E+02	Dir Exp

Note:
Groundwater depth is no longer a toggle for evaluating vapor intrusion. See the notes in Workbook Table GW-3 and the User's Guide Chapter 5 for further information.

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2019 (Rev. 2) — Table T2-2: Tier 2 – Site-Specific Cumulative Risk and Hazard Calculator

Selected Site Scenario (from T2-1)

Land Use:	Residential
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth:	Shallow Soil

Enter Site Data (Leave blank when no data exits)

	Contaminant 1	Contaminant 2	Contaminant 3	Contaminant 4	Contaminant 5
Contaminant inputs from T2-1:	**Benzene**	**Chloroform**	**Ethylbenzene**	**Tetrachloroethene**	**Toluene**
Soil Concentration (mg/kg) - dry weight:					
Groundwater Concentration (µg/L):					
Subslab/ Soil Gas Concentration (µg/m^3):	19.00	13	23	8	19
Indoor Air Concentration (µg/m^3):					

Soil Gas VI Attenuation Factor (Use 0.03 for Screening): 0.0010

Cancer Risk:	Benzene	Chloroform	Ethylbenzene	Tetrachloroethene	Toluene	Cumulative Risk
Soil Exposure Risk:	--	--	--	--	--	--
Tapwater Exposure Risk:	--	--	--	--	--	--
Current* Vapor Intrusion Exposure Risk:	2.0E-07	1.1E-07	2.1E-08	1.7E-08	--	3.4E-07
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Risk:	2.0E-07	1.1E-07	2.1E-08	1.7E-08	--	3.4E-07
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI

Noncancer Hazard:	Benzene	Chloroform	Ethylbenzene	Tetrachloroethene	Toluene	Cumulative Hazard
Soil Exposure Hazard:	--	--	--	--	--	--
Tap Water Exposure Hazard:	--	--	--	--	--	--
Current* Vapor Intrusion Exposure Hazard:	6.1E-03	1.3E-04	2.2E-05	1.9E-04	6.0E-05	6.5E-03
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Hazard:	6.1E-03	1.3E-04	2.2E-05	1.9E-04	6.0E-05	6.5E-03
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI

Notes:

Cumulative cancer risk and noncancer hazard are not automatically calculated across pathways because exposure via multiple pathways typically is not simultaneous. This may be performed separately as part of a site-specific evaluation. See the User's Guide Section 3.3 (Addressing Cumulative Risk and Hazard).

* **Current** (VI exposure to current occupants of existing buildings) – Primarily based on indoor air data. See User's Guide Chapter 5 for further information.
In the absence of indoor air data, subslab/soil gas or groundwater data is used to predict current indoor air concentrations.
Subslab/soil gas data is given priority over groundwater data for current exposure calculations. The cumulative risk calculation follows the same hierarchy.

** **Future** (VI exposure to future occupants of existing or future buildings) – Primarily based on subslab/soil gas data. See User's Guide Chapter 5 for further information.
In the absence of subslab/soil gas data, groundwater data is used to predict future indoor air concentrations. The cumulative risk calculation follows the same hierarchy.

2019 (Rev. 2)	Table T2-1: Tier 2 ESLs Site-Specific Input and Output

Click in cell and use pull-down boxes to make selection.

Tier 2 Scenario Toggles

Land Use:	Residential
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth: (Shallow ≤ 10ft bgs < Deep)	Shallow Soil

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Select Site Contaminants:	Contaminant 1	Contaminant 2	Contaminant 3	Contaminant 4	Contaminant 5
	Xylenes				

Tier 2 ESLs:	ESL	Basis	ESL	Basis	ESL	Basis	ESL	Basis	ESL	Basis
Soil (mg/kg):	1.0E+01	Leaching	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Groundwater (µg/L):	3.9E+02	VI HHR	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Subslab/ Soil Gas (µg/m³):	3.5E+03	VI HHR	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Indoor Air (µg/m³):	1.0E+02	Dir Exp	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Note:
Groundwater depth is no longer a toggle for evaluating vapor intrusion. See the notes in Workbook Table GW-3 and the User's Guide Chapter 5 for further information.

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2019 (Rev. 2)	Table T2-2: Tier 2 – Site-Specific Cumulative Risk and Hazard Calculator

Enter Site Data (Leave blank when no data exits)

	Contaminant 1	Contaminant 2	Contaminant 3	Contaminant 4	Contaminant 5
Contaminant inputs from T2-1:	Xylenes	0	0	0	0
Soil Concentration (mg/kg) - dry weight:					
Groundwater Concentration (µg/L):					
Subslab/ Soil Gas Concentration (µg/m^3):	101.52				
Indoor Air Concentration (µg/m^3):					

Soil Gas VI Attenuation Factor (Use 0.03 for Screening): 0.0010

Selected Site Scenario (from T2-1)

Land Use:	Residential
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth:	Shallow Soil

Cancer Risk:

	Xylenes	0.00	0.00	0.00	0.00	Cumulative Risk
Soil Exposure Risk:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Tapwater Exposure Risk:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Current* Vapor Intrusion Exposure Risk:	--	--	--	--	--	--
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Risk:	--	--	--	--	--	--
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI

Noncancer Hazard:

	Xylenes	0	0	0	0	Cumulative Hazard
Soil Exposure Hazard:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Tap Water Exposure Hazard:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Current* Vapor Intrusion Exposure Hazard:	9.7E-04	--	--	--	--	9.7E-04
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Hazard:	9.7E-04	--	--	--	--	9.7E-04
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI

Notes:

Cumulative cancer risk and noncancer hazard are not automatically calculated across pathways because exposure via multiple pathways typically is not simultaneous. This may be performed separately as part of a site-specific evaluation. See the User's Guide Section 3.3 (Addressing Cumulative Risk and Hazard).

* **Current** (VI exposure to current occupants of existing buildings) – Primarily based on indoor air data. See User's Guide Chapter 5 for further information.
In the absence of indoor air data, subslab/soil gas or groundwater data is used to predict current indoor air concentrations.
Subslab/soil gas data is given priority over groundwater data for current exposure calculations. The cumulative risk calculation follows the same hierarchy.

** **Future** (VI exposure to future occupants of existing or future buildings) – Primarily based on subslab/soil gas data. See User's Guide Chapter 5 for further information.
In the absence of subslab/soil gas data, groundwater data is used to predict future indoor air concentrations. The cumulative risk calculation follows the same hierarchy.

APPENDIX H

ESL Model Commercial
AF 0.03 & AF 0.001

2019 (Rev. 2)	Table T2-1: Tier 2 ESLs Site-Specific Input and Output

Click in cell and use pull-down boxes to make selection.

Tier 2 Scenario Toggles

Land Use:	Commercial or Industrial
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth: (Shallow ≤ 10ft bgs < Deep)	Shallow Soil

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Select Site Contaminants:	Contaminant 1		Contaminant 2		Contaminant 3		Contaminant 4		Contaminant 5	
	Benzene		Chloroform		Ethylbenzene		Tetrachloroethene		Toluene	
Tier 2 ESLs:	**ESL**	**Basis**	**ESL**	**Basis**	**ESL**	**Basis**	**ESL**	**Basis**	**ESL**	**Basis**
Soil (mg/kg):	2.5E-02	Leaching	2.3E-02	Leaching	4.3E-01	Leaching	8.0E-02	Leaching	1.0E+01	Leaching
Groundwater (µg/L):	1.8E+00	VI HHR	3.6E+00	VI HHR	1.5E+01	VI HHR	2.8E+00	VI HHR	4.0E+02	Odor/Nuis
Subslab/ Soil Gas (µg/m³):	1.4E+01	VI HHR	1.8E+01	VI HHR	1.6E+02	VI HHR	6.7E+01	VI HHR	4.4E+04	VI HHR
Indoor Air (µg/m³):	4.2E-01	Dir Exp	5.3E-01	Dir Exp	4.9E+00	Dir Exp	2.0E+00	Dir Exp	1.3E+03	Dir Exp

Note:
Groundwater depth is no longer a toggle for evaluating vapor intrusion. See the notes in Workbook Table GW-3 and the User's Guide Chapter 5 for further information.

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2019 (Rev. 2)	Table T2-2: Tier 2 – Site-Specific Cumulative Risk and Hazard Calculator

Enter Site Data (Leave blank when no data exits)

Contaminant inputs from T2-1:	Contaminant 1 Benzene	Contaminant 2 Chloroform	Contaminant 3 Ethylbenzene	Contaminant 4 Tetrachloroethene	Contaminant 5 Toluene
Soil Concentration (mg/kg) - dry weight:					
Groundwater Concentration (µg/L):					
Subslab/ Soil Gas Concentration (µg/m^3):	19.00	13	23	8	19
Indoor Air Concentration (µg/m^3):					

Soil Gas VI Attenuation Factor (Use 0.03 for Screening): 0.0300

Selected Site Scenario (from T2-1)

Land Use:	Commercial or Industrial
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth:	Shallow Soil

Cancer Risk:

	Benzene	Chloroform	Ethylbenzene	Tetrachloroethene	Toluene	Cumulative Risk
Soil Exposure Risk:	--	--	--	--	--	--
Tapwater Exposure Risk:	--	--	--	--	--	--
Current* Vapor Intrusion Exposure Risk:	1.3E-06	7.3E-07	1.4E-07	1.2E-07	--	2.3E-06
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Risk:	1.3E-06	7.3E-07	1.4E-07	1.2E-07	--	2.3E-06
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI

Noncancer Hazard:

	Benzene	Chloroform	Ethylbenzene	Tetrachloroethene	Toluene	Cumulative Hazard
Soil Exposure Hazard:	--	--	--	--	--	--
Tap Water Exposure Hazard:	--	--	--	--	--	--
Current* Vapor Intrusion Exposure Hazard:	4.3E-02	9.0E-04	1.6E-04	1.4E-03	4.3E-04	4.6E-02
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Hazard:	4.3E-02	9.0E-04	1.6E-04	1.4E-03	4.3E-04	4.6E-02
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI

Notes:

Cumulative cancer risk and noncancer hazard are not automatically calculated across pathways because exposure via multiple pathways typically is not simultaneous. This may be performed separately as part of a site-specific evaluation. See the User's Guide Section 3.3 (Addressing Cumulative Risk and Hazard).

* **Current** (VI exposure to current occupants of existing buildings) – Primarily based on indoor air data. See User's Guide Chapter 5 for further information.
In the absence of indoor air data, subslab/soil gas or groundwater data is used to predict current indoor air concentrations.
Subslab/soil gas data is given priority over groundwater data for current exposure calculations. The cumulative risk calculation follows the same hierarchy.

** **Future** (VI exposure to future occupants of existing or future buildings) – Primarily based on subslab/soil gas data. See User's Guide Chapter 5 for further information.
In the absence of subslab/soil gas data, groundwater data is used to predict future indoor air concentrations. The cumulative risk calculation follows the same hierarchy.

2019 (Rev. 2)	Table T2-1: Tier 2 ESLs Site-Specific Input and Output

Click in cell and use pull-down boxes to make selection.

Tier 2 Scenario Toggles

Land Use:	Commercial or Industrial
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth: (Shallow ≤ 10ft bgs < Deep)	Shallow Soil

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Select Site Contaminants:	Contaminant 1	Contaminant 2	Contaminant 3	Contaminant 4	Contaminant 5
	Xylenes				

Tier 2 ESLs:	ESL	Basis	ESL	Basis	ESL	Basis	ESL	Basis	ESL	Basis
Soil (mg/kg):	1.0E+01	Leaching	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Groundwater (µg/L):	1.6E+03	VI HHR	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Subslab/ Soil Gas (µg/m³):	1.5E+04	VI HHR	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Indoor Air (µg/m³):	4.4E+02	Dir Exp	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Note:
Groundwater depth is no longer a toggle for evaluating vapor intrusion. See the notes in Workbook Table GW-3 and the User's Guide Chapter 5 for further information.

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2019 (Rev. 2) | **Table T2-2: Tier 2 – Site-Specific Cumulative Risk and Hazard Calculator**

Enter Site Data (Leave blank when no data exits)

	Contaminant 1	Contaminant 2	Contaminant 3	Contaminant 4	Contaminant 5
Contaminant inputs from T2-1:	Xylenes	0	0	0	0
Soil Concentration (mg/kg) - dry weight:					
Groundwater Concentration (µg/L):					
Subslab/ Soil Gas Concentration (µg/m^3):	101.52				
Indoor Air Concentration (µg/m^3):					

Soil Gas VI Attenuation Factor (Use 0.03 for Screening): 0.0300

Selected Site Scenario (from T2-1)

Land Use:	Commercial or Industrial
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth:	Shallow Soil

Cancer Risk:

	Xylenes	0.00	0.00	0.00	0.00	Cumulative Risk
Soil Exposure Risk:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Tapwater Exposure Risk:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Current* Vapor Intrusion Exposure Risk:	--	--	--	--	--	--
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Risk:	--	--	--	--	--	--
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI

Noncancer Hazard:

	Xylenes	0	0	0	0	Cumulative Hazard
Soil Exposure Hazard:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Tap Water Exposure Hazard:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Current* Vapor Intrusion Exposure Hazard:	7.0E-03	--	--	--	--	7.0E-03
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Hazard:	7.0E-03	--	--	--	--	7.0E-03
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI

Notes:

Cumulative cancer risk and noncancer hazard are not automatically calculated across pathways because exposure via multiple pathways typically is not simultaneous. This may be performed separately as part of a site-specific evaluation. See the User's Guide Section 3.3 (Addressing Cumulative Risk and Hazard).

* **Current** (VI exposure to current occupants of existing buildings) – Primarily based on indoor air data. See User's Guide Chapter 5 for further information.
In the absence of indoor air data, subslab/soil gas or groundwater data is used to predict current indoor air concentrations.
Subslab/soil gas data is given priority over groundwater data for current exposure calculations. The cumulative risk calculation follows the same hierarchy.

** **Future** (VI exposure to future occupants of existing or future buildings) – Primarily based on subslab/soil gas data. See User's Guide Chapter 5 for further information.
In the absence of subslab/soil gas data, groundwater data is used to predict future indoor air concentrations. The cumulative risk calculation follows the same hierarchy.

2019 (Rev. 2)	Table T2-1: Tier 2 ESLs Site-Specific Input and Output

Click in cell and use pull-down boxes to make selection.

Tier 2 Scenario Toggles

Land Use:	Commercial or Industrial
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth: (Shallow ≤ 10ft bgs < Deep)	Shallow Soil

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Select Site Contaminants:	Contaminant 1		Contaminant 2		Contaminant 3		Contaminant 4		Contaminant 5	
	Benzene		Chloroform		Ethylbenzene		Tetrachloroethene		Toluene	
Tier 2 ESLs:	**ESL**	**Basis**	**ESL**	**Basis**	**ESL**	**Basis**	**ESL**	**Basis**	**ESL**	**Basis**
Soil (mg/kg):	2.5E-02	Leaching	2.3E-02	Leaching	4.3E-01	Leaching	8.0E-02	Leaching	1.0E+01	Leaching
Groundwater (µg/L):	1.8E+00	VI HHR	3.6E+00	VI HHR	1.5E+01	VI HHR	2.8E+00	VI HHR	4.0E+02	Odor/Nuis
Subslab/ Soil Gas (µg/m³):	1.4E+01	VI HHR	1.8E+01	VI HHR	1.6E+02	VI HHR	6.7E+01	VI HHR	4.4E+04	VI HHR
Indoor Air (µg/m³):	4.2E-01	Dir Exp	5.3E-01	Dir Exp	4.9E+00	Dir Exp	2.0E+00	Dir Exp	1.3E+03	Dir Exp

Note:
Groundwater depth is no longer a toggle for evaluating vapor intrusion. See the notes in Workbook Table GW-3 and the User's Guide Chapter 5 for further information.

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2019 (Rev. 2)	Table T2-2: Tier 2 – Site-Specific Cumulative Risk and Hazard Calculator

Enter Site Data (Leave blank when no data exits)

Contaminant inputs from T2-1:	Contaminant 1 Benzene	Contaminant 2 Chloroform	Contaminant 3 Ethylbenzene	Contaminant 4 Tetrachloroethene	Contaminant 5 Toluene
Soil Concentration (mg/kg) - dry weight:					
Groundwater Concentration (µg/L):					
Subslab/ Soil Gas Concentration (µg/m^3):	19.00	13	23	8	19
Indoor Air Concentration (µg/m^3):					

Soil Gas VI Attenuation Factor (Use 0.03 for Screening): 0.0010

Selected Site Scenario (from T2-1)

Land Use:	Commercial or Industrial
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth:	Shallow Soil

Cancer Risk:

	Benzene	Chloroform	Ethylbenzene	Tetrachloroethene	Toluene	Cumulative Risk
Soil Exposure Risk:	--	--	--	--	--	--
Tapwater Exposure Risk:	--	--	--	--	--	--
Current* Vapor Intrusion Exposure Risk:	4.5E-08	2.4E-08	4.7E-09	4.0E-09	--	7.8E-08
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Risk:	4.5E-08	2.4E-08	4.7E-09	4.0E-09	--	7.8E-08
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI

Noncancer Hazard:

	Benzene	Chloroform	Ethylbenzene	Tetrachloroethene	Toluene	Cumulative Hazard
Soil Exposure Hazard:	--	--	--	--	--	--
Tap Water Exposure Hazard:	--	--	--	--	--	--
Current* Vapor Intrusion Exposure Hazard:	1.4E-03	3.0E-05	5.3E-06	4.6E-05	1.4E-05	1.5E-03
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Hazard:	1.4E-03	3.0E-05	5.3E-06	4.6E-05	1.4E-05	1.5E-03
Basis:	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI	Subslab/Soil Gas VI

Notes:

Cumulative cancer risk and noncancer hazard are not automatically calculated across pathways because exposure via multiple pathways typically is not simultaneous. This may be performed separately as part of a site-specific evaluation. See the User's Guide Section 3.3 (Addressing Cumulative Risk and Hazard).

* **Current** (VI exposure to current occupants of existing buildings) – Primarily based on indoor air data. See User's Guide Chapter 5 for further information.
In the absence of indoor air data, subslab/soil gas or groundwater data is used to predict current indoor air concentrations.
Subslab/soil gas data is given priority over groundwater data for current exposure calculations. The cumulative risk calculation follows the same hierarchy.

** **Future** (VI exposure to future occupants of existing or future buildings) – Primarily based on subslab/soil gas data. See User's Guide Chapter 5 for further information.
In the absence of subslab/soil gas data, groundwater data is used to predict future indoor air concentrations. The cumulative risk calculation follows the same hierarchy.

2019 (Rev. 2)	Table T2-1: Tier 2 ESLs Site-Specific Input and Output

Click in cell and use pull-down boxes to make selection.

Tier 2 Scenario Toggles

Land Use:	Commercial or Industrial
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth: (Shallow ≤ 10ft bgs < Deep)	Shallow Soil

California Water Boards

Environmental Screening Levels

San Francisco Bay Regional Water Quality Control Board

Gavin Newsom, Governor

Jared Blumenfeld, Secretary for Environmental Protection

Select Site Contaminants:	Contaminant 1	Contaminant 2	Contaminant 3	Contaminant 4	Contaminant 5
	Xylenes				

Tier 2 ESLs:	ESL	Basis	ESL	Basis	ESL	Basis	ESL	Basis	ESL	Basis
Soil (mg/kg):	1.0E+01	Leaching	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Groundwater (µg/L):	1.6E+03	VI HHR	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Subslab/ Soil Gas (µg/m³):	1.5E+04	VI HHR	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Indoor Air (µg/m³):	4.4E+02	Dir Exp	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Note:
Groundwater depth is no longer a toggle for evaluating vapor intrusion. See the notes in Workbook Table GW-3 and the User's Guide Chapter 5 for further information.

Environmental Screening Levels

San Francisco Bay Regional Water Quality Control Board

2019 (Rev. 2) — Table T2-2: Tier 2 – Site-Specific Cumulative Risk and Hazard Calculator

Enter Site Data (Leave blank when no data exits)

	Contaminant 1	Contaminant 2	Contaminant 3	Contaminant 4	Contaminant 5
Contaminant inputs from T2-1:	Xylenes	0	0	0	0
Soil Concentration (mg/kg) - dry weight:					
Groundwater Concentration (µg/L):					
Subslab/ Soil Gas Concentration (µg/m^3):	101.52				
Indoor Air Concentration (µg/m^3):					

Soil Gas VI Attenuation Factor (Use 0.03 for Screening): 0.0010

Selected Site Scenario (from T2-1)

Land Use:	Commercial or Industrial
Vegetation Level:	Minimal
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	No
Discharge to Surface Water:	No Discharge Expected
Soil Contamination Depth:	Shallow Soil

Cancer Risk:

	Xylenes	0.00	0.00	0.00	0.00	Cumulative Risk
Soil Exposure Risk:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Tapwater Exposure Risk:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Current* Vapor Intrusion Exposure Risk:	--	--	--	--	--	--
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Risk:	--	--	--	--	--	--
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI

Noncancer Hazard:

	Xylenes	0	0	0	0	Cumulative Hazard
Soil Exposure Hazard:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Tap Water Exposure Hazard:	--	#N/A	#N/A	#N/A	#N/A	#N/A
Current* Vapor Intrusion Exposure Hazard:	2.3E-04	--	--	--	--	2.3E-04
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI
Future** Vapor Intrusion Exposure Hazard:	2.3E-04	--	--	--	--	2.3E-04
Basis:	Subslab/Soil Gas VI	--	--	--	--	Subslab/Soil Gas VI

Notes:

Cumulative cancer risk and noncancer hazard are not automatically calculated across pathways because exposure via multiple pathways typically is not simultaneous. This may be performed separately as part of a site-specific evaluation. See the User's Guide Section 3.3 (Addressing Cumulative Risk and Hazard).

* **Current** (VI exposure to current occupants of existing buildings) – Primarily based on indoor air data. See User's Guide Chapter 5 for further information.
In the absence of indoor air data, subslab/soil gas or groundwater data is used to predict current indoor air concentrations.
Subslab/soil gas data is given priority over groundwater data for current exposure calculations. The cumulative risk calculation follows the same hierarchy.

** **Future** (VI exposure to future occupants of existing or future buildings) – Primarily based on subslab/soil gas data. See User's Guide Chapter 5 for further information.
In the absence of subslab/soil gas data, groundwater data is used to predict future indoor air concentrations. The cumulative risk calculation follows the same hierarchy.

APPENDIX I

VURAM Model

Virginia Department of Environmental Quality

VURAM

Virginia Unified Risk Assessment Model

VERSION: 2.1.1

Construction Worker Quantitative Risk Assessment Report

Site Name: 950 E 33rd St & 3177 California Ave

Program: Voluntary Remediation Program

Total Hazard Index/Risk for All Media

Non-Cancer Adult	Cancer
Total: 2.46E-03	Total: 6.56E-09
does not exceed hazard index	*does not exceed cumulative risk*

Risk Based Performance Criteria

Default Hazard Index	Default Cumulative Risk-All Chemicals
1	1.00E-04

All Report Pages are Required for Risk Assessment Submission
DETAILED REPORT FOLLOWS

Risk Based Performance Criteria

Default Hazard Index	Default Risk Individual Chemical	Default Cumulative Risk-All Chemicals
1	1.00E-06	1.00E-05

Air

Analyte: Benzene
CAS: 71-43-2

Concentration ug/m3:	1.90E+01
RfDo:	
RfCi:	8.00E-02
SFO:	
IUR:	7.80E-06
Mutagen:	
VOC:	Y

Calculated Hazard Quotient/Risk

Non-Cancer Adult		Cancer	
Ingestion:		Ingestion:	
Dermal:		Dermal:	
Inhalation:	2.53E-04	Inhalation:	2.17E-09
Total:	**2.53E-04**	**Total:**	**2.17E-09**

% Contribution to Media Risk 10.31% 33.04%

Analyte: Chloroform
CAS: 67-66-3

Concentration ug/m3:	1.29E+01
RfDo:	
RfCi:	2.44E-01
SFO:	
IUR:	2.30E-05
Mutagen:	
VOC:	Y

Calculated Hazard Quotient/Risk

Non-Cancer Adult		Cancer	
Ingestion:		Ingestion:	
Dermal:		Dermal:	
Inhalation:	4.84E-05	Inhalation:	3.72E-09
Total:	**4.84E-05**	**Total:**	**3.72E-09**

% Contribution to Media Risk 1.97% 56.79%

Analyte: Ethylbenzene
CAS: 100-41-4

Concentration ug/m3:	2.32E+01
RfDo:	
RfCi:	9.00E+00
SFO:	
IUR:	2.50E-06
Mutagen:	
VOC:	Y

Calculated Hazard Quotient/Risk

Non-Cancer Adult		Cancer	
Ingestion:		Ingestion:	
Dermal:		Dermal:	
Inhalation:	2.11E-06	Inhalation:	6.49E-10
Total:	**2.11E-06**	**Total:**	**6.49E-10**

% Contribution to Media Risk 0.09% 9.90%

Risk Based Performance Criteria

Default Hazard Index	Default Risk Individual Chemical	Default Cumulative Risk-All Chemicals
1	1.00E-06	1.00E-05

Air

Analyte: Propyl benzene
CAS: 103-65-1

Concentration	ug/m3:	2.00E+01
RfDo:		
RfCi:		1.00E+00
SFO:		
IUR:		
Mutagen:		
VOC:		Y

Calculated Hazard Quotient/Risk

Non-Cancer Adult		Cancer	
Ingestion:		Ingestion:	
Dermal:		Dermal:	
Inhalation:	1.43E-05	Inhalation:	
Total:	**1.43E-05**	**Total:**	**0.00E+00**

% Contribution to Media Risk 0.58% 0.00%

Analyte: Tetrachloroethylene
CAS: 127-18-4

Concentration	ug/m3:	8.00E+00
RfDo:		
RfCi:		4.00E-02
SFO:		
IUR:		2.60E-07
Mutagen:		
VOC:		Y

Calculated Hazard Quotient/Risk

Non-Cancer Adult		Cancer	
Ingestion:		Ingestion:	
Dermal:		Dermal:	
Inhalation:	1.20E-04	Inhalation:	1.71E-11
Total:	**1.20E-04**	**Total:**	**1.71E-11**

% Contribution to Media Risk 4.89% 0.26%

Analyte: Toluene
CAS: 108-88-3

Concentration	ug/m3:	1.87E+01
RfDo:		
RfCi:		5.00E+00
SFO:		
IUR:		
Mutagen:		
VOC:		Y

Calculated Hazard Quotient/Risk

Non-Cancer Adult		Cancer	
Ingestion:		Ingestion:	
Dermal:		Dermal:	
Inhalation:	3.46E-06	Inhalation:	
Total:	**3.46E-06**	**Total:**	**0.00E+00**

% Contribution to Media Risk 0.14% 0.00%

Risk Based Performance Criteria

Default Hazard Index	Default Risk Individual Chemical	Default Cumulative Risk-All Chemicals
1	1.00E-06	1.00E-05

Air

Analyte: Trimethylbenzene, 1,2,4-
CAS: 95-63-6

Concentration ug/m3:	4.13E+01
RfDo:	
RfCi:	7.00E-02
SFO:	
IUR:	
Mutagen:	
VOC:	Y

Calculated Hazard Quotient/Risk

Non-Cancer Adult		Cancer	
Ingestion:		Ingestion:	
Dermal:		Dermal:	
Inhalation:	4.27E-04	Inhalation:	
Total:	**4.27E-04**	**Total:**	**0.00E+00**

% Contribution to Media Risk 17.37% 0.00%

Analyte: Trimethylbenzene, 1,3,5-
CAS: 108-67-8

Concentration ug/m3:	1.93E+01
RfDo:	
RfCi:	1.00E-02
SFO:	
IUR:	
Mutagen:	
VOC:	Y

Calculated Hazard Quotient/Risk

Non-Cancer Adult		Cancer	
Ingestion:		Ingestion:	
Dermal:		Dermal:	
Inhalation:	1.38E-03	Inhalation:	
Total:	**1.38E-03**	**Total:**	**0.00E+00**

% Contribution to Media Risk 56.22% 0.00%

Analyte: Xylenes
CAS: 1330-20-7

Concentration ug/m3:	1.02E+02
RfDo:	
RfCi:	4.00E-01
SFO:	
IUR:	
Mutagen:	
VOC:	Y

Calculated Hazard Quotient/Risk

Non-Cancer Adult		Cancer	
Ingestion:		Ingestion:	
Dermal:		Dermal:	
Inhalation:	2.07E-04	Inhalation:	
Total:	**2.07E-04**	**Total:**	**0.00E+00**

% Contribution to Media Risk 8.43% 0.00%

Risk Based Performance Criteria

Default Hazard Index	Default Risk Individual Chemical	Default Cumulative Risk-All Chemicals
1	1.00E-06	1.00E-05

Air

Total Calculated Hazard Index/Risk For Media: Air

Non-Cancer Adult	
Ingestion:	0.00E+00
Dermal:	0.00E+00
Inhalation:	2.46E-03
Total:	**2.46E-03**

Cancer	
Ingestion:	0.00E+00
Dermal:	0.00E+00
Inhalation:	6.56E-09
Total:	**6.56E-09**

Risk Based Performance Criteria

Default Hazard Index	Default Risk Individual Chemical	Default Cumulative Risk-All Chemicals
1	1.00E-06	1.00E-05

Total Hazard Index/Risk for All Media

Non-Cancer Adult

Ingestion:	0.00E+00
Dermal:	0.00E+00
Inhalation:	2.46E-03
Total:	**2.46E-03**

does not exceed hazard index

Cancer

Ingestion:	0.00E+00
Dermal:	0.00E+00
Inhalation:	6.56E-09
Total:	**6.56E-09**

does not exceed cumulative risk

Risk Based Performance Criteria

Default Hazard Index	Default Risk Individual Chemical	Default Cumulative Risk-All Chemicals
1	1.00E-06	1.00E-05

Construction Exposure Default Values

Symbol	Description	Value	Units
A	Construction Worker Soil Inhalation Dispersion Constant - Virginia DEQ	14.0111	(unitless)
AFcw	Construction Worker Soil Adherence Factor	0.3	(mg/cm2)
As	Areal extent of the site or contamination	0.5	(acres)
ATcw	Construction Worker Averaging Time: 365 x LT	25550	(days)
ATcw-a	Construction Worker Averaging Time: EWcw x 7 x EDcw	350	(days)
B	Construction Worker Soil Inhalation Dispersion Constant - Virginia DEQ	19.6154	(unitless)
BWcw	Construction Worker Body Weight	80	(kg)
C	Construction Worker Soil Inhalation Dispersion Constant - Virginia DEQ	225.3397	(unitless)
DWcw	Construction Worker Days Worked	5	(days/week)
EDcw	Construction Worker Exposure Duration	1	(yrs)
EFcw	Construction Worker Exposure Frequency	250	(days/yrs)
EFcw-vrp	Construction Worker Soil Exposure Frequency - VRP ONLY - Virginia DEQ	125	(days/yr)
ETcw	Construction Worker Exposure Time	8	(hrs/day)
EWcw	Construction Worker Weeks Worked	50	(weeks/yr)
F(x)	Function Dependent on 0.886 × (Ut/Um)	0.194	(unitless)
Fd	Dispersion Correction Factor	0.185	(unitless)
IRcw	Construction Worker Soil Ingestion Rate	330	(mg/day)
n	Total soil porosity: 1-(ρb/ρs)	0.433962264150943	(unitless)
PEFsc	Particulate Emission Factor Subchronic - Virginia DEQ calculated	3339236953.22437	(m3/kg)
RfCsc	Subchronic Inhalation Reference Concentration		(mg/m3)
RfDosc	Subchronic Oral Reference Dose		(mg/kg-day)
SAcw	Construction Worker Surface Area	3527	(cm2/day)
Tc	Total time over which construction occurs: EDcw*EWcw*7days/wk*24hrs/day*3600s/hr	30240000	(s)

Risk Based Performance Criteria

Default Hazard Index	Default Risk Individual Chemical	Default Cumulative Risk-All Chemicals
1	1.00E-06	1.00E-05

TR-ACH	Trench Air Changes per Hour - Virginia DEQ	2	(h)-1
TR-ACvad	Trench Advection Coefficient Groundwater greater than 15ft - Virginia DEQ	0.25	(cm3/cm3)
TR-D-dir	Trench Depth - groundwater less Than 15ft - Virginia DEQ	2.44	(m)
TR-D-ind	Trench Depth - groundwater greater than 15ft - Virginia DEQ	4.57	(m)
TR-Dsg	Trench - Depth to soil gas vapor source - Virginia DEQ	1	(cm)
TR-EFcw	Trench Construction Worker Exposure Frequency - Virginia DEQ	125	(days/yr)
TR-ETcw	Trench Construction Worker Exposure Time - Virginia DEQ	4	(hrs/day)
TR-EVcw	Trench Construction Worker Events - Virginia DEQ	1	(events/day)
TR-F	Trench Fraction of floor through which contaminant can enter - Virginia DEQ	1	(unitless)
TR-HV	Trench Thickness of Vadose Zone - groundwater greater than 15 ft - Virginia DEQ	30	(cm)
TR-IRcw	Trench Construction Worker Groundwater Ingestion Rate - Virginia DEQ	0.02	(L/day)
TR-KGH2O	Trench Gas-phase mass transfer coefficient of water vapor at 25deg C - Virginia DEQ	0.833	(cm/s)
TR-KLO2	Trench Liquid-phase mass transfer coefficient of oxygen at 25deg C - Virginia DEQ	0.002	(cm/s)
TR-L	Trench Length - Virginia DEQ	2.44	(m)
TR-Lgw	Trench Depth to groundwater - Virginia DEQ	488	(cm)
TR-MWH2O	Trench Molecular Weight of Water - Virginia DEQ	18	(unitless)
TR-MWO2	Trench Molecular Weight of Oxygen - Virginia DEQ	32	(unitless)
TR-Porvad	Trench Porosity in Vadose Zone - groundwater greater than 15ft - Virginia DEQ	0.44	(cm3/cm3)
TR-R	Trench Ideal Gas Constant - Virginia DEQ	0.000082	(atm-m3/mol-K)
TR-Temp-F	Trench Temperature Fahrenheit - Virginia DEQ	77	(F)
TR-Temp-K	Trench Temperature - Virginia DEQ	298	(K)
TR-W	Trench Width - Virginia DEQ	0.91	(m)
TR-W/D	Trench Width to Depth Ratio - Virginia DEQ	0.38	(unitless)
Um	Mean Annual Wind Speed	4.69	(m/s)
Ut	Equivalent Threshold Value of Wind Speed at 7m	11.32	(m/s)
V	V Fraction of Vegetative Cover	0.5	(unitless)

Risk Based Performance Criteria

Default Hazard Index	Default Risk Individual Chemical	Default Cumulative Risk-All Chemicals
1	1.00E-06	1.00E-05

Θa	Air filled soil porosity: n-Θw	0.133962264150943	(unitless)
Θw	Water filled soil porosity	0.3	(unitless)
ρb	Dry soil bulk density	1.5	(kg/L)
ρs	Soil particle density	2.65	(kg/L)

END OF REPORT

APPENDIX J

LeadSpread Model

CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Click here for ABBREVIATED INSTRUCTIONS FOR LEADSPREAD 8

INPUT	
MEDIUM	LEVEL
Lead in Soil/Dust (ug/g)	33.0
Respirable Dust (ug/m^3)	1.5

OUTPUT						
Percentile Estimate of Blood Pb (ug/dl)						PRG-90
	50th	90th	95th	98th	99th	(ug/g)
BLOOD Pb, CHILD	0.2	0.4	0.5	0.6	0.7	77
BLOOD Pb, PICA CHILD	0.5	0.9	1.0	1.2	1.4	39

EXPOSURE PARAMETERS		
	units	children
Days per week	days/wk	7
Geometric Standard Deviation		1.6
Blood lead level of concern (ug/dl)		1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day	0.192

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PATHWAYS						
CHILDREN	typical			with pica		
	Pathway contribution			Pathway contribution		
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	5.8E-5	0.00	1%		0.00	0%
Soil Ingestion	7.0E-3	0.23	99%	1.4E-2	0.46	100%
Inhalation	2.0E-6	0.00	0%		0.00	0%

MODIFIED VERSION OF USEPA ADULT LEAD MODEL

CALCULATIONS OF BLOOD LEAD CONCENTRATIONS (PbBs) AND PRELMIINARY REMEDIATION GOAL (PRG)

EDIT RED CELL

Variable	Description of Variable	Units	
PbS	Soil lead concentration	ug/g or ppm	33
$R_{fetal/maternal}$	Fetal/maternal PbB ratio	--	0.9
BKSF	Biokinetic Slope Factor	ug/dL per ug/day	0.4
GSD_i	Geometric standard deviation PbB	--	1.8
PbB_0	Baseline PbB	ug/dL	0.0
IR_S	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.050
$AF_{S, D}$	Absorption fraction (same for soil and dust)	--	0.12
$EF_{S, D}$	Exposure frequency (same for soil and dust)	days/yr	250
$AT_{S, D}$	Averaging time (same for soil and dust)	days/yr	365
PbB_{adult}	**PbB of adult worker, geometric mean**	**ug/dL**	**0.1**
$PbB_{fetal, 0.90}$	90th percentile PbB among fetuses of adult workers	ug/dL	0.1
PbB_t	Target PbB level of concern (e.g., 10 ug/dL)	ug/dL	**1.0**
$P(PbB_{fetal} > PbB_t)$	**Probability that fetal PbB > PbB_t, assuming lognormal distributio**	**%**	**0.0%**

PRG90 **318**

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CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Click here for ABBREVIATED INSTRUCTIONS FOR LEADSPREAD 8

INPUT	
MEDIUM	LEVEL
Lead in Soil/Dust (ug/g)	10.5
Respirable Dust (ug/m^3)	1.5

OUTPUT						
Percentile Estimate of Blood Pb (ug/dl)						PRG-90
	50th	90th	95th	98th	99th	(ug/g)
BLOOD Pb, CHILD	0.1	0.1	0.2	0.2	0.2	77
BLOOD Pb, PICA CHILD	0.1	0.3	0.3	0.4	0.4	39

EXPOSURE PARAMETERS		
	units	children
Days per week	days/wk	7
Geometric Standard Deviation		1.6
Blood lead level of concern (ug/dl)		1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day	0.192

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PATHWAYS						
CHILDREN	typical			with pica		
	Pathway contribution			Pathway contribution		
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	5.8E-5	0.00	1%		0.00	0%
Soil Ingestion	7.0E-3	0.07	99%	1.4E-2	0.15	100%
Inhalation	2.0E-6	0.00	0%		0.00	0%

MODIFIED VERSION OF USEPA ADULT LEAD MODEL

CALCULATIONS OF BLOOD LEAD CONCENTRATIONS (PbBs) AND PRELMIINARY REMEDIATION GOAL (PRG)

EDIT RED CELL

Variable	Description of Variable	Units	
PbS	Soil lead concentration	ug/g or ppm	10.54
$R_{fetal/maternal}$	Fetal/maternal PbB ratio	--	0.9
BKSF	Biokinetic Slope Factor	ug/dL per ug/day	0.4
GSD_i	Geometric standard deviation PbB	--	1.8
PbB_0	Baseline PbB	ug/dL	0.0
IR_S	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.050
$AF_{S, D}$	Absorption fraction (same for soil and dust)	--	0.12
$EF_{S, D}$	Exposure frequency (same for soil and dust)	days/yr	250
$AT_{S, D}$	Averaging time (same for soil and dust)	days/yr	365
PbB_{adult}	**PbB of adult worker, geometric mean**	**ug/dL**	**0.0**
$PbB_{fetal, 0.90}$	90th percentile PbB among fetuses of adult workers	ug/dL	0.0
PbB_t	Target PbB level of concern (e.g., 10 ug/dL)	ug/dL	**1.0**
$P(PbB_{fetal} > PbB_t)$	**Probability that fetal PbB > PbB_t, assuming lognormal distributio**	**%**	**0.0%**

PRG90 **318**

Click here for REFERENCES

Methane Gas Leak Test Report

MEARNS CONSULTING LLC
ENVIRONMENTAL CONSULTANTS
RISK ASSESSORS

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www.MearnsConsulting.com

April 13, 2020

via email

Mr. Kevin Laney
Vice President of Business Development
Signal Hill Petroleum, Inc.
2633 Cherry Avenue
Signal Hill, California 90755

Messrs. Tom Lee and John Clement
Venture Point, Inc.
2865 MacArthur Court
Newport Beach, California 92660

RE: **Methane Gas Leak Test Report**
950 East 33rd Street and
3177 California Avenue, Signal Hill, California 90755

Dear Messrs. Laney, Lee and Clement:

I am pleased to present this Methane Gas Leak Test Report on five previously abandoned oil wells located at 950 East 33rd Street and 3177 California Avenue in Signal Hill, California 90755. Three of these oil wells were methane gas leak tested on March 26, 2020 in the presence of Mr. Jackson Ethier the City of Signal Hill Oil Services Coordinator. Methane gas leak tests of the two previously abandoned oil wells located on the 950 East 33rd Street portion of the project were not required pursuant to the City of Signal Hill Oil and Gas Code §16.24.010(B).

The methane gas leak tests were performed in accordance with the City of Signal Hill Oil and Gas Code §16.24.040 and the City of Signal Hill Project Development Guide (February 28, 2019).

CalGEM Oil Well Files
According to the State of California Department of Conservation, Division of Geologic Energy Management (CalGEM), formerly the Division of Oil, Gas and Geothermal Resources (DOGGR), oil wells files, these oil wells were abandoned in either 2007, 2004 or 1971. These oil wells are within Section 19, Township 4S, Range 12West, S.B. B & M., Long Beach Field, Los Angeles County. The oil well files are attached.

950 East 33rd Street
Chevron U.S.A. Inc. "Field" 24, A.P.I. No. 037-11549 – the total depth of this oil well is 5050'. The April 18, 2007 CalGEM (formerly DOGGR) Report on Operations reports the 10 ¾" casing was cemented at 20'; the 5 ½" casing was cemented at 5050', cut and pulled from 727' and 1845', perforated at 4242' water shut-off, perforated at 4255'-4300', and at intervals from 4470' to 4825'. Junk below 4100'. Cement plugs are at 3892'-3864', 3730'-3600', 1845'-1591', 740'-588' and 100'-6'. The operations were performed in 2007 for the purpose of reabandonment to current CalGEM specifications as the Target Store onsite was expanded. The location of "Field" 24 was recorded as 370' south along centerline of California Avenue from the centerline of 33rd Street and 260' westerly at 90°. The location of "Field" 24 is mapped in the SubSurface Surveys February 6, 2020 geophysical report and is approximately 5' south of the southern wall of the Target Store in the parking lot with below ground horizontal vent

piping connected to a vertical vent riser attached to the southern wall of the Target Store terminating on top of the Target Store roof (Figure 2).

Chevron U.S.A. Inc. "Field" 18, A.P.I. No. 037-11543 – the total depth of this oil well (present hole) is 7483'. The April 12, 2007 CalGEM (formerly DOGGR) Report on Operations reports the 13" casing was cemented at 788'; the 8 ¼" casing was cemented at 4230' water shut-off, shot and pulled from 764'; the 5 ¾" casing was cemented at 6210' water shut-off, cut and pulled from 4730' and 4870', perforated at intervals 4230'-4830', shot 4051', 4100' and 4170', pulled from 4051'; 4 ¾" casing was landed 6120'-6366', perforated at 6120'-6366'. Junk below 4051' and 4828'. Cement plugs are at 7483'-6828', 6500'-6106', 4848'-4776', 4560'-4385', 4375'-41285', 4048'-4021' and 627'-5'. The operations were performed in 2007 for the purpose of reabandonment to current CalGEM specifications as the Target Store onsite was expanded. CalGEM recommended not building over this well as it could not be reabandoned in 2007 to meet current CalGEM specifications. The location of "Field" 18 was recorded as 160' south of northern property line and 660' east from intersection centerline of Atlantic Avenue and Crest Drive, distance parallel and at right angles to centerline streets. The location of "Field" 18 is mapped in the SubSurface Surveys February 6, 2020 geophysical report and is in the parking lot east of the Target Store with below ground horizontal vent piping connected to a vertical vent riser in a landscaped parking island (Figure 2).

3177 California Avenue

AW-1, A.P.I. No. 037-00338 – the total depth of this oil well is 5100'. The May 13, 2004 CalGEM (formerly DOGGR) Report on Operations reports the 10 ¾" casing was cemented at 100'; the 7" casing was cemented at 5100', perforated at intervals 4260'-5001', holes 24' and 4225'. Junk below 4345'. Cement plugs are at 5100'-5090', 4343'-4090', 1920'-1680' and 100'-0'. The operations were performed in 2007 for the purpose of reabandonment. In 1976 "Field" 37 was converted to an injection well (or water flood), AW-1. The location of AW-1 was recorded as 1225' east along section line and 890' south at right angles to said line from northwest corner of section 19, T.4S, R.12W, S.B. B&M. The location of AW-1 is mapped in the SubSurface Surveys February 6, 2020 geophysical report and depicted on Figure 2.

"Field" 36, A.P.I. No. 037-00410 – the total depth of this well is 5160'. The September 9, 1971 CalGEM (formerly DOGGR) History of Oil or Gas Well reports the well never produced and served as a water injector. The CalGEM Special Report on Operations Witnessed (July 29, 1971) reports the 13 ⅜" x 10 ¾" casing string was cemented at 2012'; the 2 ⅞" casing was cemented at 5146', perforated 4590'-4738', bridge plug 4749'; plugged with cement 2500' +/- to surface; the 2 ⅞" casing was cemented at 5126', cut and pulled from 4210', 4432', 4560' and 4749', perforated at 4240'-4415', plugged with cement 4240 +/- to surface; the 2 ⅞" casing was cemented at 5133', perforated at 4780'-5060'. Junk 1 ¼" tubing 4793'-4928', plugged with cement 4780' +/- to surface; the 2 ⅞" casing was cemented at 4771', perforated at 4450'-4556', plugged with cement 1038' to surface. The location of "Field" 36 was recorded as 500' southerly along property line and 370' westerly at right angles to said line from the northwesterly corner of the property which also is 500' southerly along the centerline of California Avenue from the centerline of 33rd Street and 400' westerly at right angles. The location of "Field" 36 is mapped in the SubSurface Surveys February 6, 2020 geophysical report and depicted on Figure 2.

A-19, A.P.I. No. 037-11552 – the total depth of this oil well is 4830'. The November 16, 2004 CalGEM (formerly DOGGR) Report on Operations reports the 11 ¾" casing was cemented at63', the 5 ½" casing was landed at 4805', cut and pulled from 805' and 4227', perforated 4190' water shut-off, perforated at intervals 4236'-4805', holes 3872', 4037' and 4067', cavity shot at 1880'. Junk below 4058'. Cement plugs are at 4058'-3235', 1890'-1661' and 810'-5'. The operations were performed in 2004 for the purpose of reabandonment. This well originally was "Field" 27 (1953) and produced. The location of A-19 was recorded as 500' southerly and 300' westerly from the centerline of 33rd Street and California Avenue. The location of A-19 is mapped in the SubSurface Surveys February 6, 2020 geophysical report and depicted on Figure 2.

Methane Gas Leak Test
The required leak test of the surface plugs was performed on March 26, 2020 in the presence of Jackson Ethier (City of Signal Hill, Oil Services Coordinator). The methane gas leak test consisted of testing the interior and exterior of the exposed casings for methane using a RKI GX2012 methane detection meter (serial number 489020162) calibrated on March 10, 2020 (Certificate of Calibration is attached) pursuant to the City of Signal Hill Oil Code §16.24.040 and the *CalGEM Construction-Site Review Program, Conducting Gas Tests on Wells* guidelines.

1. A.P.I. No. 037-00338, AW-1 – 7" OD casing, 200ppmv interior and 400ppmv exterior; 10 ¾" OD casing, 400ppmv interior and 400ppmv exterior. The top of the casing was approximately 16' 3" below surface elevation.
2. A.P.I. No. 037-00410, "Field" 36 – 14" OD casing 300ppmv interior and 300ppmv exterior; 16" OD casing, 300ppmv interior and 300ppmv exterior. The top of the casing was approximately 14' 2" below surface elevation.
3. A.P.I. No. 037-11552, A-19 – 5 ⅞" OD casing 200ppmv interior and 200ppmv exterior; 11 ¾" OD casing 200ppmv interior and 300ppmv exterior. The top of the casing was approximately 14' 5" below surface elevation.

The visible surface plugs and casings were found not to be leaking methane in concentrations exceeding the threshold of 500ppmv on March 26, 2020.

The competency of the surface plugs was tested as development is proposed at this property address.

California Code of Regulations, Title 14, Division 2, §1723.5 Surface Plugging
1723.5. Surface Plugging.
"The hole and all annuli shall be plugged at the surface with at least a 25-foot cement plug. The district deputy may require that inner strings of uncemented casing be removed to at least the base of the surface plug prior to placement of the plug. All well casing shall be cut off at least 5 feet but no more than 10 feet below the surface of the ground. The district deputy may approve a different cut-off depth, as conditions warrant, including but not limited to excavation or grading operations for construction purposes. As defined in Section 1760(j), a steel plate at least as thick as the outer well casing shall be welded around the circumference of the casing at the top of the casing, after Division approval of the surface plug. The steel plate shall show the well's identification, indicated by the last five digits of the API well number."

Conclusions
The top of the casings of the three oil wells that were methane gas leak tested on March 26, 2020 are not in compliance with CCR §1723.5; however they will be in compliance once between 6-feet to 8-feet of fill is removed from the property pursuant to the final elevation plan.

Please do not hesitate to contact me should you have any questions.

Sincerely,

x Susan Mearns

Susan L. Mearns, Ph.D.

Mearns Consulting LLC

ENCLOSURES: Site Location
Site Map
Final Elevation Plan
CALGEM Oil Well Files
Photos
Certificate of Calibration

SITE LOCATION



EXPLANATION

Previously abandoned oil wells

A12, A17, AW-2, and A22 are operating oil wells

N

0 500 feet

Base map: Google Earth Pro, 2019

Figure 1: Site Location Map
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC

SITE MAP



EXPLANATION

Previously abandoned oil wells

A12, A17, AW-2, and A22 are operating oil wells

N

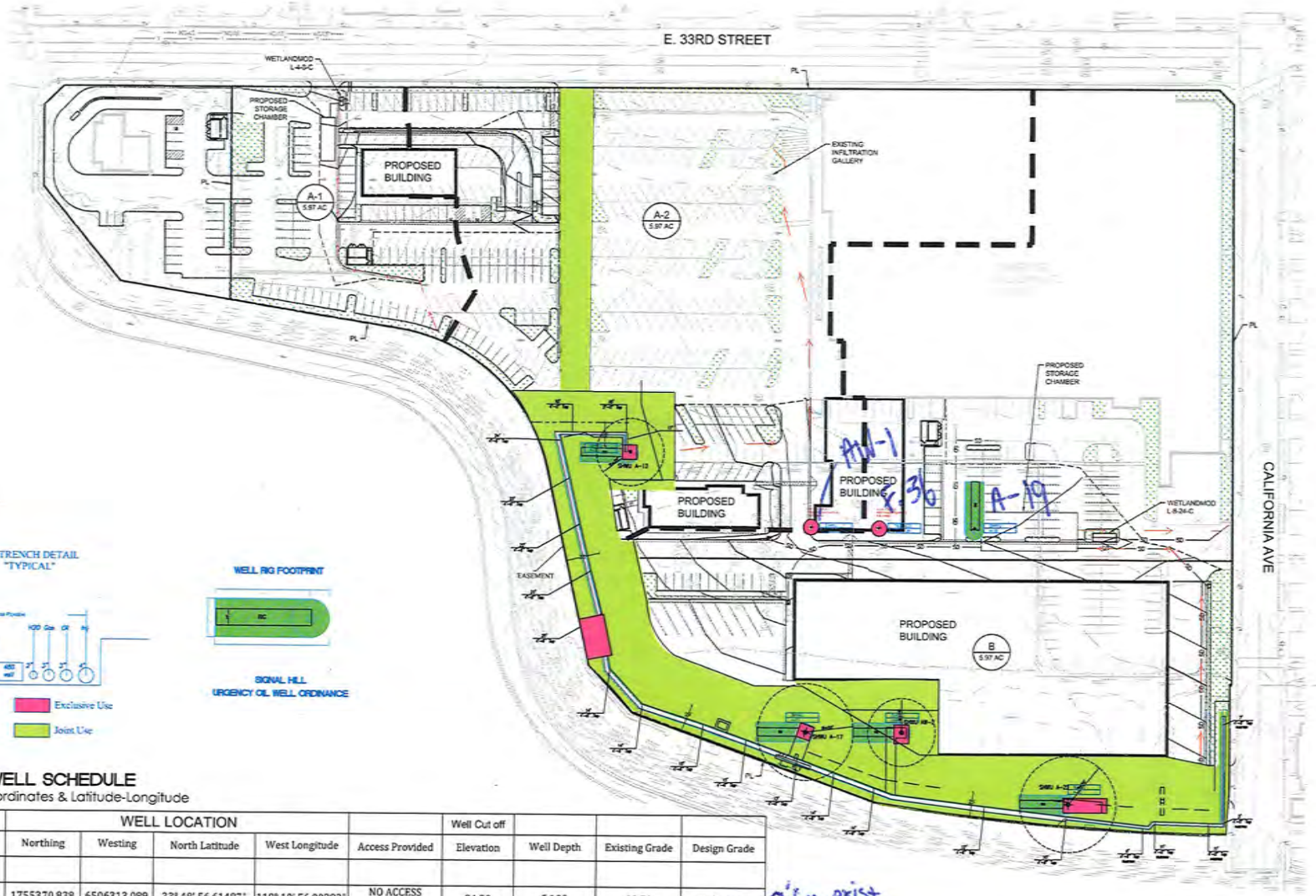
0 200 feet

Base map: Google Earth Pro, 2019

Figure 2: Site Map
950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC

Final Elevation Plan



SIGNAL FIELDS NORTH WELL SCHEDULE

California Zone 5 NAD83 Grid Coordinates & Latitude-Longitude

			WELL LOCATION					Well Cut off			
Operator	Well Name	API No.	Northing	Westing	North Latitude	West Longitude	Access Provided	Elevation	Well Depth	Existing Grade	Design Grade
Abandoned Wells											
SHWU	AW-1	037-00338	1755370.838	6506313.089	33° 48' 56.61487"	118° 10' 56.00282"	NO ACCESS PROVIDED	84.30	5,100	93.70	Unknown
Texaco	Field 36	037-00410	1755370.514	6506383.495	33° 48' 56.61292"	118° 10' 55.16842"	NO ACCESS PROVIDED	79.72	5,160	93.00	Unknown
SHWU	A-19	037-11552	1755370.518	6506483.469	33° 48' 56.61475"	118° 10' 53.98362"	ACCESS PROVIDED	88.31	4,380	93.41	Unknown
Operating Wells											
SHWU	A-12	037-11547	1755450.550	6506126.990	33° 48' 57.40"	118° 10' 58.21"	ACCESS PROVIDED				
SHWU	AW-2	037-11555	1755159.900	6506408.300	33° 48' 54.53"	118° 10' 54.87"	ACCESS PROVIDED				
SHWU	A-17	037-11557	1755161.090	6506311.260	33° 48' 54.54"	118° 10' 56.02"	ACCESS PROVIDED				
SHWU	A-22	037-11548	1755087.780	6506584.520	33° 48' 53.79"	118° 10' 52.78"	ACCESS PROVIDED				

9' from exist
14' from exist
5' from exist

LEGEND
DMA BOUNDARY
FLOW PATH LENGTH

SCALE: 1" = 50'

ADJ. ALL to 79.00 T/O/Well

WARE MALCOMB
CIVIL ENGINEERING & SURVEYING
990 south broadway
suite 230
denver, co 80209
p 303.561.3333
waremalcomb.com

No. 72588 CIVIL STATE OF CALIFORNIA
Jan 10, 2020
FOR AND ON BEHALF OF WARE MALCOMB

VENTURE POINT

PRELIMINARY LID PLAN

NO	DATE	REMARKS

JOB NO.:	IRV16-0211
PA / PM:	BS
DRAWN BY:	JP
DATE:	12/18/2019
PLOT DATE:	

SHEET LID-1
Sheet 7 of 8

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY AND COPYRIGHT OF WARE MALCOMB AND SHALL NOT BE USED ON ANY OTHER WORK EXCEPT BY AGREEMENT WITH WARE MALCOMB. VERIFIED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED ON THE JOB SITE. ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF WARE MALCOMB PRIOR TO THE COMMENCEMENT OF ANY

CalGEM Oil Well Files
API 037-11549
“Field” 24

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF WELL PLUGGING AND ABANDONMENT

Cypress, California
May 4, 2007

Target Dept. Stores
c/o M.E. Wright
16531 Bolsa Chica St. #301
Huntington Beach, CA 92649

Your report of the plugging and **reabandonment** of well **Chevron U.S.A. Inc./"Field" 24**, A.P.I. No. **037-11549**, Section **19**, T. **4**S, R. **12**W, S.B. B & M., **Long Beach** Field, **Los Angeles** County, dated **02-21-07**, received **04-16-07**, has been examined in conjunction with operations witnessed and records filed in this office.

We have determined that all of the requirements of this Division have been fulfilled relative to plugging and **reabandonment** of the well, removal of well equipment and junk, and the filing of well records.

NOTE:

1. Surface plugging completed on **03-30-07**.
2. Surface inspection made and approved on **05-02-07**.

Hal Bopp
State Oil and Gas Supervisor

By: _____
For: R. K. Baker, *Deputy Supervisor*

INDIVIDUAL BOND

cc: Update
Los Angeles County Assessor
Los Angeles County Fire Prevention Bureau
Long Beach Department of Building & Planning
Department of Oil Properties
Chevron U.S.A. Inc.

KMC:dw

DIVIS OF OIL, GAS, AND GEOTHERMAL RE IRCES

CHECK LIST – RECORDS RECEIVED AND WELL STATUS

Company:	**Target Dept. Stores**	Well: **Chevron U.S.A. Inc./"Fields" 24**
API#:	**037-11549**	Sec. **19**, T. **4S**, R.**12W**. S. B. B. & M.
County:	**Los Angeles**	Field: **Long Beach**

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
History (Form OG103)	**4/18/07**
Core Record (Form OG101)	
Directional Survey	
Sidewall Samples	
Date final records received.	
Electric Logs:	
Other:	

STATUS			
Producing	☐	Drilling	☐
Abandoned	☐	Idle	☐
Reabandoned	☐	Other	☐

WELL TYPE			
Oil	☐	Waterflood	☐
Gas	☐	Water Disposal	☐
Water Source	☐	Cyclic Steam	☐
Observation	☐	Steam Flood	☐
Exploratory	☐	Fire Flood	☐
Dry Hole	☐	Other	☐

EFFECTIVE DATE:

REMARKS:

	ENGINEERS CHECK LIST
☐	Summary, History & Core Record (Dupl.)
☐	Electric Log
☐	Operator's Name
☐	Signature
☐	Well Designation
☐	Location
☐	Elevation
☐	Notices
☐	"T" Reports
☐	Casing Record
☐	Plugs
☐	Directional Survey
☐	Production/Injection (FAP Codes:)
☐	E Well on Prod., enter EDP
☐	Surface Inspection Required
☐	Surface inspection Waived (Island)
☐	Well site restoration deferred (common cellar)
☐	Final Letter Required AB: ☐ REAB: ☐
☐	Other:

CLERICAL CHECK LIST
Location change
Elevation change
Form OGD121
Form OGD150b (Release of Bond)
Duplicate logs to archives
Notice of Records Due
EDP
District Date Base
Final Letter (OG159)
Update Center
FIELD CHECK LIST
Date Surface Inspection Completed:
Other:

RECORDS NOT APPROVED	RECORDS APPROVED
(Reason:)	*(Signature)*
	RELEASE BOND
	Date Eligible
	(Use date last needed records received.)
	MAP AND MAP BOOK

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

Operator Target Dept. Stores. Field LONG BEACH County LOS ANGELES

Well Target-Chevron-Texaco "FIELDS" 24 Sec. 19 T. 4S R. 12 S.B. B.&M.

A.P.I. No. 037-11549 Name M. E. WRIGHT Title CONSULTANT
(Person submitting report) (President, Secretary, or Agent)

Date 2-21-07
(Month, day, year)

Signature M. E. Wright

Address 3350 - 6th St, CC 3425, Minneapolis, MN 55402 Telephone Number 612-204-0214

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment, with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, and initial production data.

Date 2007	
3-21	Hauled in and spotted mud pump, pipe trailer, drilling mat and BOPE on location. Moved in and spotted rig. RU mast. Sank marsh anchors and put out guy lines. Installed, nippled up and function tested BOPE. Set up working platform. Secured rig and well.
3-22	Drove to location. Serviced rig and equipment. RU and filled mud pump with mud. RU power swivel. Picked up one 3-1/2" drill collar and made up 4-3/4" bit on bottom. Started drilling on cement at surface. Unable to get bit past 5-1/2" csg stub at surface. Replaced 4-3/4" bit with 4-3/8" bit and continued trying to drill cmt, still couldn't get bit through 5-1/2" csg stub. Pulled bit and removed BOPE. Found lip on csg stub to be rolled over, restricting inside diameter of stub. Secured rig and well.
3-23	Drove to location. Serviced rig and equipment. Removed work floor and BOPE. Used chisels to chip out concrete from inside 5-1/2" csg stub down to about 1'. Used cutting torch to remove rolled over lip from top of csg stub. Re-installed BOPE and set up work floor. Picked up one 3-1/2" drill collar, made up 4-5/8" bit. Hooked up power swivel, mud pump and circulating equipment. Drilled out cmt plug from 0' to 50', cleaned out fill from 50' to 70'±. Continued running in hole with bit and two 3-1/2" drill collars, picking up 97 joints 2-7/8" tbg from trailer. Broke circulation with bit at 3060'. Circulated hole clean. Secured rig and well.
3-26	Drove to location. Serviced rig and equipment. Continued running in hole with 4-5/8" bit and two 3-1/2" drill collars, after hauling to location and picking up 23 joints 2-7/8" tbg, tagged TOC plug at 3662'. Hooked up mud pump. Broke circulation and circulated hole clean at 3662'. POOH. Laying down 117 joints 2-7/8" tbg, two 3-1/2" drill collars and 4-5/8" bit. Picked up and ran in hole with 117 joints 2-7/8" tbg with saw toothed collar on bottom. Secured rig and well.
3-27	Drove to location. Serviced rig and equipment. Continued running in hole with 2-7/8" saw tooth collar and tagged TOC plug at 3662'. RU Ausburn Cementers. Ausburn mixed, pumped and displaced 11 sx (13 cu. ft.) class "G" neat cement with 2% CaCl2. Pulled tubing up to 3300'± with calculated TOC at 3562'±. Cement in place at 9:12 AM. Waited on cement until 1:30 PM. Checked cement sample and found cement still too soft to tag. DOGGR A. B. Gorashi inspected BOPE Class 2. DOGGR A. B. Gorashi witnessed bottom plug, 13 cu. ft. Est. TOC at 3562'. Secured rig and well.

REC'D APR 18 2007

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

3-28 Drove to location. Serviced rig and equipment. Ran in with 2-7/8" saw toothed collar and tagged TOC plug at 3600'. Pumped 46 bbls, 73# clay base mud to mud hole from 3600' to 1845'. POOH, laying down excess tbg. RU Tiger Wireline Service. Tiger made 1 run and shot eight ½" holes in 5-1/2" csg from 1845' to 1847'. RIH and hung tbg at 1850'. RU Ausburn Cementers. Mixed, pumped and displaced 49 sx "G" neat cmt. Pulled 10 stands, filled hole and shut well in. Squeezed away total of 22 cu. ft. at 600 # max and final shut in pressure. Calc TOC @ 1600'. Witness BFW SQZ @, 56 cu. ft.
DOGGR A. B. Gorashi witnessed cmt tag at 3600'. DOGGR E. Moser witnessed mudding from 3600' to 1845±.

3-29 Drove to location. Serviced rig and equipment. RIH with tbg and tagged TOC plug at 1591'. Hung tbg at 1588' and pumped 22 bbls, 73# clay based P & A mud to mud hole up to 730'. Pulled and LD 28 jnts excess tbg. RU Ausburn Cementers with bottom of tbg at 740'. Ausburn filled hole, shut well in and attempted to pressure test 5-1/2" csg to 600# psi, would not hold pressure. Bleeds off slowly, no low pressure checked. Ausburn mixed, pumped and displaced 16 sx (18 cu. ft) "G" neat cmt with 3% CaCl2, pulled tbg up to 430'. Calc TOC at 605'. CIP at 10:00 AM. Waited on cmt until 2:00 PM. Ran in and tagged at 680'. Hung btm of tbg at 678'. Mixed, pumped and displaced 10 sx "G" neat cmt. Pulled tbg up to 400'. Calc TOC at 596'. CIP at 2:27 PM. Secured rig and well.
DOGGR E. Moser witnessed cmt tag at 1,591, mudding from 1591 to 750, tag TOC @ 680. DOGGR E. Moser witnessed placement of cmt @ 680', est TOC 596.

3-30 Drove to location. Serviced rig and equipment. Ran in with 2-7/8" saw toothed collar and tagged TOC plug at 588' (calc TOC at 596'). Hung tbg at 586' and hooked up mud pump, pumped 20 bbls, 73# clay based P & A mud to fill 5-1/2" csg from 588' to surface. Pulled and LD remainder of tbg. Removed work floor and BOPE. RIH with tbg to 100'. Hooked up Ausburn Cementers. Ausburn mixed and pumped 21 sx "G" neat cmt (24 cu. ft). Pulled and LD tbg. Loaded out tools and equipment. Took down guy lines. Rigged down mast. Cleaned location and moved rig off.
DOGGR A. B. Gorashi witnessed port sleeve plug tag at 588'.
DOGGR A. B. Gorashi witnessed mudding (588' to surface), 14 bbls.

4-3 Drove to location. Backhoe dug down, removed cellar ring. Dug down around well csg. Cut csg 6' below grade. Got ready for gas test. Made location safe.
Gas test approved by DOG.

REC'D APR 18 2007

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST – RECORDS RECEIVED AND WELL STATUS

Company:	**Target Dept. Stores**	Well: **Chevron U.S.A. Inc./"Fields" 24**
API#:	**037-11549**	Sec. **19**, T. **4S**, R.**12W**. S. B. B. & M.
County:	**Los Angeles**	Field: **Long Beach**

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
History (Form OG103)	**4/16/07**
Core Record (Form OG101)	
Directional Survey	
Sidewall Samples	
Date final records received.	
Electric Logs:	
Other:	

STATUS			
Producing	☐	Drilling	☐
Abandoned	☐	Idle	☐
Reabandoned	☒	Other	☐

WELL TYPE			
Oil	☒	Waterflood	☐
Gas	☐	Water Disposal	☐
Water Source	☐	Cyclic Steam	☐
Observation	☐	Steam Flood	☐
Exploratory	☐	Fire Flood	☐
Dry Hole	☐	Other	☐

EFFECTIVE DATE: 3/30/07

REMARKS: Reabd

	ENGINEERS CHECK LIST	CLERICAL CHECK LIST
☒	Summary, History & Core Record (Dupl.)	Location change
☐	Electric Log	Elevation change
☒	Operator's Name	Form OGD121
☒	Signature	Form OGD150b (Release of Bond)
☒	Well Designation	Duplicate logs to archives
☐	Location	Notice of Records Due
☐	Elevation	EDP 5.15.07 um
☒	Notices	District Date Base
☒	"T" Reports	Final Letter (OG159) 5/10/07 JL
☒	Casing Record	Update Center 5.15.07 um
☒	Plugs	
☐	Directional Survey	
☐	Production/Injection (FAP Codes:)	
☐	E Well on Prod., enter EDP	**FIELD CHECK LIST**
☒	Surface Inspection Required	Date Surface Inspection Completed: 5-2-07 GBRL
☐	Surface inspection Waived (Island)	Other:
☐	Well site restoration deferred (common cellar)	
☒	Final Letter Required AB: ☐ REAB: ☒ 5-4-07 DW	
☐	Other:	

RECORDS NOT APPROVED	RECORDS APPROVED Mm 4/07
(Reason:)	*(Signature)*
	RELEASE BOND
	Date Eligible
	(Use date last needed records received.)
	MAP AND MAP BOOK
	N/C

Need surf insp.

OGD2 5/16/01 CYPRESS

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

Operator Target Dept. Stores, Field LONG BEACH County LOS ANGELES
Well Target-Chevron-Texaco "FIELDS" 24 Sec. 19 T. 4S R. 12 S.B. B.&M.
A.P.I. No. 037-11549 Name M. E. WRIGHT Title CONSULTANT
(Person submitting report) (President, Secretary, or Agent)

Date 2-21-07
(Month, day, year)

Signature M. E. Wright

Address 3350 - 6th St, CC 3425, Minneapolis, MN 55402 Telephone Number 612-204-0214

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment, with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, and initial production data.

Date 2007	
3-21	Hauled in and spotted mud pump, pipe trailer, drilling mat and BOPE on location. Moved in and spotted rig. RU mast. Sank marsh anchors and put out guy lines. Installed, nippled up and function tested BOPE. Set up working platform. Secured rig and well.
3-22	Drove to location. Serviced rig and equipment. RU and filled mud pump with mud. RU power swivel. Picked up one 3-1/2" drill collar and made up 4-3/4" bit on bottom. Started drilling on cement at surface. Unable to get bit past 5-1/2" csg stub at surface. Replaced 4-3/4" bit with 4-3/8" bit and continued trying to drill cmt, still couldn't get bit through 5-1/2" csg stub. Pulled bit and removed BOPE. Found lip on csg stub to be rolled over, restricting inside diameter of stub. Secured rig and well.
3-23	Drove to location. Serviced rig and equipment. Removed work floor and BOPE. Used chisels to chip out concrete from inside 5-1/2" csg stub down to about 1'. Used cutting torch to remove rolled over lip from top of csg stub. Re-installed BOPE and set up work floor. Picked up one 3-1/2" drill collar, made up 4-5/8" bit. Hooked up power swivel, mud pump and circulating equipment. Drilled out cmt plug from 0' to 50', cleaned out fill from 50' to 70'±. Continued running in hole with bit and two 3-1/2" drill collars, picking up 97 joints 2-7/8" tbg from trailer. Broke circulation with bit at 3060'. Circulated hole clean. Secured rig and well.
3-26	Drove to location. Serviced rig and equipment. Continued running in hole with 4-5/8" bit and two 3-1/2" drill collars, after hauling to location and picking up 23 joints 2-7/8" tbg, tagged TOC plug at 3662'. Hooked up mud pump. Broke circulation and circulated hole clean at 3662'. POOH. Laying down 117 joints 2-7/8" tbg, two 3-1/2" drill collars and 4-5/8" bit. Picked up and ran in hole with 117 joints 2-7/8" tbg with saw toothed collar on bottom. Secured rig and well.
3-27	Drove to location. Serviced rig and equipment. Continued running in hole with 2-7/8" saw tooth collar and tagged TOC plug at 3662'. RU Ausburn Cementers. Ausburn mixed, pumped and displaced 11 sx (13 cu. ft.) class "G" neat cement with 2% CaCl2. Pulled tubing up to 3300'± with calculated TOC at 3562'±. Cement in place at 9:12 AM. Waited on cement until 1:30 PM. Checked cement sample and found cement still too soft to tag. DOGGR A. B. Gorashi inspected BOPE Class 2. DOGGR A. B. Gorashi witnessed bottom plug, 13 cu. ft. Est. TOC at 3562'. Secured rig and well.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

3-28 Drove to location. Serviced rig and equipment. Ran in with 2-7/8" saw toothed collar and tagged TOC plug at 3600'. Pumped 46 bbls, 73# clay base mud to mud hole from 3600' to 1845'. POOH, laying down excess tbg. RU Tiger Wireline Service. Tiger made 1 run and shot eight ½" holes in 5-1/2" csg from 1845' to 1847'. RIH and hung tbg at 1850'. RU Ausburn Cementers. Mixed, pumped and displaced 49 sx "G" neat cmt. Pulled 10 stands, filled hole and shut well in. Squeezed away total of 22 cu. ft. at 600 # max and final shut in pressure. Calc TOC @ 1600'. Witness BFW SQZ @, 56 cu. ft.
DOGGR A. ~~B. Gorashi witnessed cmt tag~~ E-MOSGR at 3600'. DOGGR E. Moser witnessed mudding from 3600' to 1845±.

3-29 Drove to location. Serviced rig and equipment. RIH with tbg and tagged TOC plug at 1591'. Hung tbg at 1588' and pumped 22 bbls, 73# clay based P & A mud to mud hole up to 730'. Pulled and LD 28 jnts excess tbg. RU Ausburn Cementers with bottom of tbg at 740'. Ausburn filled hole, shut well in and attempted to pressure test 5-1/2" csg to 600# psi, would not hold pressure. Bleeds off slowly, no low pressure checked. Ausburn mixed, pumped and displaced 16 sx (18 cu. ft) "G" neat cmt with 3% CaCl2, pulled tbg up to 430'. Calc TOC at 605'. CIP at 10:00 AM. Waited on cmt until 2:00 PM. Ran in and tagged at 680'. Hung btm of tbg at 678'. Mixed, pumped and displaced 10 sx "G" neat cmt. Pulled tbg up to 400'. Calc TOC at 596'. CIP at 2:27 PM. Secured rig and well.
DOGGR E. Moser witnessed cmt tag at 1,591, mudding from 1591 to 750, tag TOC @ 680. DOGGR E. Moser witnessed placement of cmt @ 680', est TOC 596.

3-30 Drove to location. Serviced rig and equipment. Ran in with 2-7/8" saw toothed collar and tagged TOC plug at 588' (calc TOC at 596'). Hung tbg at 586' and hooked up mud pump, pumped 20 bbls, 73# clay based P & A mud to fill 5-1/2" csg from 588' to surface. Pulled and LD remainder of tbg. Removed work floor and BOPE. RIH with tbg to 100'. Hooked up Ausburn Cementers. Ausburn mixed and pumped 21 sx "G" neat cmt (24 cu. ft). Pulled and LD tbg. Loaded out tools and equipment. Took down guy lines. Rigged down mast. Cleaned location and moved rig off.
DOGGR A. B. Gorashi witnessed port sleeve plug tag at 588'.
DOGGR A. B. Gorashi witnessed mudding (588' to surface), 14 bbls.

4-3 Drove to location. Backhoe dug down, removed cellar ring. Dug down around well csg. Cut csg 6' below grade. Got ready for gas test. Made location safe.
Gas test approved by DOG.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CONSTRUCTION SITE WELL INSPECTION

District Ref. No. _____

Field: Long Beach City/County Long Beach Sec. 19 T. 4S R. 12W S.BB.&M.

Location (major cross streets): Atlantic Ave and 33rd Street

Development representative: Mick Beyer Phone: (310) 505-9787

Describe the exact location of the excavation or well at the building site (from a reference point on a Division Map):

How the location was determined: Measured ☒ Surveyed ☐ Other ☐

Describe: _____

Well designation: "Field" 24 , API No. 03711549

Operator: Target Dept. Stores

SAFETY PRECAUTIONS AND UNSAFE EXCAVATIONS

CAUTION! Oil and gas wells may produce hydrogen sulfide gas, which is highly poisonous and will accumulate and concentrate in low areas such as excavations. Before entering an excavation area, test to ensure that there is sufficient oxygen and that the flammable/toxic gas readings are within safe limits.

INSPECTIONS	1	Initials Date	2	Initials Date	3	Initials Date	4	Initials Date
Excavation size	6'X6' 6' down	4/5/07 AB						
Picture No.								
Picture direction								
Metal detector (Y/N)	N							
Visible casing size(s) (or comment)	103/4" & 51/2"							
Fluid leaks (Y/N)*	N							
Amount (est.)								
Gas leaks (Y/N)*	N							
Amount (est.)								
Gas detector (N/Y)	Y							
Bubble test (Y/N)	Y							

*Leak location(s): N/A

Describe hazardous or damaged well condition(s): N/A

Report finalized by: AB Gorashi A., Division of Oil, Gas & Geothermal Res. Date: 4/5/07

Abdulm

OG190A (12/00/GSR1/1M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

No. T 107-0401

REPORT ON OPERATIONS

Cypress, California
April 18, 2007

Target Dept. Stores
C/O M.E. Wright
16531 Bolsa Chica St. #301
Huntington Beach, CA 92649

Your operations at well **Chevron U.S.A. Inc./"Field" 24,** A.P.I. No. **037-11549**, Sec. **19**, T. **4**S., R. **12**W, S.B. B. & M., **Long Beach** Field, **Los Angeles** County, were witnessed on **04-05-07**. **AB Gorashi**, representative of the supervisor, was present from **0830** to **1000**. There was also present **Mick Beyer**, Supervisor.

Present condition of well: **10 3/4" cem 20'; 5 1/2" cem 5050', cp 727' & 1845', perf 4242' WSO, perf 4255'-4300', @ int 4470'-4825'. Junk below 4100'. TD 5050'. Plugged w/cem 3892'-3864', 3730'-3600', 1845'-1591', 740'-588' & 100'-6'.**

The operations were performed for the purpose of witnessing the plugging operations in the process of reabandonment.

DECISION: APPROVED.

NOTE: The required Class II2M blowout prevention equipment was inspected and approved on **03-27-07**.

DEFICIENCIES: None.

CONTRACTOR: Allenco

Witness Inspection Approved 5-2-07 GB

KMC:dw

cc: Update
Chevron U.S.A. Inc.

Hal Bopp
State Oil and Gas Supervisor

By: _____
For: R. K. Baker, *Deputy Supervisor*

T107-0401

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CEMENTING/PLUGGING MEMO

Operator TARGET DEPT. STORES Well No. CHEVRON U.S.A. INC. / "FIELD" 24
API No. 037-11549 Sec. 19 T. 4S R. 12W , B&M
Field LONG BEACH , County LOS ANGELES. On 4/05/07 ,
Mr. / Ms. AB GORASHI A , representative of the supervisor, was present from 830 to 1000 .

There were also present MICK BEYER, SUPERVISOR

Casing record of well: 10 3/4" CEM 20'; 5-1/2" CEM 5050', CP 727' & 1845', perfs 4242' WSO, perf 4255'-4300', & int 4470'-4825'. Junk below 4100'. TD 5050. plugged w/CEM 3892'-3864', 3730'-3600', 1845'-1591', 746'-588', 100'-6'.

The operations were performed for the purpose of: REABANDON

☒ The plugging/cementing operations as witnessed and reported are approved.

☐ The location and hardness of the cement plug @ _____ ' are approved.

Hole size: _____ " fr. _____ ' to _____ ', _____ " to _____ ' & _____ " to _____ '

Casing				Cemented			Top of Fill		Squeezed Away	Final Pressure	Perforations
Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			
5 1/2	15.5#	0	5050	3/28/07	TD 1845	56 cf	1745	1614'	24 cf	400 psi	CP 1847-1845

Casing/tubing recovered: _____ " Shot/cut at _____ ', _____ ', _____ ', Pulled fr. _____ ';
_____ " Shot/cut at _____ ', _____ ', _____ ', Pulled fr. _____ '.

Junk (in hole):

Hole fluid (bailed to) at _____ '. Witnessed by _____

Mudding	Date	bbls	Displaced	Poured	Fill	Engineer
73#	3/28/07	46 BBLS	3600'		1845'	E-MOSER
73#	3/29/07	22 BBLS	1591'		750	E. MOSER
73#	3/30/07	14 BBLS	588'		SURFACE	AB. GORASHI

NOTE (K) #2M, 3/27/07 C/O DEPTH 3662'

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engineer	Depth	Wt/Sample	Date & Time	Engineer
3/27/07	13 cf	TD 3662	900	AB GORASHI	3600' 3562'	ATW	3/28/07 800	E. MOSER
3/28/07	56 cf	TD 1845	1400	AB GORASHI	1591' 1614'	ATW	3/29/07	E MOSER
3/29/07	18 cf	TD 740'	1400	E. MOSER	588' 596'	ATW	3/30/07 730	AB GORASHI
3/30/07	24 cf	TD 100'		RPT	6' 5'	VISUAL	4/5/07	AB GORASHI

API No. 037-11549 D...ON OF OIL, GAS, AND GEOTHERMAL RESOURCES T_____

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator TARGET DEPT. STORES Well CHEVRON U-S-A. INC / FIG 24 Sec. 19 T. 4S R. 12W

Field LONG BEACH County L-A Spud Date _____

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	3/27/07	AB GORASHI A.	(800 to 1100)		
2nd			(to)		

Contractor ALLENCO Rig# 5 Contractor's Rep. & Title CECIL GLENN, RIG SUPERVISOR

Casing record of well: MEMO

OPERATION: Testing (inspecting) the blowout prevention equipment and installation. Critical well? Y____ N____

DECISION: The blowout prevention equipment and its installation on the 10 3/4" casing are approved.

Proposed Well Opns: _____. MACP: _____ psi

Hole size: _____" fr. _____' to _____', _____" to _____' & _____" to _____'

REQUIRED BOPE CLASS: II 2M

CASING RECORD OF BOPE ANCHOR STRING

Size	Weight(s)	Grade(s)	Shoe at	CP at	Cement Details	Top of Cement: Casing	Top of Cement: Annulus
CD							

BOP STACK

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul
RD	27/8"	TOWNSON		9"	3000	
RD	CSO	TOWNSON		9"	3000	

TEST DATA

Gal. to Close	Recovery Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
0-68						
0-68						

TOTAL: 1.36

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure 1500 psi

Total Rated Pump Output _____ gpm Fluid Level OK

Distance From Well Bore _____ ft.

	Accum. Manufacturer	Capacity	Precharge
1	HAND PUMP	10 gal.	— psi
2		gal.	psi

	CONTROL STATIONS	Elec.	Hyd.	Pneu.
	Manifold at accumulator unit			
	Remote at Driller's station			
	Other: HAND PUMP		X	

	EMERG. BACKUP SYSTEM			Press.	Wkg. Fluid
X	N_2 Cylinders	1	L=51"	2600	5-5 gal.
	Other:	2	L= "		gal.
		3	L= "		gal.
		4	L= "		gal.
		5	L= "		gal.
		6	L= "		gal.
			TOTAL:		5-5 gal.

AUXILIARY EQUIPMENT

		No.	Size (in.)	Rated Press.	Connections: Weld	Connections: Flange	Connections: Thread	Test Press.
	Fill-up Line							
X	Kill Line		2"	3000				
X	Control Valve(s)	3		3000				
	Check Valve(s)							
	Aux. Pump Connect.							
	Choke Line							
	Control Valve(s)							
	Pressure Gauge							
	Adjustable Choke(s)							
	Bleed Line							
	Upper Kelly Cock							
	Lower Kelly Cock							
	Standpipe Valve							
	Standpipe Press. Gauge							
X	Pipe Safety Valve		2 7/8	3000				
	Internal Preventer							

	HOLE FLUID MONITORING EQUIPMENT	Alarm Type: Audible	Alarm Type: Visual	Class
	Calibrated Mud Pit			A
	Pit Level Indicator			B
	Pump Stroke Counter			B
	Pit Level Recorder			B
	Flow Sensor			C
	Mud Totalizer			C
	Calibrated Trip Tank			C
	Other:			C

Hole Fluid Type	Weight	Storage Pits (Type & Size)
WATER + MUD	9-24/GAL	100 BBLS

REMARKS AND DEFICIENCIES:

CONTRACTOR: ALLENCO

UNCORRECTABLE DEFICIENCIES:

DEFICIENCIES NOTED AND TO BE CORRECTED:

DEFICIENCIES NOTED AND CORRECTED:



RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

No. P 107-0114

412 (Field Code)

06 (Area Code)

-- (New Pool Code)

-- (Old Pool Code)

PERMIT TO CONDUCT WELL OPERATIONS

Target Dept. Stores
C/O M.E. Wright
16531 Bolsa Chica St. #301
Huntington Beach CA 92649

Cypress, California
February 22, 2007

Your proposal to **reabandon** well **Chevron U.S.A. Inc./"Field" 24**, A.P.I. No. **037-11549**, Section **19**, T. **4S**, R. **12W**, **S.B.** B. & M., **Long Beach** Field, **Old** area, **--** pool, **Los Angeles** County, dated **02/08/07**, received **02/08/07** has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment with hydraulic controls, equivalent to this Division's Class **II2M** requirements, or better, shall be installed and maintained in operating condition.
2. Well killing fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
3. At least **360'** of surface casing shall be cemented in the well, if the surface casing is not competent.
4. The well shall be plugged with cement from **730'** to **630'**.
5. All portions of the well not plugged with cement shall be filled with clay base mud having a minimum density of 72 lb/cu ft and a minimum gel-shear strength of 25 lb/100 sq ft.
6. This Division shall be consulted and a Supplementary Notice may be required before making any changes in the proposed program.
7. **THIS DIVISION SHALL BE NOTIFIED TO:**
   a. Inspect the installed blowout prevention equipment prior to commencing downhole operations.
   b. Witness the clean-out depth.
   c. Witness the mudding of the hole.
   d. Witness the placing, location and hardness of the cement plug from **3662'** to **3605'**.
   e. Witness the squeeze cementing of the **5 1/2"** casing through the **perforations** at **1845'**.
   f. Witness the placing, location and hardness of the cement plug from **1845'** to **1745'**, inside and outside the **5 1/2"** casing.
   g. Witness the placing, location and hardness of the cement plug from **730'** to **630'**.
   h. Witness the placing, location and hardness of the cement plug from **100'** to **5'**, inside and outside **all** casings.
   i. Inspect and approve the cleanup of the well site within 60 days after placement of the surface plug.

NOTE:

1. A crew drill may be required at the time of the blowout prevention equipment inspection.
2. This Division does not pass upon your right to enter the property, but merely approves the proposal as conforming to our requirements.
3. The proposed surface plug shall not contain rock or gravel.
4. The base of the freshwater sands is at **1845'±**.

KMC:kc
cc: Update
Chevron U.S.A. Inc.
INDIVIDUAL BOND

Engineer: Kenneth Carlson

Phone: 714/816-6847

Hal Bopp
State Oil and Gas Supervisor

By _____
For R. K. Baker, *Deputy Supervisor*

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended. OG 111

09/KC

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Notice of ~~Intention to~~ RE Abandon Well

R# 1070114

FOR DIVISION USE ONLY			
CARDS	BOND	FORMS OGD114	FORMS OGD121
		2/10/07 KG	2/9/07 KG

DIVISION OF OIL AND GAS

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to ~~abandon~~ RE abandon well TARGET-CHEVRON-TEXACO Chevron U.S.A. Inc. FIELDS "N" 24, API No. 037-11549

Sec. 19, T. 4S, R. 12W, SB B. & M., Long Beach Field, Los Angeles County.

commencing work on FEB 21, ~~19~~ 2007

The present condition of the well is:

1. Total depth 5050 (Plug 5045)
2. Complete casing record, including plugs and perforations (present hole) See Attached Diagram
3. Last produced Nov '46 3 — 3 (Date) (Oil, B/D) (Gas, Mcf/D) (Water, B/D)

or

4. Last injected (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure)

Additional data for dry hole (show depths):

5. Oil or gas shows
6. Stratigraphic markers
7. Formation and age at total depth
8. Base of fresh water sands 1750 (Dog, Map)

9. Is this a critical well according to the definition on the reverse side of this form? ☐ Yes ☒ No

The proposed work is as follows:

See attached program

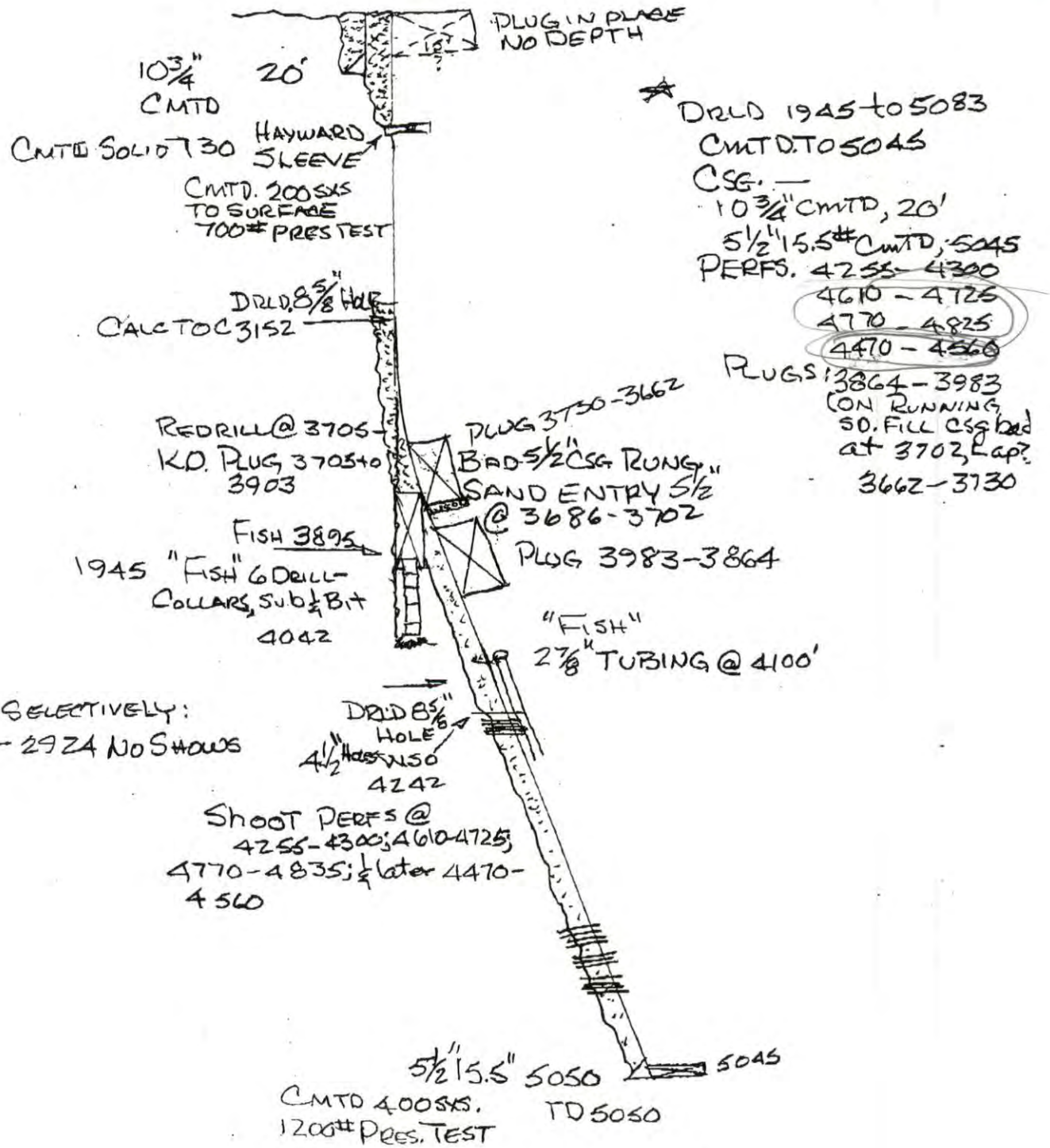
It is understood that if changes in this plan become necessary, we are to notify you immediately.

Address 33506th St. CC.3425 (Street)
Minneapolis MN 55402 (City) (State) (Zip)
Telephone Number (612) 304-0214 (Area Code) (Number)

TARGET DEPT STORES (Name of Operator)
By B. Ullery - M.E. WRIGHT (C.O. Below) (Print Name)
M.E. Wright (714) 3779234 2/08/07 (Signature) (Date)
C.O. 16531 Bolsa Chica St #301
HUNTINGTON BEACH CA 92649

OG108 (2/84/DWRR/5M)

TARGET - CHEVRON TEXACO
WELL DIAGRAM FIELDS 24
API # 037-11549



MEW 2-05-07

ABANDONMENT PROGRAM
CHEVRON-TEXACO "FIELDS" 24

API 037-11549 LONG BEACH FIELD -Sec 19 - T4S - R12W -

PROGRAM

1. MIRU - Install BOP equipment on the 5 1/2' csg. 20' long 10 3/4" is too short to support equipment.
2. Fill hole with water.
3. Drill out and clean out surface plug to 3662 raise plug too 3605. Can't drill out below, 5 1/2" casing bad 3686 and has running sand entry.
4. Shoot eight 1/2" holes at 1845, base of fresh water.
5. Squeeze cement 1845 to 1745. Tag TOC.
6. Fill hole with spec mud to 100 feet.
7. Cement surface plug 100 feet to surface. 5 1/2" is cemented from 730 to surface.
8. Gas test and weld on a ID plate.

MEW 2/08/07

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF PROPERTY AND WELL TRANSFER

Field or County	District
Imperial Co., Wilmington, L.A. Co., W. Coyote, Montebello, Beverly Hills, Seal Beach, El Segundo, Inglewood, Rosecrans, Venice Beach, Las Cienegas, S. Salt Lake, Dominguez, Hyperion, Lawndale, Leffingwell, Long Beach, Los Angeles Downtown, Potrero, Salt Lake, Santa Fe Springs, Cheviot Hills, Sherman, Torrance, Whittier, Howard Townsite, Huntington Beach, Yorba Linda, Orange Co., Richfield, Kraemer, W. Newport, Sunset Beach, Belmont Offshore	District 1 (Cypress, California)
Former owner: ChevronTexaco Exploration & Production Co. C5680	Date: 9/23/2005

Well Name	API Number	Section Township Range
See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA	See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA	See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA

Description of the land upon which the well (s) is (are) located.
Various

Date of transfer	New owner		Type of organization
7/11/2005		Chevron U.S.A. Inc. **C5640**	Corp.
	Address:	9525 Camino Media Bakersfield, CA 93311	Telephone: 661/654-7065

Reported by	OG30A received in Sacramento 9/2005
Confirmed by	Same as above
New operator new status: **PA**	Designation of Agent: Greg Leyendecker, Agent
Old operator new status: **AB**	Remarks: For further information see Operator file (C5640) Chevron U.S.A. Inc.

OPERATOR STATUS ABBREVIATIONS
PA – Producing Active
NPA- No potential, Active
PI- Potential Inactive
NPI-No potential, Inactive
AB-Abandoned or No More Wells

cc: Update; Envir Desk (2); File
Conservation Committee
Harold W. Bertholf, Inc.
L.A. & Orange County Assessors
WellStats – Cypress Dist. 1
WellStats – Sacrament HQS

Deputy Supervisor: R. K. Baker

Signature: Richard K. Baker, District Deputy

FORM AND RECORD CHECK LIST

Form or Record	Initials	Date	Form or Record	Initials	Date
Form OGD121	—	—	Map and Book		
Operator Card	CC	9-23-05	Notice cancellations	—	—
Well Records	CC	9/26/05	Bond Status BB	CC	9-23-05
Log Records	CC	9/26/05	EDP HQS	J.C	7-11-05
Production Reports	—	—	Data Base Pdoy D1	GM	9-26-05

WELL TRANSFER NOTICE

Effective August 22, 2002

Chevron USA Inc.
Texaco California Inc.
And
Texaco Exploration and Production, Inc.

Transferred ALL THEIR WELLS
To

ChevronTexaco Exploration & Production Company

See OGD156 dated October 18, 2002 in Operator File for ChevronTexaco Exploration & Production Company (C5680) for details

1015 West Olympic Blvd.,
Los Angeles 15, California,
May 27, 1947.

Mr. W. H. Loomis,
P. O. Box 320,
Long Beach 1, California.

Agent for The Texas Company.

Dear Sir:

Your report of abandonment of well No. "Field" 24, Sec. 19, T. 4 S., R. 12 W., S. B. B. & M., Long Beach oil field, Los Angeles County, dated May 20, 1947, and submitted to this division on our form No. 103, has been examined in conjunction with records filed in this office.

A review of the reports and records shows that the requirements of this division, which are based on all information filed with it, have been fulfilled.

Yours truly,

R. D. BUSH,
State Oil and Gas Supervisor,

By C H Wasser
Deputy Supervisor.

my
cc - Mr. R. D. Bush
- Long Beach
- Mr. W. A. Clark

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
20	5-28-47 P.W.B.		Blanket		✓

FORM 103. 36346 7-44 37,500
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAY 22 1947
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR THE TEXAS COMPANY FIELD Signal Hill

Well No. Field #24, Sec. 19, T. 4-S, R. 12-W, S.B. B. & M.

Signed

Date May 20, 1947 Title Division Engineer
(President, Secretary or Agent)

Use this form in reporting all important operations at the well, together with the dates thereof, in the order of their performance. Such operations include drilling, redrilling, deepening, plugging, or altering casing as by perforating, shooting, or pulling. Include in your report size of hole drilled, redrilled, or deepened; size, weight and length of casing landed, cemented, or removed, amount and location of perforations; number of sacks of cement used in cementing or plugging operations, number of feet of cement drilled out of casing, location of top and bottom of cement plugs. If the well was dynamited, give date, dimensions and weight of all shots. If tests were made give interval tested and results of tests, such as, amount and nature of fluids recovered.

Date	
1946	
10/30	Well sanded up. Tubing stuck. Bottom of tubing 4823'.
10/31	Could not work tubing loose.
11/ 1	Fishing rods with left hand rods. 73 rods out.
11/ 2	" " " " " " . 137 " "
11/ 3	" " " " " " . 142 " "
11/ 4	" " " " " " . 156 " "
11/ 5	Left one rod and pump in hole.
11/ 6	Cut tubing at 4763'. The bottom piece dropped, but could not pull tubing loose. McCullough Magna-Tector showed tubing stuck at 3800'.
11/ 8	Re-ran Magna-Tector. Found tubing stuck at 4025'. Relanded tubing. Ran pump and rods with an Ardmore anchor set at 4325'.
11/ 9	Pumped 8 barrels and pumped off.
11/10	Not producing.
	Idle.
11/16	Fished parted rods and lowered tubing to 4435'.
11/17	Pumped 9 barrels.
11/18	" 7 "
11/19	" 5 "
11/20	" 2 "
11/21	" 10 " . Off 10 hours, lowered pump to 4600'.
11/22	" 10 "
11/23	" 5 "
11/24	Pump sanded up. Could not work pump loose.
11/25	Recovered 112 rods with left hand rods.
11/26	Recovered 30 rods.
11/27	Recovered 4 rods for a total of 146. Left 4, 3/4" rods, pump and Ardmore anchor at 4600'.
	Idle.
12/16	Checked fluid level in tubing at 870'.
12/17	Bailed mud from 4418' to 4462'. Rod box up at 4462'.
12/18	Bailed mud.
12/23	Recovered rod box with left hand rods.
12/24	Could not recover rods.
12/26	Cut tubing at 4200'. Not loose.
12/27	Cut tubing at 4100'.
12/30	Bailed sand inside of tubing from 4002' to 4091'.

FORM 103. 54705 2-46 50M
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAY 22 1947
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR THE TEXAS COMPANY FIELD Signal Hill

Well No. Field #24, Sec. 19, T. 4-S, R. 12-W, S.B. B. & M.

Signed W. A. Clark

Date May 20, 1947 Title Division Engineer
(President, Secretary or Agent)

Use this form in reporting all important operations at the well, together with the dates thereof, in the order of their performance. Such operations include drilling, redrilling, deepening, plugging, or altering casing as by perforating, shooting, or pulling. Include in your report size of hole drilled, redrilled, or deepened; size, weight and length of casing landed, cemented, or removed, amount and location of perforations; number of sacks of cement used in cementing or plugging operations, number of feet of cement drilled out of casing, location of top and bottom of cement plugs. If the well was dynamited, give date, dimensions and weight of all shots. If tests were made give interval tested and results of tests, such as, amount and nature of fluids recovered.

Date	
1946	
12/31	Cleaned out inside of tubing at 4040'. After bailing for a time, the tubing could be pulled a short distance. Recovered 5 joints of tubing.
1947	
1/ 2	Cleaned out inside of tubing from 3715' to 3825'. Pulled out 15' of tubing.
1/ 3	Cleaned out inside of tubing and recovered a total of 4100' of tubing.
1/ 4	Checked fluid at 1425', top mud 3670' and top of sand 3736'. Cleaned out to 3820'.
1/ 6	Cleaned out to 3855'. Recovered mud and sand at 3815' and coarse sand at 3855'.
1/ 7	Cleaned out to 3870'. Coarse gravel at 3870'.
1/ 8	Cleaned out to 3878'.
	Idle.
4/30	Found fluid at 1180' and sand at 3690'. Cleaned out to 3715'.
5/ 1	Cleaned out to 3855'.
5/ 2	Cleaned out to 3885'.
5/ 3	Cleaned out to 3893'. Dumped 3-1/2 sacks of cement at 3893'. D.O.G. representative witnessed and approved location and hardness of plug at 3864'.
5/ 5	Dumped 9 sacks cement in stages starting at 3730'.
5/ 6	Dumped 1-1/2 sacks cement at 3674'. D.O.G. representative witnessed and approved location and hardness of plug at 3662'. Set wood plug at 32' and dumped 3 sacks cement. Top of plug 6 feet below surface. Abandoned well.

RFC:tg

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

DIVISION OF OIL AND GAS
RECEIVED
MAY 17 1947
LOS ANGELES, CALIFORNIA

No. T_____

_____ Calif. _____ 19____

Mr._____

_____ Calif.

Agent for The Texas Company

DEAR SIR:

Operations at your well No. "Field" 29 Sec. 19, T. 4S, R. 12W, S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by A. Pfeil - Inspector, representative of the supervisor, on May 13, 1947. There was also present _____

Casing Record	Junk
Nema.	

The operations were performed for the purpose of _____

The inspector arrived at the well at _____ and Mr. _____ reported:

1. The 5½" casing is plugged with cement at the surface.
2. There is no evidence of Oil or gas escaping at the surface.

R. D. BUSH
State Oil and Gas Supervisor

By _____ Deputy

43395 3-45 15M
STATE PRINTING OFFICE

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-46720

Los Angeles 15, Calif. May 13, 1947

Mr. W. H. Loomis
Long Beach 1, Calif.
Agent for THE TEXAS COMPANY

171

DEAR SIR:

Operations at your well No. "Field" 24 Sec. 19, T. 4 S., R. 12W, S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by John M. Carls, Inspector, representative of the supervisor, on May 6, 1947. There was also present J. R. Flum, Driller; C. C. Jackson, Helper.

Casing Record 10-3/4" cem. 20'; 5-1/2" cem. 5050', c.p. 730', four test holes at 4242', W. S. O., perf. 4835'-4770', 4725'-4610', 4300'-4255', bad at 3686'-3702'. Junk (in hole) 2-1/2" tubing, 4100'-4763'. T. D. (present hole) 5047', plugged with cement 3893'-3864' and 3730'-3662'.

Junk (1st hole) drill collar and bit, 3792'-3939'; T. D. 3939', plugged with cement 3939'-3792'.

The operations were performed for the purpose of testing the location and hardness of a cement plug placed from 3730' to 3662' in the process of abandonment.

The inspector arrived at the well at 10:45 a.m. and Mr. Flum reported:
On May 5, 1947, 10-1/2 sacks of cement was dumped in the hole on a wooden plug at 3730'.

THE INSPECTOR NOTED THAT the bailer could not be spudded below 3662' and brought up a sample of set cement.

The test was completed at 11:15 a.m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 3663' ARE APPROVED.

JMC:OH

cc- Company
Long Beach

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Musser Deputy

59352 6-46 15M
STATE PRINTING OFFICE

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T1-46719

Los Angeles 15, Calif. May 13, 1947

Mr. W. H. Loomis
Long Beach 1, Calif.
Agent for THE TEXAS COMPANY

DEAR SIR:

Operations at your well No. "Field" 24 Sec. 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by John M. Carls, Inspector, representative of the supervisor, on May 5, 1947. There was also present J. R. Flum, Driller; C. C. Jackson, Helper.

Casing Record 10-3/4" cem. 20'; 5-1/2" cem. 5050', c.p. 730', four test holes at 4242', W. S. O., perf. 4835'-4770', 4725'-4610', 4300'-4255', bad 3686'-3702'; Junk (in hole) 2-1/2" tubing 4100'-4763'; T. D. (present hole) 5047', plugged with cement 3893'-3864'.

Junk(1st hole) drill collar and bit, 3792'-3939'; T. D. 3939', plugged with cement 3939'-3792'.

The operations were performed for the purpose of testing the location and hardness of a cement plug placed from 3893' to 3864' in the process of abandonment.

The inspector arrived at the well at 2:30 p.m. and Mr. Flum reported:

1. The hole could not be cleaned out below 3893'.
2. On May 5, 1947, 3-1/2 sacks of cement was dumped in the hole at 3893'.

THE INSPECTOR NOTED THAT the bailer could not be spudded below 3864' and brought up a sample of set cement.

The test was completed at 3:15 p.m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 3864' ARE APPROVED.

JMC:OH

cc- Company
Long Beach

B/W

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Meesen Deputy

59352 6-46 15M
STATE PRINTING OFFICE

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-43026

Los Angeles 14, Calif. February 7, 1947

Mr. W. H. Loomis

Long Beach 1, Calif.

Agent for THE TEXAS COMPANY

Dear Sir:

Your proposal to abandon Well No. "Field" 24,

Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, Los Angeles County,

dated Jan. 30, 1947, received Feb. 5, 1947, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS IN ADDITION TO, OR AT VARIANCE WITH, THOSE SHOWN IN THE NOTICE:

Junk (1st hole) drill collar and bit 3792'-3939', T. D. 3939', plugged with cement 3939'-3792'.

THE NOTICE STATES:

"The present condition of the well is as follows:

1. Complete casing record.

5-1/2", 15.5# - 5050' cmt'd. w/400 sacks, CTP at 730' w/200 sacks. W. S. O. on 4, 1/2" holes at 4242'. Gun perforated 4835'-4770', 4725'-4610', 4300'-4255'. 2-1/2" tubing stuck at 4823', cut at 4763' and bottom piece dropped approximately 30' with tubing still stuck. Cut at 4200'- not loose. Cut and recovered from 4100'. Top sand in 5-1/2" casing found at 3736'. Cleaned out to 3878'; casing bad and sand running in at 3686' to 3702'.

October 1946 Ave. : 27 B/D, 18° gravity oil with 27 B/D water.

November 1946 Ave.: 3 B/D oil, 3 B/D water."

PROPOSAL:

"PROPOSED WORK:

1. Clean out below bad place in 5-1/2" casing at 3686'-3702' by running fluid in hole to hold back sand, if possible.
2. Place 20' cement bridge in solid blank casing below bad place and continue plug up above 3666'.
3. Cap surface and abandon well."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT

1. If possible the hole should be cleaned out to 4100' and a 20' cement plug placed on the stub of the junk tubing.
2. THIS DIVISION SHALL BE NOTIFIED AS FOLLOWS:
   (a) To witness the location and hardness of cement plugs at 4080' and 3666'.
   (b) To inspect the completed surface cap or plug.

Hist. of abnd. 5/22/47 SHR

SHR:OH

cc- Company
Long Beach

R. D. BUSH
State Oil and Gas Supervisor

By H. Mueller Deputy

Blanket bond.

FORM 108. 20296 1-43 5M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
FEB 5 1947
LOS ANGELES, CALIFORNIA

Notice of Intention to Abandon Well

This notice must be given at least five days before work is to begin

Long Beach, Calif. January 30, 1 19 47

DIVISION OF OIL AND GAS

Los Angeles 14, Calif.

In compliance with Sec. 3228, 3229, 3230, 3231 and 3232, Ch. 93, Stat. 1939, notice is hereby given that it is our intention to abandon well No. Field #24

Sec. 19, T. 4-S, R. 12-W, S.B. B. & M. Long Beach Field, Los Angeles County, commencing work on the day of 19.

The present condition of the well is as follows:

1. Complete casing record.

5-1/2", 15.5# - 5050' cmt'd. w/400 sacks, CTP at 730' w/200 sacks. W.S.O. on 4, 1/2" holes at 4242'. Gun perforated 4835'-4770', 4725'-4610', 4300'-4255'. 2-1/2" tubing stuck at 4823', cut at 4763' and bottom piece dropped approximately 30' with tubing still stuck. Cut at 4200' - not loose. Cut and recovered from 4100'. Top sand in 5-1/2" casing found at 3736'. Cleaned out to 3878'; casing bad and sand running in at 3686' to 3702'.

2. Last produced.

Date	Net oil	Gravity	Cut
October 1946 Ave. :	27 B/D, 18° gravity oil with 27 B/D water.		
November 1946 Ave.:	3 B/D oil, 3 B/D water.		

~~The proposed work is as follows:~~

PROPOSED WORK:

1. Clean out below bad place in 5-1/2" casing at 3686'-3702' by running fluid in hole to hold back sand, if possible.
2. Place 20' cement bridge in solid blank casing below bad place and continue plug up above 3666'.
3. Cap surface and abandon well.

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
		Cmt	Blanket	Cmt	Cmt

HOW:tg

abandon

THE TEXAS COMPANY
(Name of Operator)

By H. O. Woodruff
District Engineer

ADDRESS NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

STENOGRAPHER

Forms Filed 100-101-103-elec. log

Date Rec'd. 9-28-45

Electric Log 25-5048 (1)

Location ✓

Elevation ✓

ENGINEER

Form Needed —

Map Correction producing

Form 150b (Date of Release)

At Request of Operator Blankut

Because Abandoned

Because Request by Oper.

Remarks log last core record

elec log (1)

ERma

SUBMIT LOG IN DUPLICATE

FILL IN BLANK IN WITH TYPEWRITER. WRITE ON ONE SIDE OF P ONLY

STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
SEP 28 1945
LOS ANGELES, CALIFORNIA

WELL SUMMARY REPORT

Operator The Texas Company Field Long Beach

Well No. Field #24 Sec. 19, T. 4S, R. 12W, S.B. B. & M.

Location 370' Sly. on C/L California Ave. from C/L 33rd St. thence Wly. 260' at 90° Elevation of derrick floor / ground above sea level KB 96.52 Floor 93.42 Mat 86.94 feet.

In compliance with the provisions of Chapter 93, Statutes of 1939, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date 9-17-45 Signed W. A. Clark
W. A. Clark

H. O. Woodruff (Engineer or Geologist) W. H. Loomis (Superintendent) Title Division Engineer (President, Secretary or Agent)

Commenced drilling 8-19-44 Completed drilling 9-28-44 Drilling tools Cable / Rotary

Total depth 5050 Plugged depth 5045

Junk Bit, and 6 drill collars from 3895 to 4042 in sidetracked hole.

GEOLOGICAL MARKERS	DEPTH
Top Brown Zone	4252

Commenced producing October 1, 1944 (date) Flowing / gas lift / pumping (cross out unnecessary words)

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	30	17.1	66%	-	-	-
Production after 30 days	36	17.1	34.0%			

Casing Record (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Casing landed in	Number of Sacks of Cement	Depth of Cementing if through perforations
5½	5050	0	15.5	New	Smles.	J-55 cmt'd thru Hayward sleeve at 730 ft B with 200.	6-5/8	400	

Perforations

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
5½	4255 ft.	4300 ft.	½" holes		6"	Gun perforations
	4610 ft.	4725 ft.				
	4770 ft.	4835 ft.				
	ft.	ft.				
	ft.	ft.				

MAP | MAP BOOK | CARDS | BOND | FORMS 114 121

Electrical Log Depths 25 - 5048 (Attach Copy of Log)

DIVISION OF OIL AND GAS
RECEIVED
SEP 28 1945
LOS ANGELES, CALIFORNIA

The Texas Company — Long Beach

Field #24 — 19 — 4S — 12W — S.B.

W. A. Clark

W. A. Clark
Division Engineer

9-17-45

1944

8-19 Spudded in at 5:00 P.M., drilling an 8-5/8" hole.

8-21 Drilled an 8-5/8" hole to 2527 and started coring in an 8-5/8" hole.

8-27 Cored in 8-5/8" hole to 2924 and drilled ahead in 8-5/8" hole.

8-30 Drilled an 8-5/8" hole to 4042. Pulled out kelly and one stand pipe, then drill pipe backed off while rotating. Dropped 36 stands, 6 drill collars and bit. Top of fish 664. Recovered 5 stands of drill pipe leaving top of fish at 1123.

8-31 Took hold of fish, established circulation and spotted oil. Could not jar fish loose. Backed off leaving sub on top of fish. Ran socket on left hand drill pipe. Backed off drill pipe at top of drill collars, leaving bit, 6 drill collars and sub in hole. Top of fish 3895.

9-1 Took hold of drill collars with socket but could not jar fish loose. Reamed hole.

9-2 Reamed to top of fish. Washed over fish to 3897.

9-3 Washed over fish to 3945.

9-4 Repaired equipment.

9-5 Washed over fish to 3967.

9-6 Washed over fish to 3946.

9-7 Washed over fish to 4042.

9-8 Took hold of fish with socket. Could not jar fish loose. Washed over fish to 4042.

9-9 Could not jar fish loose. Could not drill by top of fish.

9-10 Could not drill by fish. Washed over fish to 3903.

DIVISION OF OIL AND GAS
RECEIVED
SEP 28 1945
LOS ANGELES, CALIFORNIA

The Texas Company
Field #24

Long Beach
19 4S 12W S.B.

9-11 Could not wash over fish below 3903. Ran Halliburton hole caliper log. Pumped in 75 sacks of Victor construction cement through drill pipe hung at 3891. Displaced cement with 150 cu. ft. of mud and pulled out. M.T. 6 min., D.T. 3 min.

9-12 Drilled out cement from 3655 to 3705.

9-13 Reamed hole and conditioned mud. Whipstock would not go to bottom.

9-14 Ran removable whipstock and started redrilling at 3705.

9-23 Drilled and 8-5/8" hole to 5050 and ran Schlumberger electric log. Ran and cemented 113 joints, 5083.83' of 5½", 15.5#, J-55, seamless, 8 round thread, new, National Tube Co. casing at 5050 K.B. Used Baker guide shoe on bottom and Baker float collar one joint, 41.69', up. Hayward collar at 730'. Used 3 B & W scratchers at each of the following points: 5040, 4830, 4748, 4619, 4533, 4494, 4316 and 4273. Cemented shoe with 400 sacks of Victor construction cement using one top plug. Bumped plug at 1200# final pressure. M.T. 47 min., D.T. 18 min., T.T. 1 hr. 12 min. Cemented Hayward sleeve at 730' K.B. with 200 sacks of Victor construction cement. M.T. 17 min., D.T. 3 min., T.T. 22 min. ave. Slurry Wt. 118#/cu.ft. Closed Hayward sleeve and tested at 700# pressure for 10 minutes without loss. Surface cementing operations were witnessed and approved by a D.O.G. representative.

9-24 Landed casing and laid down drill pipe.

9-25 Drilled out cement from 667 to 733.

9-26 Drilled out cement from 5005 to 5045. Perforated 4½" holes at 4242' K.B. using a McCullough gun. Ran Halliburton tester on 2-7/8" O.D. tubing with packer set at 4220 with tailpipe extending to 4240. Tailpipe included 2 pressure bombs, 5' perforated and 3/8" choke. Used no cushion. Valve open at 1:20 P.M., closed valve at 1:51 P.M. Valve open 31 min. Had a good puff then dead. Recovered 27' of medium drilling fluid. Both bombs showed testor open. D.O.G. representative witnessed and approved water shut off. Changed mud to oil.

9-27 Perforated 4255-4300, 4610-4725, 4770-4835 with 450 ½" holes, using a McCullough gun.

9-28 Hung 2-7/8" O.D. tubing at 4239.

9-29 Moved out drilling equipment.

9-30 Moved out drilling equipment.

DIVISION OF OIL AND GAS
RECEIVED
SEP 28 1945
LOS ANGELES, CALIFORNIA

The Texas Company
Field #24

Long Beach
19 4S 12W S.B.

10-1 30 Bbls. net, 66% LLCut
25 " " 36% "
28 " " 28% "
33 " " 16% "
22 " " 30% "
25 " " 30% "
18 " " 46% "
32 " " 24% "
39 " " 9.6% "

12-29 Pulled rods and tubing. Lane Wells Gun perforated the 5½" casing 4470-4560 with 180 - ½" holes, 6" centers. Stuck gun at 4465'.

12-30 Ran Bowen socket and fished for perforating gun.

12-31 Recovered gun.

1945

1-1 Cleaned out to 5036.

1-2 Landed 2⅛" tubing at 4450'.

1-3 53 Bbls. net, 32% cut

1-4 31 " " 56% "

1-5 31 " " 48% "

1-6 25 " " 57% "

1-7 36 " " 34% "

1-8 20 " " 57% "

1-9 16 " " 71% "

Produced 873 barrels net oil during 30 days in January 1945 for an average of 29 B/D net, 15.9° gravity, 47.7% cut.

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121

FORM 101
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
SEP 28 1945
LOS ANGELES, CALIFORNIA

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator The Texas Company Field Long Beach

Well No. Field #24 Sec. 19, T. 4S, R. 12W, S.B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
0	391		Drilled		Surface conglomerate
391	2527		"		Sand and shale
2527	2547		Core #1	12'	½' Soft black organic shale 1' Soft coarse gray sand 2½' Soft black sandy organic shale 8' Soft coarse gray sand becoming silty toward bottom.
2547	2567		Core #2	5'	1/6' Soft silty gray sand 1/6' Hard sandstone shell 1/6' Soft sandy black organic shale 2½' Soft mushy coarse gray sand.
2567	2587		Core #3	6'	Soft silty gray sand.
2587	2607		Core #4	14'	1' Soft coarse gray sand 1' Soft black organic shale 3' Soft coarse gray sand 4' Soft black organic shale 1' Soft coarse gray sand 2' Soft black organic shale 2' Soft coarse gray sand
2607	2627		Core #5	0	No recovery.
2627	2647		Core #6	3½'	½' Medium hard, dark gray sandy shale 3' Fine soft gray sand.
2647	2667		Core #7	12'	6' Medium hard, dark gray shale. Forams No dips 2' Fine, loose, soft, gray sand ½' Medium hard dark gray shale 3' Fine, loose, soft, gray sand. Increasingly silty to bottom. ½' Very sandy, soft, dark gray shale
2667	2687		Core #8	18'	Medium hard sand, micaceous medium gray shale. Forams.

DIVISION OF OIL AND GAS
RECEIVED
SEP 28 1945

The Texas Company
Field #24

Long Beach LOS ANGELES, CALIFORNIA
19 4S 12W S.B.

2687	2703	Core #9	3'	Soft, fine, loose, gray sand.
2703	2723	Core #10	18'	Soft, coarse, loose, gray sand. Silty in parts.
2723	2744	Core #11	12'	Soft, coarse, loose, gray sand.
2744	2765	Core #12	12'	3½' Coarse, mushy, gray sand . ½' Soft, dark gray, sandy shale. 3½' Coarse, mushy, gray sand. 4½' Soft, gray, sandy, micaceous shale.
2765	2786	Core #13	14'	3' Soft, very sandy, dark gray, micaceous shale. Forams Wafery. Dips ∔ 20°. 4' Soft black, micaceous shale with good partings. Forams. 1' Soft, interbedded black shale and gray sand. 2' Medium to soft, micaceous shale with partings. Forams. 4' Soft, silty, gray sand.
2786	2803	Core #14	12'	Hard, massive, micaceous, sandy shale with a few irregular enclosures of gray sand. No dips.
2803	2823	Core #15	18'	½' Massive, dark gray, sandy, micaceous shale 1' Medium grained soft gray sand. 9½' Massive, soft, sandy micaceous dark gray shale with irregular inclusions of coarse gray sand on bottom. 1' Coarse, soft, gray sand. ½' Massive shale as above. 5½' Coarse, soft, gray sand.
2823	2844	Core #16	13'	Medium hard, massive, sandy, micaceous gray shale. Forams. No dips.
2844	2864	Core #17	13'	5' Shale as above. 4' Coarse, soft, gray sand. 1½' Shale as above. ¼' Coarse, soft, gray sand. 1' Shale as above. 1¼' Coarse, soft, gray sand.
2864	2885	Core #18	12'	4' Massive, dark gray, micaceous shale. Forams. Very sandy. 1' Fine, loose, gray sand. 1' Shale as above. 2' Gray sand and shale. Crushed in core bbl. 1' Massive, hard, dark gray, micaceous shale. Forams. 1½' Fine, loose, gray sand. 1½' Massive, sandy, dark gray, micaceous shale. Forams.

DIVISION OF OIL AND GAS
RECEIVED
SEP 28 1945
LOS ANGELES, CALIFORNIA

The Texas Company
Field #24

Long Beach
19 4S 12W S.B.

2885	2906	Core #19	8'	1' Fine, loose, gray sand. 2' Very sandy, medium hard, gray shale. 1½' Medium mushy, gray sand. 1½' Sandy, gray shale with irregular inclusions of fine gray sand. 2' Coarse, loose, gray sand.
2906	2924	Core #20	12'	Hard, light gray, massive, sandy, micaceous shale. Forams.
2924	5050	Drilled		Sand and shale.

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121

DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

No. 782

La Calif. 10-23 1944

The Texas Co.
Name of Operator

Address

This is to acknowledge the receipt of logs and similar records of wells on Sec. 19 T. 4S R. 12W, SB B. & M., *as herewith enumerated by well numbers.*

Logs Field 24 Long Beach

History

Core record

Subsequent work electric log 9-23-44

R. D. BUSH, *State Oil and Gas Supervisor*

FORM 127
36195 7-44 3500 TRIP SPO

By E. B. Spencer *Deputy*

FORM 109-A

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off
(FORMATION TESTER)

No. T 1-43277

Los Angeles 14, Calif. October 9, 1944

Mr. W. H. Loomis
Long Beach 1, Calif.
Agent for THE TEXAS COMPANY

DEAR SIR:

Your well No. "Field" 24, Sec. 19, T. 4 S., R. 12 W., S. B. B. & M. Long Beach Field, in Los Angeles County, was tested for water shut-off on September 26, 1944. Mr. Chas. Corwin, Inspector, designated by the supervisor, was present as prescribed in Sec. 3222 and 3223, Ch. 93, Stat. 1939; there were also present R. F. Cory, Engineer, and R. D. Crum, Driller.

Shut-off data: 5-1/2 in. 15.5 lb. casing was cemented at 5047 ft. on September 24, 1944 in 8-5/8" hole with 400 sacks of cement of which 5 sacks was left in casing. Casing record of well: 10-3/4" cem. 20'; 5-1/2" cem. 5047', c.p. 727', perf. 4 test holes at 4242', W.S.O. Junk (1st hole) drill collar and bit 3792'-3939'. T.D. 3939', plugged with cement 3939'-3792'.

Reported total depth present hole 5047 ft. Bridged with cement from 5047 ft. to 5042 ft. Cleaned out to 5042 ft. for this test. A pressure of xxx lb. was applied to the inside of casing for xxx min. without loss after cleaning out to xxx ft. A Halliburton tester was run into the hole on 2-1/2 in. drill pipe, with xxx ft. of water cushion, and packer set at 4220 ft. with tailpiece to 4240 ft. Tester valve, with 3/8" bean, was opened at 1:20 p.m. and remained open for xxx hr. and 30 min. During this interval there was an initial puff and no blow for the balance of the test.

THE INSPECTOR ARRIVED AT THE WELL AT 3:00 P.M. AND MR. CORY REPORTED:

1. The 5-1/2" casing was perforated with four, 1/2" holes at 4242'.
2. A Halliburton tester was run into the hole as noted above.

THE INSPECTOR NOTED:

1. When the drill pipe was removed 27' of medium drilling fluid was found in the drill pipe above the tester, equivalent to 0.2 bbl.
2. The recording pressure bomb chart showed that the tester valve was open 30 minutes.

The test was completed at 3:40 p.m.

THE SHUT-OFF ABOVE 4242' IS APPROVED.

CC:OK

cc- Company
Long Beach

W/L

R. D. BUSH, State Oil and Gas Supervisor

By E. H. Musser, Deputy

36194 7-44 7500
STATE PRINTING OFFICE

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-43258

Los Angeles 14, Calif. October 2, 1944

Mr. W. H. Loomis
Long Beach 1, Calif.
Agent for THE TEXAS COMPANY

DEAR SIR:

Operations at your well No. "Field" 24 Sec. 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by A. Pfeil, Inspector, representative of the supervisor, on September 23, 1944. There was also present D. M. Smith, Engineer, and M. M. French, Drilling Foreman.

Casing Record 10-3/4" cem. 20'; 5-1/2" cem. 5047', c.p. 727'; T.D. 5047'.

Junk (1st hole) drill collar and bit 3792'-3939'; T.D. 3939', plugged with cement 3939'-3792'.

The operations were performed for the purpose of demonstrating that the known surface waters are adequately protected.

The inspector arrived at the well at 9:10 p.m and Mr. Smith reported:

1. An 8-5/8" rotary hole was drilled from 20' to 5047'.
2. Electrical core readings showed the top of the Brown zone 4252'.
3. On September 24, 1944, the 5-1/2", 15.5 lb. casing with a Hayward collar at 727', was cemented with 400 sacks of cement.

THE INSPECTOR NOTED:

1. The 5-1/2" casing was cemented through ports at 727' with 200 sacks of cement.
2. The cement was displaced from the casing with 98 cubic feet of drilling fluid.
3. The final pressure was 200 lb.
4. After closing the cementing ports, a pressure of 700 lb. was applied and held for 10 minutes without loss.

The cementing operations were completed at 11:30 p.m.

THE CEMENTING OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED AS INDICATING THAT THE KNOWN SURFACE WATERS ARE ADEQUATELY PROTECTED.

AP:OH

cc- Company
Long Beach

R/C 213

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Wiesser Deputy

28381 10-43 15M
STATE PRINTING OFFICE

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-39926

Los Angeles 14, Calif. August 17, 1944

MR. W. H. Loomis

Long Beach 1, Calif.

121

Agent for THE TEXAS COMPANY

DEAR SIR:

Your proposal to drill Well No. "Field" 24,

Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, Los Angeles County,

dated Aug. 10, 1944, received Aug. 14, 1944, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:

"The well is 370' S. along ℄ Calif. Ave. from ℄ 33rd St. and 260' W'ly at 90°
The elevation of the derrick floor / ground above sea level is * feet.
We estimate that the first productive oil or gas sand should be encountered at a depth of about 4250 feet."

* See Form 100

PROPOSAL:

"We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing	Weight	Grade and Type	Depth	Landed or Cemented
5-1/2"	15.5	J-55 Seamless cmtd. through Hayward collar	5050 700	Cmtd. w/400 w/200

Well is to be drilled with rotary tools.
It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Mud fluid consistent with good drilling practice shall be used and the column of mud fluid maintained at all times to the surface, particularly while pulling the drill pipe.
2. Any hole to be sidetracked in any oil zone shall be filled with cement, if possible.
3. This division shall be consulted before running the 5-1/2" casing.
4. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   (a) The cementing of the 5-1/2" casing through the upper ports. Any subsequent testing required will be specified at that time.
   (b) A test of the effectiveness of the 5-1/2" shut-off through holes opposite the Brown zone shale.

ERMA:OH

cc- P. A. W.
Company
Long Beach

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Musser Deputy
EHB

Blanket bond No. 130253-C

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL & GAS
RECEIVED
AUG 14 1944
LOS ANGELES, CALIFORNIA

Notice of Intention to Drill New Well

This notice must be given and surety bond filed before drilling begins

037-11549

TEXACO INC.

Long Beach 1, Calif. August 10, 1944

DIVISION OF OIL AND GAS

Los Angeles 14, Calif.

"Field "24

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of drilling well No. "Field" #24, Sec. 19, T. 4-S, R. 12-W, S.B. B. & M., Long Beach Field, Los Angeles County.

Lease consists of

The well is 370' S. along ℄ Calif. Ave. from ℄ 33rd St. and 260' W'ly at 90° feet N. or S., and feet E. or W. from

(Give location in distance from section corners or other corners of legal subdivision)

The elevation of the derrick floor / ground above sea level is * 96.52 feet. * see form 100

We estimate that the first productive oil or gas sand should be encountered at a depth of about 4250 feet.

We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing, Inches	Weight, Lb. Per Foot	Grade and Type	Depth	Landed or Cemented
5-1/2"	15.5	J-55 Seamless	5050	Cmtd. w/400
		cmtd. through Hayward collar	700	w/200

Well is to be drilled with rotary ~~xxxxx~~ tools.

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing.

Address Box 320, Long Beach 1, Calif. THE TEXAS COMPANY
(Name of Operator)

Telephone number 416-21 By H. O. Woodruff
District Engineer

ADDRESS NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

PAW

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
20					
Aug 14 1944 G.L.	8-14-44 G.L.	Ents	Blanket 130253-C	Ents	Ents

CalGEM Oil Well Files
API 037-11543
“Field” 18

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF WELL PLUGGING AND ABANDONMENT

Cypress, California
May 4, 2007

Target Dept. Stores
c/o M.E. WRIGHT
16531 Bolsa Chica Street #301
Huntington Beach, CA 92649

Your report of the plugging and **reabandonment** of well **Chevron U.S.A. Inc./"Field" 18**, A.P.I. No. **037-11543**, Section **19**, T. **4**S, R. **12**W, S.B. B & M., **Long Beach** Field, **Los Angeles** County, dated **02-18-07**, received **04-18-07**, has been examined in conjunction with operations witnessed and records filed in this office. We have determined that the requirements of this Division **COULD NOT** be fulfilled.

NOTE:

1. Surface plugging completed on **03-20-07**.
2. Surface inspection made and approved on **05-02-07**.
3. This well is NOT to be built over without further consideration.
4. Deficiencies:
   1. Plug from 4021'-3950' not placed.
   2. Unable to cavity shot @ 1850' or plug 1850'-1750'.
   3. Unable to place plug from 764'-660'.

Hal Bopp
State Oil and Gas Supervisor

By: _____
For: R. K. Baker, *Deputy Supervisor*

INDIVIDUAL BOND

cc: Update
Los Angeles County Assessor
Los Angeles County Fire Prevention Bureau
Long Beach Department of Building & Planning
Department of Oil Properties
Chevron U.S.A. Inc.

KMC:dw

DIVISI)F OIL, GAS, AND GEOTHERMAL RES RCES

CHECK LIST – RECORDS RECEIVED AND WELL STATUS

Company:	**Target Dept. Stores**	Well: **Chevron U.S.A. Inc./"Fields" 18**
API#:	**037-11543**	Sec. **19**, T. **4S**, R.**12W**. S. B. B. & M.
County:	**Los Angeles**	Field: **Long Beach**

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
History (Form OG103)	**4/18/07**
Core Record (Form OG101)	
Directional Survey	
Sidewall Samples	
Date final records received.	
Electric Logs:	
Other:	

STATUS

Producing	☐	Drilling	☐
Abandoned	☐	Idle	☐
Reabandoned	☒	Other	☐

WELL TYPE

Oil	☒	Waterflood	☐
Gas	☐	Water Disposal	☐
Water Source	☐	Cyclic Steam	☐
Observation	☐	Steam Flood	☐
Exploratory	☐	Fire Flood	☐
Dry Hole	☐	Other	☐

EFFECTIVE DATE: 3/20/07

REMARKS: Reabd

	ENGINEERS CHECK LIST	CLERICAL CHECK LIST
☒	Summary, History & Core Record (Dupl.)	Location change
☐	Electric Log	Elevation change
☒	Operator's Name	Form OGD121
☒	Signature	Form OGD150b (Release of Bond)
☒	Well Designation	Duplicate logs to archives
☐	Location	Notice of Records Due
☐	Elevation	EDP 5.15.07 vm
☒	Notices	District Date Base
☒	"T" Reports	Final Letter (OG159) 5/10/07 sr
☐	Casing Record	Update Center 5.15.07 vm
☒	Plugs	
☐	Directional Survey	
☐	Production/Injection (FAP Codes:)	
☐	E Well on Prod., enter EDP	**FIELD CHECK LIST**
☒	Surface Inspection Required	Date Surface Inspection Completed: 5/2/07 GBOK
☐	Surface inspection Waived (Island)	Other:
☐	Well site restoration deferred (common cellar)	
☒	Final Letter Required AB: ☐ REAB: ☒ 5-4-07 DW	
☐	Other:	

Note: Also to state "This well is not to be built over with out further consideration" JM 5/07

RECORDS NOT APPROVED	RECORDS APPROVED
(Reason:) Need Surf Insp	*(Signature)*
	RELEASE BOND
	Date Eligible
	(Use date last needed records received.)
	MAP AND MAP BOOK N/C

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

Operator Target Dept. Stores. Field LONG BEACH County LOS ANGELES

Well Chevron-Texaco E & P Co. "FIELDS" 18-Rd Sec. 19 T. 4S R. 12 S.B. B.&M.

A.P.I. No. 037-11543 Name M. E. WRIGHT Title CONSULTANT

(Person submitting report) (President, Secretary, or Agent)

Date 2-18-07
(Month, day, year)

Signature M. E. Wright

Address 3350 - 6th St, CC 3425, Minneapolis, MN 55402 Telephone Number 612-204-0214

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment, with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, and initial production data.

Date 2007	
3-5	Drove rig and equipment to location. Set drilling mat in place. Moved rig in, RU mast. Had backhoe dig holes through asphalt. Sank marsh anchors and put out guy lines. Had welder welding wellhead, flange and riser onto 8-5/8" csg stub. Unloaded equipment. Hooked up hoses on mud pump. Secured rig and well.
3-6	Drove to location. Serviced rig and equipment. Installed, nippled up and function tested BOPE. RU working platform, mud pump and circulating equipment, tbg equipment, and power swivel. Made up 6-1/4" bit on one 4-3/4" drill collar, unable to get bit deeper than 16' due to bend in surface csg. LD 4-3/4" drill collar. Made 6-1/4" bit up on 1 joint 2-7/8" tbg. Drilled wood from 16' to 33', circulating with mud. Started getting returns coming up through cellar floor from outside 9" surface pipe. Pulled out with bit. Secured rig and well until A.M.
3-7	Drove to location. Serviced rig and equipment. Ran back in hole with 6-1/4" bit on 2-7/8" tbg. Continued drilling up wooden plug and circulating out coarse sand from 33' to 246'. Pulled out with bit. Found bit plugged and balled up clay. Secured rig and well until A.M.
3-8	Drove to location. Serviced rig and equipment. Made up good, used 6 -1/4" bit and ran in hole. Bit stopped on fill at 40'. Drilled and cleaned out sand and gravel from 40' to 310'. Circulated hole clean at 310'. Pulled out with bit. Secured rig and well until A.M.
3-9	Drove to location. Serviced rig and equipment. Checked and re-ran same 6-1/4" bit and stopped on hard fill at 180'. Continued drilling and cleaning out wood, sand and gravel from 180' to 465'. Circulated hole clean at 465'. POOH with bit. Secured rig and well. *NOTE: Vacuum truck hauled in 2 loads (120 bbls) mud from Allenco yard.
3-12	Drove to location. Serviced rig and equipment. Made up good 6-1/4" bit and ran on 2-7/8" tbg. Bit stopped at 120' on hard fill. Drilled and cleaned out sand, gravel and wood from 120' to 559'. Circulated hole clean at 559'. POOH with bit. Secured rig and well until A.M. *NOTE: Vacuum truck hauled in 2 loads (120 bbls) of mud from Allenco yard.
3-13	Drove to location. Serviced rig and equipment. Picked up two 3-1/2" drill collars and made up good 6-1/4" bit on bottom. RIH to top of fill at 120'. Circulated and drilled out sand and gravel down to 624'. Circulated hole clean at 625'. *NOTE: Vacuum truck hauled in 2 loads (120 bbls) mud from Allenco yard.
3-14	Drove to location. Serviced rig and equipment. Replaced worn 6-1/4" bit with good 6-1/4" bit and ran in hole on two 3-1/2" drill collars and 1 joint 2-1/3" tbg to tag top of fill at 98'. Drilled and cleaned out sand and gravel from 98' to 565'. POOH with bit. Secured rig and well until A.M. *NOTE: Vacuum truck hauled in 1 load (60 bbls) mud from Allenco yard.

REC'D APR 18 2007

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

3-15	Drove to location. Serviced rig and equipment. Checked and ran in with same 6-1/4" bit with two 3-1/2" drill collars and 2-7/8" tbg. Continued drilling and cleaning out sand and gravel from 65' to 565'. Circulated hole clean at 565'. POOH with tbg, drill collars and bit. RU Tiger Wireline Service. Ran 1 Gamma Ray log from surface down to 565', and 1 Casing Caliper Profile log on 8-5/8" from surface to bottom of 8-5/8" stub at 39'. Rigged down Tiger Wireline Service. Secured rig and well until A.M. *NOTE: Vacuum truck hauled in 1 load (60 bbls) mud.
3-16	Drove to location. Serviced rig and equipment. Ran same 6-1/4" bit on 3-1/2" drill collars and 2-7/8" tbg. Drilled and cleaned out sand from 192' to TOC plug at 625'. Circulated hole clean at 625'. POOH with tbg, drill collars and bit. Secured rig and well until A.M. DOGGR Mr. K. Carlson & Mr. M. Kratovil approved cmt plugging from 625' to surface. *NOTE: Vacuum truck hauled in 1 load (60 bbls) mud.
3-19	Drove to location. Serviced rig and equipment. Ran in with 2-7/8" saw-toothed collar. Drilled and cleaned out sand and gravel from 95' to top of cement plug at 625'. RU Ausburn Cementers, with bottom of tubing at 625', Ausburn mixed, pumped and displaced 195 sx (225 cu. ft.) Class "G" neat cement to leave calc TOC at 383'. Hole size unknown. Pulled out with tubing. Secured rig and well until A.M. DOGGR witnessed plug from 627'. By A. B. Gorashia
3-20	Drove to location. Serviced rig and equipment. Ran in with tbg and tagged TOC plug at 40'. Hung bottom of tbg at 38' and RU Ausburn Cementing. Ausburn mixed and pumped 11 sx (12 cu. ft) "G" neat cmt to bring cmt to surface. Rigged down cementers. LD tbg. RD work floor and BOPE. Loaded out tbg equipment, took down guy lines and rigged down mast. Started cleaning out solids from mud pump tank. Secured rig and well. DOGGR A. B. Gorashia witnessed surface plug (Phase 1 tag), 40' DOGGR A. B. Gorashia witnessed surface plug (up grade) 12 cf.
3-21	Drove to location. Serviced rig and equipment. Finished loading out tools and equipment and cleaning out mud pump. Helped stinger crane load out drilling mat and BOPE. Moved pipe trailer, mud pump and rig off location. Cleaned location. Set up fences, moved off.
4-3	Drove to location. Cut csg 5' below surface. Chipped away cmt, got ready for gas test. Steel I. D. plate. Gas test approved.

REC'D APR 18 2007

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CONSTRUCTION SITE WELL INSPECTION

District Ref. No. _____

Field: Long Beach City/County Long Beach Sec. 19 T. 4S R. 12W S.BB.&M.

Location (major cross streets): Atlantic Ave and 33rd Street

Development representative: Mick Beyer Phone: (310) 505-9787

Describe the exact location of the excavation or well at the building site (from a reference point on a Division Map):

How the location was determined: Measured ☒ Surveyed ☐ Other ☐

Describe: _____

Well designation: "Field" 18 , API No. 03711543

Operator: Target Dept. Stores

SAFETY PRECAUTIONS AND UNSAFE EXCAVATIONS

CAUTION! Oil and gas wells may produce hydrogen sulfide gas, which is highly poisonous and will accumulate and concentrate in low areas such as excavations. Before entering an excavation area, test to ensure that there is sufficient oxygen and that the flammable/toxic gas readings are within safe limits.

INSPECTIONS	1	Initials Date	2	Initials Date	3	Initials Date	4	Initials Date
Excavation size	6'X6' 5' down	5/4/07 AB						
Picture No.								
Picture direction								
Metal detector (Y/N)	N							
Visible casing size(s) (or comment)	81/4"							
Fluid leaks (Y/N)*	N							
Amount (est.)								
Gas leaks (Y/N)*	N							
Amount (est.)								
Gas detector (N/Y)	Y							
Bubble test (Y/N)	Y							

*Leak location(s): N/A

Describe hazardous or damaged well condition(s): N/A

Report finalized by: AB Gorashi A., Division of Oil, Gas & Geothermal Res. Date: 5/4/07

OG190A (12/00/GSR1/1M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

4e

No. T 107-0380

REPORT ON OPERATIONS

Cypress, California
April 12, 2007

Target Department Stores
c/o M.E. WRIGHT
16531 Bolsa Chica Street #301
Huntington Beach, CA 92649

Your operations at well **Chevron U.S.A. Inc./"Field" 18,** A.P.I. No. **037-11543**, Sec. **19**, T. **4**S., R. **12**W, S.B. B. & M., **Long Beach** Field, **Los Angeles** County, were witnessed on **4/5/07**. **AB Gorashi**, representative of the supervisor, was present from **0800** to **1000**. There was also present **Mick Beyer**, **Allenco Supervisor**.

Present condition of well: **13" cem 788'; 8 1/4" cem 4230' WSO, shot & pulled fr 764'; 5 3/4" cem 6210' WSO, cp 4730' & 4870', perfs @ int 4230'-4830', shot 4051', 4100' & 4170', pulled fr 4051'; 4 3/4" ld 6120'-6366', perfs 6120'-6366'. Junk below 4051' & 4828'. TD (present hole) 7483'. Plugged w/ cem 7483'-6828', 6500'-6106', 4848'-4776', 4560'-4385', 4375'-4185', 4048'-4021' & 627'-5'.**

The operations were performed for the purpose of witnessing the plugging operations in the process of reabandonment.

DECISION: APPROVED.

NOTE: The required Class II2M blowout prevention equipment was inspected and approved on **3/14/07**.

DEFICIENCIES:
1. Plug from 4021'-3950' not placed.
2. Unable to cavity shot @ 1850' or plug 1850'-1750'.
3. Unable to place plug from 764'-660'.

CONTRACTOR: Allenco.

KMC:sjl

[redacted] Approved 5-2-07 GBA

cc: Update
Chevron U.S.A. Inc.

Hal Bopp
State Oil and Gas Supervisor

By:
For: R. K. Baker, *Deputy Supervisor*

OG109 3-16-99

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CEMENTING/PLUGGING MEMO

T107-0380

Operator Target Dept. Stores c/o M.E Wright Well No. Chevron USA. Inc. / "Field" 18

API No. 037-11543 Sec. 19 T. 4S R. 12W , SB B&M

Field Long Beach , County Los Angeles . On 4-5-2007 ,

Mr. / Ms. AB GORASHI A representative of the supervisor, was present from 800 to 1000 .

There were also present MICK BEYER, ALLENCO, SUPERVISOR

Casing record of well: 13" cem 788'; 8¼" cem 4230' WSO, Shot & pulled fr 764'; 5¾" cem 6210' WSO, cp 4730' & 4870', perfs @ int 4830'-4230', Shot 4170', 4100' & 4051', pulled fr 4051', Junk below 4828' & 4051'; 4¾" ld 6120'-6366', perfs 6120'-6366'. TD (Present Hole) 7483'. Plugged w/ cem 7483'-6828', 6500'-6106', 4848'-4776', 4560'-4385', 4375'-4185', 4048'-4021', 627'.

The operations were performed for the purpose of: (N) Reabandonment

☐ The plugging/cementing operations as witnessed and reported are approved.

☐ The location and hardness of the cement plug @ _____ ' are approved.

Hole size: _____ " fr. 0 ' to 788 ', 12 " to 4235 ' & _____ " to _____ '

Casing				Cemented			Top of Fill		Squeezed Away	Final Pressure	Perforations
Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			

Casing/tubing recovered: _____ " Shot/cut at _____ ', _____ ', _____ ', Pulled fr. _____ ';

_____ " Shot/cut at _____ ', _____ ', _____ ', Pulled fr. _____ '.

Junk (in hole): _____

Hole fluid (bailed to) at _____ '. Witnessed by _____

Mudding	Date	bbls	Displaced	Poured	Fill	Engineer

Note: (K) II2M 3/14/07 (Q) Gas Leak 4/5/07 AGA C/O = 627'

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engineer	Depth	Wt/Sample	Date & Time	Engineer
3/19/07	225 cf	TO 627'	1330	AB GORASHI	40'/285'	ATW	3/20/07 830	AB GORASHI A
3/20/07	12 cf	TO 38'	1000	AB GORASHI	5'/5'	VISUAL	4/05/07 900	AB GORASHI A

CONTRACTOR:

Allenco

UNCORRECTABLE DEFICIENCIES:

None

DEFICIENCIES NOTED AND TO BE CORRECTED:

None

DEFICIENCIES NOTED AND CORRECTED:

None.

API No. 037-11543 DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES T_____

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator Target Dept. Stores c/o M.E. Wright Well Chevron U.S.A, Inc. / "Field" 18 Sec. 19 T. 4S R. 12W

Field Long Beach County Los Angeles Spud Date_____

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	3-14-07	W. Chen	(1015 to 1045)		
2nd			(to)		

Contractor Allenco Rig# 5 Contractor's Rep. & Title Mike Russell, operation manager

Casing record of well: Memo

OPERATION: ~~Testing~~ (inspecting) the blowout prevention equipment and installation. Critical well? Y ✓ N___

DECISION: The blowout prevention equipment and its installation on the 8 5/8 " casing are approved.

Proposed Well Opns: Reabandon . MACP:_____psi

Hole size:_____" fr._____' to_____' ,_____" to_____' &_____" to_____'

REQUIRED BOPE CLASS:

CASING RECORD OF BOPE ANCHOR STRING					Cement Details	Top of Cement	
Size	Weight(s)	Grade(s)	Shoe at	CP at		Casing	Annulus

BOP STACK							TEST DATA						
API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul	Gal. to Close	Recovery Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
Rd	2 7/8"	WSI	Duke	9"	3000		0.72						
Rd	CSO	WSI	Duke	9"	3000		0.72						

TOTAL: 1.44

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure — psi

Total Rated Pump Output_____gpm Fluid Level

Distance From Well Bore 25 ft. OK

	Accum. Manufacturer	Capacity	Precharge
1	Hand pump	10 gal.	psi
2		gal.	psi

CONTROL STATIONS	Elec.	Hyd.	Pneu.
✓ Manifold at accumulator unit		✓	
Remote at Driller's station			
Other:			

EMERG. BACKUP SYSTEM			Press.	Wkg. Fluid
✓ N_2 Cylinders	1	L= 51"	2700	9.10 gal.
Other:	2	L= "		gal.
	3	L= "		gal.
	4	L= "		gal.
	5	L= "		gal.
	6	L= "		gal.
		TOTAL:		9.10 gal.

AUXILIARY EQUIPMENT

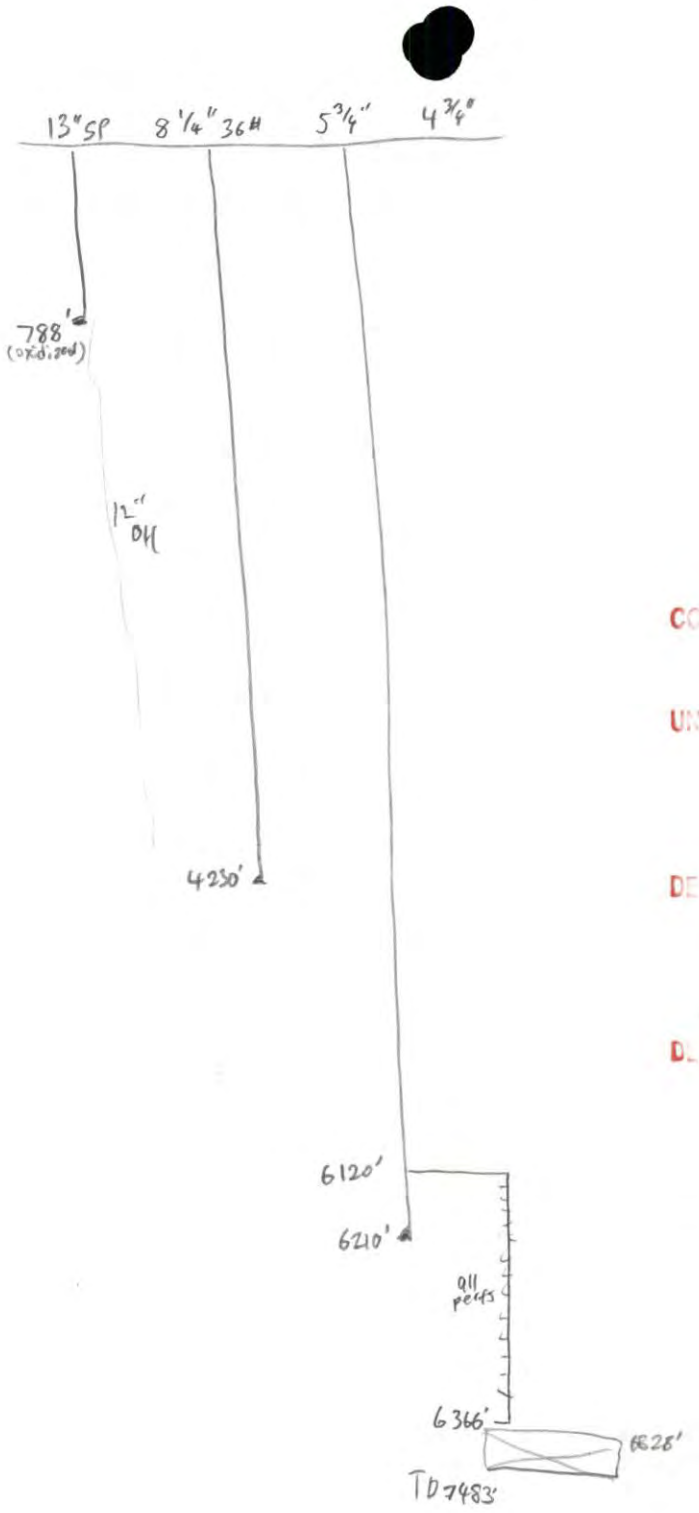
		No.	Size (in.)	Rated Press.	Connections: Weld	Flange	Thread	Test Press.
	Fill-up Line							
✓	Kill Line		2"	3000			✓	
✓	Control Valve(s)	3		3000			✓	
	Check Valve(s)							
	Aux. Pump Connect.							
	Choke Line							
	Control Valve(s)							
	Pressure Gauge							
	Adjustable Choke(s)							
	Bleed Line							
	Upper Kelly Cock							
	Lower Kelly Cock							
	Standpipe Valve							
	Standpipe Press. Gauge							
✓	Pipe Safety Valve		2 7/8"	3000				
	Internal Preventer							

HOLE FLUID MONITORING EQUIPMENT	Alarm Type: Audible	Visual	Class
Calibrated Mud Pit			A
Pit Level Indicator			B
Pump Stroke Counter			
Pit Level Recorder			C
Flow Sensor			
Mud Totalizer			
Calibrated Trip Tank			
Other:			

Hole Fluid Type	Weight	Storage Pits (Type & Size)
Drilling Mud	12 #	pump tanks 110 + 60 vac truck bbls

REMARKS AND DEFICIENCIES:

OGD8 (4/03/LICP/3M)



BOPE Insp

C/O Depth

Mud

PLH 4021'-3950'

Set 8 1/4" csg cmt shoe 1850'

PLH 1850'-1750' in + out 8 1/4" csg

PLH 764'-660'

PLH 100'-5' all csgs in out

Surf Insp

BFW 1850'±

CONTRACTOR:

Allenco

UNCORRECTABLE DEFICIENCIES:

None

DEFICIENCIES NOT CORRECTED:

None

DEFICIENCIES CORRECTED:

None.

M.E. Wright
16531 Bolsa Chica St
Suite 301
Huntington Beach, CA 92649

Chevron USA
Field 28
Long Beach

SANTA ANA
19 MAR 2007







DIVISION of OIL & GAS & G. R.
5816 CORPORATE AVE
CYPRESS CA 90630

037-11543

ATTN: K. CARLSON

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

No. P 107-0098

412
(Field Code)

PERMIT TO CONDUCT WELL OPERATIONS

06
(Area Code)

--
(New Pool Code)

--
(Old Pool Code)

Target Dept. Stores
C/O M.E. Wright
16531 Bolsa Chica St. #301
Huntington Beach CA 92649

Cypress, California
March 2, 2007

Your proposal to **reabandon** well **Chevron U.S.A. Inc./"Field" 18**, A.P.I. No. **037-11543**, Section **19**, T. **4S**, R. **12W**, **S.B.** B. & M., **Long Beach** Field, **Old** area, -- pool, **Los Angeles** County, dated **01/31/07**, received **02/02/07** has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment with hydraulic controls, equivalent to this Division's Class **II2M** requirements, or better, shall be installed and maintained in operating condition.
2. Well killing fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
3. At least **400′** of surface casing shall be cemented in the well, if the surface casing is not competent.
4. All portions of the well not plugged with cement shall be filled with clay base mud having a minimum density of 72 lb/cu ft and a minimum gel-shear strength of 25 lb/100 sq ft.
5. This Division shall be consulted and a Supplementary Notice may be required before making any changes in the proposed program.
6. **THIS DIVISION SHALL BE NOTIFIED TO:**
   a. Inspect the installed blowout prevention equipment prior to commencing downhole operations.
   b. Witness the clean-out depth.
   c. Witness the mudding of the hole.
   d. Witness the placing, location and hardness of the cement plug from **4021′** to **3950′**.
   e. Witness the squeeze cementing of the **8 1/4"** casing through the **cavity shot** at **1850′**.
   f. Witness the placing, location and hardness of the cement plug from **1850′** to **1750′**, inside and outside the **8 1/4"** casing.
   g. Witness the placing, location and hardness of the cement plug from **764′** to **660′**.
   h. Witness the placing, location and hardness of the cement plug from **100′** to **5′**, inside and outside **all** casings.
   i. Inspect and approve the cleanup of the well site within 60 days after placement of the surface plug.

NOTE:

1. A crew drill may be required at the time of the blowout prevention equipment inspection.
2. This Division does not pass upon your right to enter the property, but merely approves the proposal as conforming to our requirements.
3. Issuance of this report was delayed pending receipt of additional information.
4. The proposed surface plug shall not contain rock or gravel.
5. The base of the freshwater sands is at **1850′±**.

3/16/07 Carlson/Mel Wright (in office)
Need letter from target that they will never be able to build w/in proximity of well. Need all Caliper + E logs.

KMC:kc
cc: Update
Chevron U.S.A. Inc.
INDIVIDUAL BOND

Engineer: Kenneth Carlson

Phone: 714/816-6847

OK to cem 627'± to surface
DOG to wit cem. + Tag ops,
+ Bope insp.

Hal Bopp
State Oil and Gas Supervisor

By [signature]
For R. K. Baker, *Deputy Supervisor*

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended. OG 111

OS/KC

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Re-

Notice of Intention to Abandon Well

P# 1070098

FOR DIVISION USE ONLY			
CARDS	BOND	FORMS	
		OGD114	OGD121
		2/3/07 KJ	2/2/07 KJ

DIVISION OF OIL AND GAS

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to abandon well Chevron USA, Inc / Chevron Texaco E&P Co "Fields" 18 Rd, API No. 037-11543, Sec. 19, T. 4S, R. 12W, SB B. & M., Long Beach Field, Los Angeles County.

commencing work on FEB. 18, 2007, 19

The present condition of the well is:

1. Total depth 7483 (Plugged to 6828) Pulled 5¾" @ 4051, 8¼" @ 764 (only 29 jts range 1)
2. Complete casing record, including plugs and perforations (present hole) 13" S.P. Cem. 788 (oxidized) 8¼" Cem 4230, 5¾" Cem. 6210, 4¾" liner 6120 to 6366 Perfs - 6120 to 6366; 4880 to 70, 4740 to 30, 4650 to 40, 4770 to 45, 4650 to 10, 4784 to 4830, 4550 to 25, 4435 to 04, 4350 to 4230, W/SO 6210 - Plugs below #9
3. Last produced Jan. 1938 - 14 (Date) (Oil, B/D) (Gas, Mcf/D) (Water, B/D)

or

4. Last injected (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure)

Additional data for dry hole (show depths):

5. Oil or gas shows
6. Stratigraphic markers
7. Formation and age at total depth
8. Base of fresh water sands 1800± (See "Fields" 24) LOG

9. Is this a critical well according to the definition on the reverse side of this form? ☐ Yes ☐ No

The proposed work is as follows: (Plugs continued from above) 7483 to 6828, 6500 to 6442, 6366 to 6190, 6120 to 6106, 4848 to 4776, 4550 to 4385, 4375 to 4185, 4048 to 4021 (good plug), 670 (Fill on 8') to 627, 75 sks @ surface on mud filled csg.

— See attached program —

1750
92
BFW 1842

1850'± OK

It is understood that if changes in this plan become necessary, we are to notify you immediately.

Address 3350 6th St. CC3425 (Street)
Minneapolis, MN 55402 (City) (State) (Zip)
Telephone Number (612) 304-0214 (Area Code) (Number)

Target Dept Stores (Name of Operator)
By B. Ullery - M.E. Wright (Print Name)
M.E. Wright (Signature) 1-31-07 (Date)

C/O M. Wright
16531 Bolsa Chica St. #301
Huntington Beach CA 92649
(714) 377-9234

OG108 (2/84/DWRR/5M)

ABANDONMENT PROGRAM
CHEVRON-TEXACO "FIELDS" 18 RD.

API 037-11543 LONG BEACH FIELD -Sec 19 - T4S - R12W -

Well is in a planned parking lot 200 feet from bldg. & 160' so. of intersection of Olive Ave and 33rd Sts. 13" stove pipe csg. is rusted away and unknown length of stuck, bent 8 5/8" is exposed 3.5' below ground surface.

PROGRAM

1. Remediate well head. MIRU - Install BOP equipment on the 8 5/8" csg. determine strength, length, and usefullness of the 8 5/8" csg. Cmt. if necessary. (90 to 180 feet may be in place)
2. Fill hole with DOG spec mud. Try to circulate. Cmt. csg if necessary.
3. Drill with, extreme care, 6 1/4" hole to top of highest plug at 627. Wood plug is below cement. 100' of fill is under the wood plug.
4. If able to drill and circulate drill out plug, be careful not to tear up 13" SP. Enter 8 5/8" cmt lap if running sand is a problem.
5. Clean out fill to 4021, cmt 4021 to 3950.
6. Condition mud to DOG spec. 72# mud.
7. Shoot cavity shot at 1850.
8. Squeeze cement 8 5/8" casing from 1850 to 1750 inside and out. Tag TOC.
9. Condition mud to DOG specs. Cmt 8 5/8" stub at 764 up to 660.
10. Condition mud to DOG specs. Cmt all csg, 100 feet to the surface.
11. Gas test and weld on a ID plate.

MEW 2/1/07

Department of Oil Properties

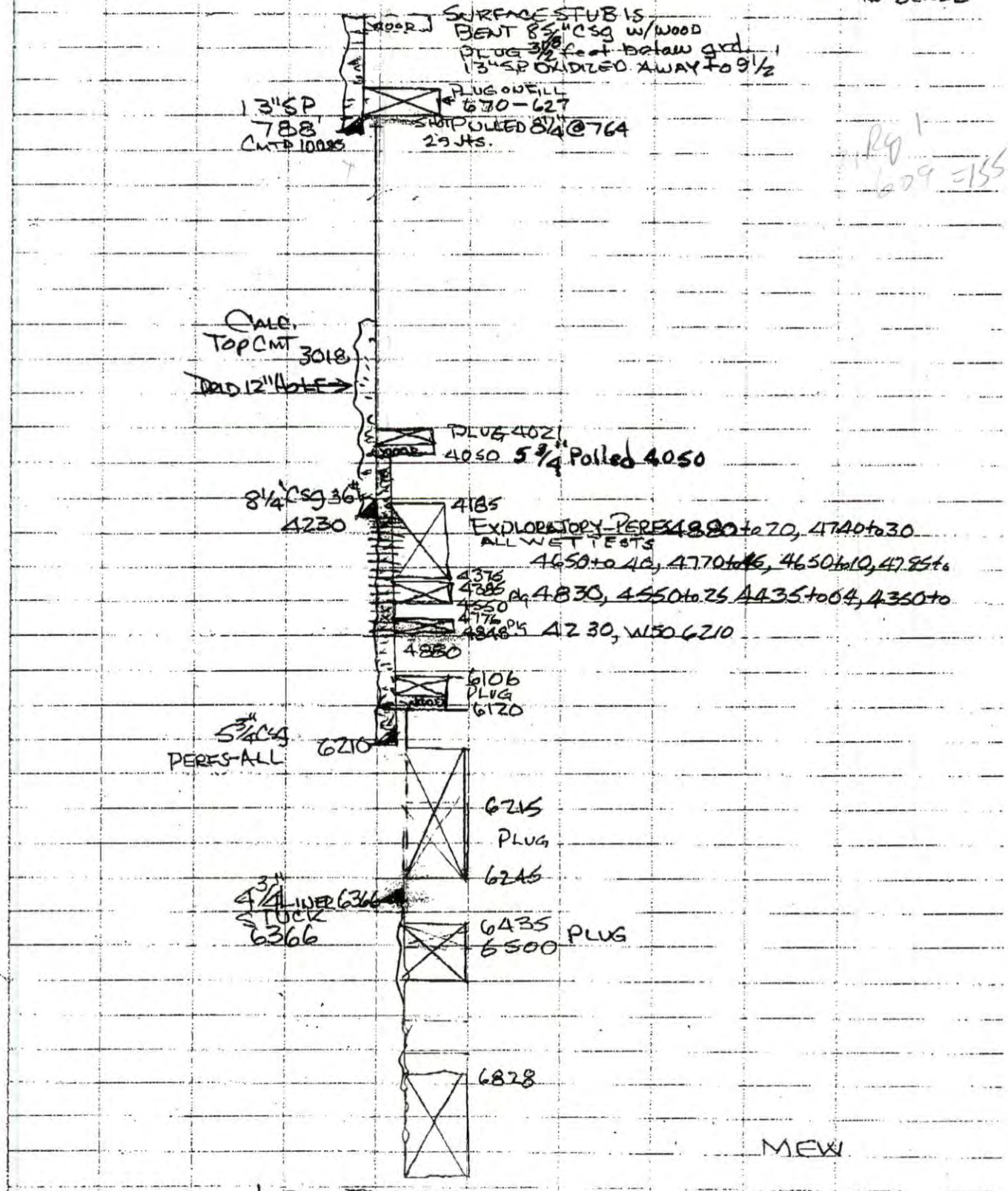
CHEVRON-TEXACO FIELDS #18 Rd.

API# 037_11543

1-1

1-25-0°

MEWright
NO SCALE



MEW

DPNG. & PERMIT I.D. 7483

TELECOPIER TRANSMISSION RECORD

DATE: 2-2-07 HUNTINGTON BEACH, CALIF TIME: 730 A.M. ~~P.M.~~

FOR: 3 PAGES FOLLOWING THIS PAGE.

TO

NAME: Ken Carlson

COMPANY NAME: DOGGR

ADDRESS: CYPRESS

Ken: Fields 18Rd the "Krataville-Target" well Program — well is in parking lot distant from any Buildings. See Bob's Plans.

NAME OF SENDER: Mel Wright

City of Long Beach

Department of Oil Properties

PAGE NO 1 - 1

DATE

TEXACO FIELD 18

Mel - 1-25-07

Surface Plug
NO FENCE
7 SXS
8 5/8 @ SURFACE

180'

670 CANNOT CLEAN OUT FILL

13 3/8 @ 788
Cmtd 100 SXS

670 PLUG

Shot 8 5/8 @ 764 PULL 29 JTS. (8 5/8 @ SURFACE)

CALCTO CMT. 3018'

12" DRLD. HOLE

MUDDED HOLE 45T

PLUG 4051-4021

WOOD

8 5/8 @ 4230
Cmtd. 400 SXS.
TESTED WSO

PERFS 4222-4529
LINER 6 1/4 @

1ST HOLE, Orig. TD 4529

5 3/4 CZ 10K

DEPTH BREAK

No 13" Csg. Get in hole with hose or Pipe & fill up with enough Cmt to make 200' plug at 670 & mud to 100' & Cmt to Surface.

REDRILL TO TD 7483

NOTE:
DRLD 1926
DPN - REDRILLED 1930
PLUGD 1938 to 6106
- 1938-39 WELL TEST
PERFD 4880-4876
4740-4730, 4650-4640
4770-4745, 4650-4610
4785-4830 CMTD 4848 to 4776 & 4560 to 4540 CMTD. out to 4550 PERF 4550 TO 4525, Cmt to 4466, PERF. 4435-4405, Cmtd 4466 to 4385, PERFD. 4350 to 4230,
1939 ABN. WELL; CO to 4375 Cmt to 4185, PULL 5 3/4 @ 4051
Cmt to 4021 on WOODEN PLUG; PULL 8 5/8 FILL @ 670 Cmt to 627, 5 SXS @ SURFACE)
SHOOT 5 3/4 @ 4170, 4100, 4051 PULL @ 4051
WSO 4230
1931 RD. PULLED 6 1/4" 4273
PLUGGED 4529 to 4280
40 SXS.
6106 PLUG GN 4 3/4" CO 20
6245-6215
3 3/4" 2465 TOC 4636 TOP 6120
6500-6435
SQUEEZE PLUGGED 7483-6828

Post-it® Fax Note 7671
Date 1-31 # of pages ▶ 1
To Ken Cantor
From Mel
Co./Dept.
Co.
Phone # Phone #
Fax # Fax #
Fred 18 Gve to Nuno Please

Mel Wright

"Field" 18

Need

Bot. Plug 4021-3921

combo plug 1942-1742' { UH2 Plug.

BFW Plug 1842-1742

Stub Plug 620' 570'

Surf. Plug 55' 5'

must have competent surface casing.

1750
92
1842

1050 AM

1/31/07

Carlson / Kratovil

Mel needs to (re)abd Field
18 he has "touched" it

Target is expecting him (mel) to
submit paperwork & use rig that
is on Carson property to abd this
well.

called Mel Wright left him
message on ans. machine ≈ 10:55 AM
Kr

Carlson / mel wright
11:10 AM
positively
not
leaking

oxidized 43"
S.P.

754
85/8

90' - 29 jts 180' 85/8"

43'
670



FIELD: LONG BEACH
SITE: CHEVRON U.S.A. INC. "FIELD" 18

API # 037-11543



FIELD: LONG BEACH
SITE: CHEVRON U.S.A. INC. "FIELD" 18
API # 037-11543

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF PROPERTY AND WELL TRANSFER

Field or County	District
Imperial Co., Wilmington, L.A. Co., W. Coyote, Montebello, Beverly Hills, Seal Beach, El Segundo, Inglewood, Rosecrans, Venice Beach, Las Cienegas, S. Salt Lake, Dominguez, Hyperion, Lawndale, Leffingwell, Long Beach, Los Angeles Downtown, Potrero, Salt Lake, Santa Fe Springs, Cheviot Hills, Sherman, Torrance, Whittier, Howard Townsite, Huntington Beach, Yorba Linda, Orange Co., Richfield, Kraemer, W. Newport, Sunset Beach, Belmont Offshore	District 1 (Cypress, California)
Former owner: ChevronTexaco Exploration & Production Co. | C5680	Date: 9/23/2005

Well Name	API Number	Section Township Range
See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA	See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA	See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA

Description of the land upon which the well (s) is (are) located.
Various

Date of transfer	New owner		Type of organization
7/11/2005		Chevron U.S.A. Inc. **C5640**	Corp.
	Address:	9525 Camino Media Bakersfield, CA 93311	Telephone: 661/654-7065
Reported by	OG30A received in Sacramento 9/2005		
Confirmed by	Same as above		
New operator new status: **PA**	Designation of Agent: Greg Leyendecker, Agent		
Old operator new status: **AB**	Remarks: For further information see Operator file (C5640) Chevron U.S.A. Inc.		

OPERATOR STATUS ABBREVIATIONS
PA – Producing Active
NPA- No potential, Active
PI- Potential Inactive
NPI-No potential, Inactive
AB-Abandoned or No More Wells

cc: Update; Envir Desk (2); File
Conservation Committee
Harold W. Bertholf, Inc.
L.A. & Orange County Assessors
WellStats – Cypress Dist. 1
WellStats – Sacrament HQS

Deputy Supervisor: R. K. Baker

Signature: Richard K. Baker, District Deputy

FORM AND RECORD CHECK LIST

Form or Record	Initials	Date	Form or Record	Initials	Date
Form OGD121	—	—	Map and Book		
Operator Card	(initials)	9-23-05	Notice cancellations	—	—
Well Records	(initials)	9/26/05 —	Bond Status BB	(initials)	9-23-05
Log Records	(initials)	9/26/05 —	EDP HQS	J.C	7-11-05
Production Reports	—	—	Data Base Poly DI	GM	9-26-05

WELL TRANSFER NOTICE

Effective August 22, 2002

Chevron USA Inc.
Texaco California Inc.
And
Texaco Exploration and Production, Inc.

Transferred ALL THEIR WELLS
To

ChevronTexaco Exploration & Production Company

See OGD156 dated October 18, 2002 in Operator File for ChevronTexaco Exploration & Production Company (C5680) for details

629 South Hill Street,
Los Angeles, California,
March 4, 1940

Mr. V. H. Wilhelm,
929 South Broadway,
Los Angeles, Calif.

Agent for The Texas Company

Dear Sir:

Your report of abandonment of well No. "Field" 18, Sec. 19, T. 4 S., R. 12 W., S. B. B. & M., Long Beach oil field, Los Angeles County, dated February 16, 1940, and submitted to this division on our form 102, has been examined in conjunction with records filed in this office.

A review of the reports and records shows that the requirements of this division, which are based on all information filed with it, have now been fulfilled.

Yours truly,

R. D. Bush
State Oil and Gas Supervisor

By E. Higginson

cc- Company
Mr. R. D. Bush
WJC:G
Long Beach

Reference to file of data

No.				Forms	
20					121
CS					✓

Book
3-5-40
CS

FORM 102.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR The Texas Company FIELD Long Beach

Well No. Field #18, Sec. 19, T. 4-S., R. 12-W., S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated 7/25/39, was filed.

SIGNED [signature]

Date February 16, 1940

Title Chief Petroleum Engineer
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

1940 Date	
12/1	Rigging up to abandon. Pumps all salt water at 50 B/D rate.
12/2	Cleaned out to 4375'. Dumped 20 sacks of cement in stages beginning at 4375'.
12/3	Your Division witnessed and approved plug at 4185'.
12/4	Shot 5-3/4" casing at 4170', 4100', and 4051'.
12/8	Pulled a total of 166 joints, 4051'. Dumped 6 sacks of cement on top of three foot wooden plug driven into stub of 5-3/4" casing. Your Division witnessed and approved plug at 4021'.
12/9	Shot 8-5/8" casing at 764' and pulled a total of 29 joints.
12/10	Could not clean out below 670'. Dumped 15 sacks of Riverside cement at 670'.
12/11	Your Division witnessed and approved plug at 627'. Filled to surface with heavy mud, capped casing with 7 sacks of cement. Abandonment complete.

DIVISION OF OIL AND GAS
RECEIVED
FEB 20 1940
LOS ANGELES, CALIFORNIA

M 109-D.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T1-37001

Los Angeles, Calif. December 27, 1939.

Mr. V. H. Wilhelm,
Los Angeles, Calif.

Agent for THE TEXAS COMPANY

DEAR SIR:

Operations at your well No. "FIELD" 18 Sec. 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by Frank J. Karmelich, Inspector, representative of the supervisor, on December 11, 1939. There was also present A. Nightingale, Driller, and L. Owens, Contractor.

Casing Record 13" cem. 788'; 8¼" cem. 4230', W.S.O., pulled from 764'; 5-3/4" cem. 6210', perf. 4880'-4870', 4830'-4785', 4770'-4745', 4740'-4730', 4650'-4610', 4525'-4485', 4435'-4405', 4350'-4230', pulled from 4051'. T. D. 7483', plugged with cement 7483'-6828', 6500'-6442', 6366'-6190', 6120'-6106', 4848'-4776', 4550'-4385' *

Junk (1st hole) 6¼", 4273'-4529'. T.D. 4529', plugged with cement 4529'-4280'.

The operations were performed for the purpose of testing the location and hardness of a cement plug placed from 670' to 627' in the process of abandonment,

and the data and conclusions are as follows:

*4375'-4185', 4048'-4021', and 670'-627'.

INSPECTOR CORWIN VISITED THE WELL AT 11:30 A. M., DECEMBER 9, 1939, AND NOTED THAT the 8¼" casing was shot loose at 764'.

ENGINEER PEIRCE VISITED THE WELL AT 11:00 A. M., DECEMBER 10, 1939, AND MR. NIGHTINGALE REPORTED THAT the 8¼" casing was pulled from 764'.
THE ENGINEER NOTED THE FOLLOWING:
1. Sand had filled to 624' and could not be cleaned out below 670'.
2. 15 sacks of Riverside cement was dumped at 670'.

INSPECTOR KARMELICH VISITED THE WELL AT 9:00 A. M., AND NOTED THAT the bailer could not be spudded below 627' and brought up a sample of set cement.

The test was completed at 9:30 a. m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 627' ARE APPROVED.

cc- Company
Long Beach
FJK:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Hagenbuch Deputy

FORM 109-D.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-36981

Los Angeles, Calif. December 21, 1939.

Mr. V. H. Wilhelm,
Los Angeles, Calif.
Agent for THE TEXAS COMPANY

DEAR SIR:

Operations at your well No. "FIELD" 18 Sec. 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by Chas. Corwin, Inspector, representative of the supervisor, on December 9, 1939. There was also present A. Nightengale, Driller, and R. Rooker, Helper.

Casing Record 13" cem. 788'; 8¼" cem. 4230', W.S.O.; 5-3/4" cem. 6210'; perf. 4880'-4870', 4830'-4785', 4770'-4745', 4740'-4730', 4650'-4610', 4525'-4485', 4435'-4405', 4350'-4230', pulled from 4051'; 4-3/4" perf. liner 6120'-6366'. T.D. 7483', plugged with cement 7483'-6828', 6500'-6442', 6366'-6190', 6120'-6106', *

Junk (1st hole) 6¼", 4273'-4529'; T.D. 4529', plugged with cement 4529'-4280'.

The operations were performed for the purpose of testing the location and hardness of a cement plug placed from 4048' to 4021' in the process of abandonment,

and the data and conclusions are as follows:

*4848'-4776', 4550'-4385', 4375'-4185' and 4048'-4021'.

INSPECTOR KARMELICH ARRIVED AT THE WELL AT 3:00 P. M., DECEMBER 8, 1939, AND MR. NIGHTENGALE REPORTED THAT the 5-3/4" casing was shot at 4170', 4100' and 4051' and pulled from 4051'.

THE INSPECTOR NOTED THAT 6 sacks of Victor cement was dumped on a wooden plug driven in the stub of the 5-3/4" casing at 4048'.

INSPECTOR CORWIN ARRIVED AT THE WELL AT 10:00 A. M., DECEMBER 9, 1939, AND NOTED THAT the bailer could not be spudded below 4021' and brought up a sample of set cement.

The test was completed at 10:45 a. m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 4021' ARE APPROVED.

cc- Company
Long Beach
CC:OH
CJB

R. D. BUSH
State Oil and Gas Supervisor

By E. Karmelich Deputy

FORM 109-D.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-36980

Los Angeles, Calif. December 21, 1939.

Mr. V. H. Wilhelm,
Los Angeles, Calif.
Agent for THE TEXAS COMPANY

DEAR SIR:

Operations at your well No. "FIELD" 18 Sec. 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by Frank J. Karmelich, Inspector, representative of the supervisor, on December 3, 1939. There was also present L. Owens, Contractor, and A. Nightengale, Driller.

Casing Record 13" cem. 788'; 8¼" cem. 4230', W.S.O.; 5-3/4" cem. 6210', perf. 4880'-4870', 4830'-4785', 4770'-4745', 4740'-4730', 4650'-4610', 4525'-4485', 4435'-4405' and 4350'-4230'; 4-3/4" perf. liner 6120'-6366'. T.D. 7483', plugged with cement 7483'-6828', 6500'-6442', 6366'-6190', 6120'-6106', 4848'-4776', 4550'-4385', and *	Junk (1st hole) 6¼", 4273'-4529'; T.D. 4529', plugged with cement 4529'-4280'.

The operations were performed for the purpose of testing the location and hardness of a cement plug proposed to be placed from 4385' to 4210' in the process of abandonment,

and the data and conclusions are as follows:

* 4375'-4185'.

THE INSPECTOR ARRIVED AT THE WELL AT 2:30 P. M., DECEMBER 1, 1939, AND NOTED THE FOLLOWING:
1. The hole was cleaned out to 4375'.
2. The cementing operations were started at 4375'.

THE INSPECTOR ARRIVED AT THE WELL AT 1:00 P. M., DECEMBER 3, 1939, AND MR. NIGHTENGALE REPORTED THAT on December 1 and 2, 1939, 20 sacks of Victor cement was dumped in stages beginning at 4375'.

THE INSPECTOR NOTED THAT the bailer could not be spudded below 4185' and brought up a sample of set cement.

The test was completed at 2:00 p. m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 4185' ARE APPROVED.

cc- Company
Long Beach
FJK:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Hagenbuch Deputy

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-34346

Los Angeles, Calif. October 23, 1939.

Mr. V. H. Wilhelm,
Los Angeles, Calif.
Agent for THE TEXAS COMPANY

121

Dear Sir:

Your proposal to abandon Well No. "FIELD" 18, Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, Los Angeles County, dated Oct. 17, 1939, received Oct. 19, 1939, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

Records in addition to, or at variance with those shown in the notice:
The hole is plugged with cement 7483'-6828', 6500'-6442', 6366'-6190', 6120'-6106', 4848'-4776', and 4550'-4385'.
T. D. (old hole) 4529'.

THE NOTICE STATES:
"The present condition of the well is as follows:
13" cemented at 788'.
8-1/4" cemented at 4230', W. S. O.
5-3/4" cemented at 6210', W.S.O., perf. in hole 4870-4880', 4785-4830', 4745-4770', 4730-4740', 4610-4650', 4485-4525', 4435-4405', 4350-4230'.
Total depth 7483'.
Plugged depth 4385'.
Well pumps all salt water at 50 B/D rate."

PROPOSAL:
"The proposed work is as follows:
Clean out to 4385' and plug solid with cement to 4210'.
Cut and pull 5-3/4" casing from 4210'.
Cut and pull 8-1/4" casing from 768' and cap stub with 20' of cement.
Fill all voids with heavy mud.
Cap 13" at surface and abandon."

DECISION:
THE PROPOSAL IS APPROVED PROVIDED THAT THIS DIVISION SHALL BE NOTIFIED TO WITNESS the location and hardness of cement plugs at 4210' and 748'.

NOTE: In the event the proposed work is done by a contractor, this division shall be consulted regarding additional requirements.

cc- Company
Long Beach
WJC:OH
CM

R. D. BUSH
State Oil and Gas Supervisor

By E. Hugenin Deputy

FORM 108. 61558 8-38 5M.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
OCT 19 1939
LOS ANGELES, CALIFORNIA

Notice of Intention to Abandon Well

This notice must be given at least five days before work is to begin

Los Angeles, Calif. October 17, 1939

DIVISION OF OIL AND GAS

Los Angeles, Calif.

In compliance with Section 16, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to abandon well No. Field #18

Sec. 19, T. 4-S., R. 12-W., S.B. B. & M. Long Beach Field,

Los Angeles County, commencing work on the 22nd day

of October, 1939.

The present condition of the well is as follows:

13" cemented at 788'.
8-1/4" cemented at 4230', W.S.O.
5-3/4" cemented at 6210', W.S.O., perf. in hole 4870-4880', 4785-4830', 4745-4770', 4730-4740', 4610-4650', 4485-4525', 4435-4405', 4350-4230'.
Total depth 7483'.
Plugged depth 4385'.
Well pumps all salt water at 50 B/D rate.

The proposed work is as follows:

Clean out to 4385' and plug solid with cement to 4210'.

Cut and pull 5-3/4" casing from 4210'.

Cut and pull 8-1/4" casing from 768' and cap stub with 20' of cement.

Fill all voids with heavy mud.

Cap 13" at surface and abandon.

aband

Name			Cards	Forms	
				✓	21

THE TEXAS COMPANY
(Name of Operator)

By [signature]
Chief Petroleum Engineer

ADDRESS NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

FORM 102.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
AUG 4 - 1939
LOS ANGELES, CALIFORNIA

Subsequent Work Report

OPERATOR The Texas Company FIELD Long Beach

Well No. Field #18, Sec. 19, T. 4-S., R. 12-W., S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated June 22,1931, was filed.

SIGNED [signature]

Date July 25, 1939 Title Chief Petroleum Engineer
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date	
1938	
2-16	Cleaned out to 6366'
2-17	Dumped in 12-1/2 sacks of cement at 6366', filling to 6191'.
2-18	Your Division witnessed and approved top of plug at 6190'.
2-19	Set wood bridging plug on top of the 4-3/4" liner at 6120'. Dumped in 2 sacks cement, filling to 6106'. Filled hole to 3075' with water and perforated 4870-4880' with twenty shots.
2-21	Pumped 36 barrels of water in six hours.
2-22 to 2-28	Averaged 150 to 200 B/D water.
3-4	Pumped in 50 sacks cement through retainer set at 4848', final pressure 1900#. Estimated forty sacks away.
3-10	Bailed fluid in casing down to 3500' - no rise. Filled hole with fluid to 2100'. Perforated 4640-4650', 4730-4740' with twenty 1/2" holes.
3-11 to 3-16	Pumping 75 to 175 B/D water.
3-18	Cemented through Baker retainer at 4715' with 45 sacks, final pressure 2800#. Estimated 43 sacks away.
3-24	No fluid entering hole.
3-31	Found top of cement at 4724'. Drilled out retainer.
4-2	Drilled out cement to 4746' and cleaned out to 4852'.
4-5	Pumped 101 barrels salt water.

FORM 102.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR The Texas Company FIELD Long Beach

Well No. Field #18, Sec. 19, T. 4-S., R. 12-W., S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated June 22, 1931, was filed.

SIGNED [signature]

Date July 25, 1939 Title Chief Petroleum Engineer

(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date	
1938	
4-6	Perforated with McCullough gun from 4745-4770' with fifty 1/2" holes.
4-7	Perforated 4610-4650' with eighty 1/2" holes; 4485-4550' with one hundred and thirty 1/2" holes. Bailing fluid at 3300'.
4-10 to 4-19	Pumping 85 to 124 B/D water.
4-21	Perforated 4785-4830' with ninety 1/2" holes.
4-23 to 4-29	Pumping 150 to 170 B/D water.
5-4	Cleaned out to 4848'. Dumped in eight sacks cement, filling to 4776'.
5-12 to 5-27	Pumping 180 B/D water.
5-28	Cleaned out to 4776'. Ran water witch and located entry at 4546-4550'.
6-19	Filled with sand to 4560'. Dumped in two sacks of cement at 4560'.
6-20	Dumped in 1/2 sack cement, filling to 4540'.
6-25 to 7-20	Intermittently pumping 80 to 180 B/D salt water.
1939	
2-27	Drilled out to 4550'.
2-28	Reperforated 4550-4525' with thirty 1/2" holes. Fluid level dropped from 3050 to 3350'.
3-14	Cleaned out to 4550' and dumped 3-1/2 sacks of cement, filling to 4531'.
3-19 to 4-3	Pumping 65 to 97 B/D, with 98% cut.
5-13	Cleaned out to 4531'.
5-14	Dumped in fifteen sacks cement, filling from 4531 to 4466'.

FORM 102.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR The Texas Company FIELD Long Beach

Well No. Field #18, Sec. 19, T. 4-S., R. 12-W., S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated June 22, 1931, was filed.

SIGNED [signature]

Date July 25, 1939 Title Chief Petroleum Engineer
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date	
1939	
5-23	Perforated with McCullough gun 4435-4405' with thirty 1/2" holes.
5-26 to 6-5	Pumped 60 to 90 B/D water.
6-8	Cleaned out to 4466' and dumped in 11 sacks cement, filling to 4385'. Perforated 4350-4230' with one hundred and twenty 5/8" holes. Fluid level dropped from 2560-3566'.
6-12 to 6-25	Pumping salt water - 40 to 60 B/D.

FORM 109-D. 47172 7-37 15M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-33890

Los Angeles, Calif. March 4 1938

Mr. V. H. Wilhelm,
Los Angeles, Calif.
Agent for THE TEXAS COMPANY

DEAR SIR:

Operations at your well No. "FIELD" 18 Sec. 19, T. 4S., R. 12W. S. B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by F.J. Karmelich, Inspector, representative of the supervisor, on February 18, 1938. There was also present H. O. Woodruff, Engineer, and I. N. Truesce, Driller.

Casing Record	Junk
13" cem. 788'; 8½" cem. 4230', W. S. O.; 5-3/4" cem. 6210' W. S. O.; 4-3/4" perf. liner 6120'-6366'. T. D. 7483', plugged with cement 7483'-6828', 6500'-6442' and 6366'-6190'.	(1st hole) 6½" 4273'-4529'. T. D. 4529', plugged with cement 4529'-4280'.

The operations were performed for the purpose of testing the location and hardness of a cement plug proposed to be placed from 6366' to 6190' in the process of plugging back,

and the data and conclusions are as follows:

THE INSPECTOR ARRIVED AT THE WELL AT 3:00 P. M. AND MR. WOODRUFF REPORTED THE FOLLOWING:

1. The 4-3/4" liner was cleaned out to 6366'.
2. On February 17, 1938, 12½ sacks of Colton's Portland cement was dumped at 6366'.

THE INSPECTOR NOTED THAT the bailer could not be spudded below 6190' and brought up a sample of set cement.

The test was completed at 4:00 p. m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 6190' ARE APPROVED.

cc- Company
Long Beach
FJK:G

R. D. BUSH
State Oil and Gas Supervisor

By E. Hugenin Deputy

FORM 111. 46011 6-37 20M.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-32056

Los Angeles, Calif. February 23, 1938.

Mr. V. H. Wilhelm,
Los Angeles, Calif.
Agent for THE TEXAS COMPANY

121

Dear Sir:

Your proposal to plug & alter casing Well No. "FIELD" 18, Section 19, T. 4 S., R 12 W., S.B. B. & M., Long Beach Field, Los Angeles County, dated Feb. 18, 1938, received Feb. 21, 1938, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS: The condition of the well is as stated in the notice.

THE NOTICE STATES:
"The present condition of the well is as follows:
13" cemented at 788'.
8-1/4" " " 4230', W. S. O.
5-3/4" " " 6210', W. S. O.
246' of 4-3/4" perf. liner froze at 6366'.
Total depth 7483'.
Plug depth 6366'.

Junk: 6-1/4" csg. s. t. 4273-4529'.

Average daily production for January, 1938, 14 barrels of oil and 1 barrel of water."

PROPOSAL:
"The proposed work is as follows:
Clean out to bottom and plug solid with cement to 6190'.
Set cement bridge 4900-4920'.
Gun perforate intervals 4485-4880'
Test for production."

DECISION:
THE PROPOSAL IS APPROVED PROVIDED THAT THIS DIVISION SHALL BE NOTIFIED TO WITNESS the location and hardness of cement plug at 6190'.

cc- Company
Long Beach
WJC:OH

J.P.

R. D. BUSH
State Oil and Gas Supervisor

By E. Higginbotham Deputy

FORM 107. 42649 3-37 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
FEB 21 1938
LOS ANGELES, CALIFORNIA

Notice of Intention to Deepen, Redrill, Plug or Alter Casing in Well

This notice must be given fifteen days before work begins when possible

Los Angeles, Calif. February 18, 1938

DIVISION OF OIL AND GAS

Los Angeles, Calif.

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of ~~deepening, redrilling~~, plugging or altering casing at well No. Field #18
(Cross out unnecessary words)

, Sec. 19, T. 4-S., R. 12-W., S. B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

13" cemented at 788'.
8-1/4" " " 4230', W.S.O.
5-3/4" " " 6210', W.S.O.
246' of 4-3/4" perf. liner froze at 6366'.
Total depth 7483'.
Plug depth 6366'.

Junk: 6-1/4" csg. s.t. 4273-4529'.

Average daily production for January, 1938, 14 barrels of oil and 1 barrel of water.

The proposed work is as follows:

Clean out to bottom and plug solid with cement to 6190'.

Set cement bridge 4900-4920'.

Gun perforate intervals 4485-4880'.

Test for production.

pl + alt csg

Reference to file of date

Name				Terms	
				✓	✓

The Texas Company
(Name of Operator)

By [signature]
Chief Petroleum Engineer

ADDRESS NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

MEMORANDUM FOR WELL RECORD.

Letter to R. D. Bush, dated July 27, 1932, making typographical corrections in the designations of a number of The Texas Company wells, is filed with record of well No. "Isaac" 1, Richfield field.

FORM 102. 80626 11-30 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
JUN 26 1931
LOS ANGELES, CALIFORNIA

LOG OF OIL OR GAS WELL

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M., Well No. FIELDS #18

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated 7-8-26, was filed.

SIGNED O. J. Wilkinson

Date June 22nd, 1931

Title Chief Petroleum Engr.
Reference to file of data
(President, Secretary or Agent)

Maps	Model	Cross Section	Cards	Forms 114	Forms 121

Rigged up to redrill and deepen 11-10-30.

Cleaned out to 4529' and pumped in 40 sax cement.
Cut and pulled 4274' of 6-1/4" casing.
Milled up 6-1/4" casing to 4278' and shot hole at this depth w/ 50# shell.
Sidetracked 6-1/4" casing to 4529'.
Drilled to 7483' and due to unfavorable showings we plugged the well to 6828' under pressure, with 170 sax Victor cement.
Your Division witnessed and approved plug at 6828'.

Filled hole w/ mud to 6500' and pumped in 35 sax Victor cmt. Top cmt. at 6435'.
Bridged hole 6245-10' w/ 15 sax Victor cmt.
Your Division witnessed and approved mudding operations.

Cemented 5-3/4" 22½# casing at 6210' w/ 75 sax cement.
Drilled out 35' of cement and cleaned out to 6215'.
Swabbed to 3,000' and fluid rose 40' in 19 hours.
Your Division witnessed and approved the shut-off.

Cleaned out to 6500' and pumped in 35 sax cement. Cement did not set, so cleaned out to 6486' and pumped in 35 sax cement under 250# pressure.
Your Division witnessed and approved plug at 6442'.

Ran 246' of 4-3/4" casing which stuck at 6366'.
A production test showed all salt water, and during the process of swabbing, about 800' of heavy rotary mud heaved up into the tubing, which suggested the failing of the plug at 6442'.
Cleaned out sand bridge 6271-6366' and milled out bull nose on bottom of liner. Cleaned out to 6442' and plug supported weight of drill pipe, indicating entry of water above the plug.
Four runs of the water witch indicated bottom water.
Plugged hole 6441-6366' w/ 7 sax cement.
Swabbed well, but it would not flow.
Put well on pump 5-12-31 and it pumped water until 5-22-31 when it produced 52 barrels gross, 50% cut.
5-23-31 Well produced 46 bbls., 27.0 grav., 11% cut.
5-28-31 Shut well in account curtailment.

M 101. 80629 11-30 30M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M. Well No. FIELD #18

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Name of Formation
4529	4577	48	Sandy Shale
	4611	34	Sand w/ stks. sh.
	4621	10	Shale and sand
	4622	1	Shell
	4630	8	Hard sand.
	4751	21	Sdy. sh. and shale
	4785	34	Sdy. sh. w/ stks. hd. sh.
	4797	12	Hard sand
	4800	3	Shell
	4809	9	Hard sand
	4848	39	Sdy. sh. and hd. sd.
	4861	13	Hard sand.
	4875	14	Sdy. sh. and shells
	4923	48	Sandy shale
	4925	2	Hard shell
	4989	64	Sdy. sh. and shells
	5058	69	Sand and shale
	5078	20	Sh., w/ thin stks. hd. sd.
	5086	8	Hard sand
	5106	20	Sand and shale
	5109	3	Hard sand
	5119	10	Sand and shale
	5133	14	Hard sand
	5199	66	Sandy shale
	5206	7	Sand and shale
	5232	26	Sand, sh., and shell
	5259	27	Hard sd. and shale
	5322	63	Sandy shale
	5370	48	Sand and shale
	5395	25	Sdy. sh. w/ stks. hd. sh.
	5422	27	Hard sd. and shale
	5428	6	Hard sand
	5431	3	Sand and shells
	5458	27	Tough shale
	5472	14	Shale and shell
	5490	18	Sand and shale
	5492	2	Shell
	5498	6	Sand and shale
	5508	10	Tough shale
	5521	13	Sdy. sh. and shells
	5536	15	Sand and shale
	5548	12	Tough shale
	5563	15	Sh. and stks. sand
	5577	14	Sand and shale

M 101. 80629 11-30 30M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M. Well No. FIELD #18

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Name of Formation
5577	5611	34	Tough shale
	5632	21	Sdy. sh. and shells
	5655	23	Sand and Shale
	5694	39	Shale
	5712	18	Shale and shell
	5721	9	Shale and hd. sand
	5731	10	Tough shale
	5754	23	Shale and shell
	5764	10	Sd. and stks. tgh. sh.
	5777	13	Shells and shale
	5801	24	Shale w/ stks. sand
	5817	16	Tough shale
	5819	2	Shell
	5839	20	Tough shale
	5842	3	Shell
	5846	4	Shale and shell
	5878	32	Shale
	5888	10	Shale and shell
	5910	22	Sandy shale
	5924	14	Shale and hd. sd.
	5982	58	Sandy shale
	6125	143	Sand and shale
	6150	25	Shale
	6151	1	Gray sd.
	6155	4	Hd. sh. w/ thin stks. oil sd.
	6157	2	Oil sd. and shale
	6163	6	Hard shale
	6166	3	Gray sand
	6169	3	Hard shale
	6172	3	Oil sd. and shale
	6193	21	Br. fract. sh. w/ few small stks. oil sd.
	6214	21	Fract. br. and black sh.
	6234	20	Oil sd. and shale
	6237	3	Hd. sandstone shell
	6252	15	Oil sand
	6253	1	Shale
	6255	2	Oil sand
	6256	1	Shale
	6261	5	Oil sd. w/ few stks. sh.
	6271	10	Oil sand
	6284	13	Oil sd. w/ stks. shale
	6285	1	Sandstone shell

M 101. 80629 11-30 30M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M. Well No. FIELD #18

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Name of Formation
6285	6286	1	Oil sand
	6287	1	Shell and shale
	6290	3	Oil sand
	6392	2	Shell and shale
	6301	9	Sand
	6308	7	Oil sand
	6311	3	Hd. br. shale
	6317	6	Oil sand
	6318	1	Shell
	6364	46	Oil sand
	6365	1	Shell
	6384	19	Oil sand
	6387	3	Hd. sandstone shell
	6458	71	Oil sd. w/ 3" shell on bottom
	6542	84	Sand and shell
	6545	3	Shell
	6548	3	Sand and shale
	6550	2	Hard sand
	6553	3	Br. sdy. shale
	6560	7	Br. sh. w/ stks. med. grained water sd.
	6570	10	Gray water sd. w/ few small stks. sdy. sh.
	6571	1	Hd. sdstone shell.
	6580	9	Gray water sand
	6611	31	Sand w/ hd. stks.
	6626	15	Sand
	6640	14	Sd. and stks. hd. sd.
	6650	10	Sand
	6652	2	Poor oil sd. and stks. sh.
	6654	2	Brown shale
	6660	6	Br. sh. w/ stks. gr. sd.
	6749	89	Sand and shale
	6750	1	Hd. sandstone shell
	6752	2	Fract. black shale
	6759	7	Gr. sh. stkd. w/ oil sd.
	6845	86	Sand and shale
	6847	2	Sandstone shell
	6854	7	Poor Oil sd. stks. gray
	6866	12	Firm gray sd., stks. poor oil sd.
	6877	11	Br. sh. w/ stks. good oil sd.
	6882	5	Fract. br. sh., showing oil
	6910	28	Oil sand
	6911	1	Sdy. br. shale
	6926	15	Oil sand
	6928	2	Sandstone shell
	6931	3	Oil sand

FORM 101. 80629 11-30 30M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M. Well No. FIELD #18

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Name of Formation
6931	6932	1	Sandy shale
	6940	8	Poor oil sand
	6942	2	Oil sd., w/ 3" shell on top
	6951	9	Br. sh. and oil sd.
	6953	2	Gray water sd. and black sdy. shale
	6956	3	Poor oil sd.
	6962	6	"ater sd. and sdy. sh.
	7018	56	Shell, shale and gr. water sd.
	7021	3	Hard shale
	7022	1	Br. sdy. shale
	7053	31	Gr. water sd., shell and shale
	7056	3	Brown shale, free oil in fract. planes
	7068	12	Hd. sdy. sh. w/ 6" oil sd. on top
	7077	9	Br. sh. and sdy. br. sh.
	7083	11	Soft gray sd.
	7089	1	Br. sh. and gray sd.
	7105	16	Gray water sand w/ shell on bottom
	7107	2	Shell
	7111	4	Gray sand
	7113	2	Shell
	7122	9	Gray water sand
	7125	3	Br. sdy. sh. and gr. sd.
	7135	10	Gray water sd.
	7153	18	Br. sh. and gray sd.
	7159	6	Hd. br. sdy. shale
	7161	2	Soft gray sd.
	7167	6	Br. sh. w/ stks. gr. sd.
	7169	2	Soft oil sand
	7171	2	Hd. br. shale
	7187	16	Soft oil sd. w/ stks. sh.
	7193	6	Hd. br. shale
	7207	14	Gr. water sd. w/ small stks. sh.
	7227	20	Hd. br. sh. w/ few thin stks. gray sd.
	7276	49	Sand and shale
	7283	7	Poor oil sd.
	7296	13	Sh. w/ stks. soft fair oil sd.
	7300	4	Soft fair oil sd.
	7308	8	Oil sd. and sdy. sh.
	7319	11	Hd. br. sh. w/ small lense gr. sd. near bottom
	7349	30	Oil sd. and shale
	7352	3	Br. sh. and sand
	7371	19	Oil sand
	7404	33	Br. sh. w/ stks. oil sd.

FORM 101. 80629 11-30 30M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M. Well No. FIELD #18

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Name of Formation
Top of Formation	Bottom of Formation		
7404	7424	20	Oil sd. and stks. shale
	7427	3	Oil sand
	7430	3	Hd. sandstone shell
	7443	13	Oil sand
	7463	20	Oil sd., w/ thin hd. gr. stks.
	7483	20	Gray water sd. w/ stks. oil sd.

FORM 101-A. 82953 2-31 20M
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STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS
RECEIVED
JUN 26 1931
LOS ANGELES, CALIFORNIA

DIVISION OF OIL AND GAS

CORE RECORD OF OIL OR GAS WELL

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M., Elevation 92. Well No. FIELDS #18

In compliance with the provisions of Section 18, Chapter 718, Statutes of 1915, as amended, the information given herewith is a complete and correct record of all cores taken in this well to the depth on the accompanying log.

Signed [signature]

Date June 23rd, 1931. Title Chief Petroleum Engr.
(President, Secretary or Agent)

Reference to file of data
Maps | Model | Cross section | Cards | Forms 121

DATE	MAKE OF BARREL	SIZE OF BARREL	FROM (DEPTH)	TO (DEPTH)	CORE RECOVERED	DESCRIPTION OF CORE	ETHER TEST	CONDITION OF CORE
			6150	6172	21'	6" soft gray sd., 4' hd. shale, w/ thin stks. firm fair oil sd., & one stk. fine gray., 2" oil sd., 8" hd. shale, 8" fine good oil sd., 6' hard shale w/ one thin stk. oil sd., 1' fine gray sd., 5° dip., 2' fine firm gray sd., 3' hd. shale, 6" oil sd., 6" sh., 1' oil sd., 1' shale, 1' firm fair oil sd.	✓	
			6172	6193	15'	Slightly fract. brown shale w/ a few small stks. oil sd.		
			6193	6214	12'	3' hd. br. sh., 1½' fract. fossile black shale, 3½' hd. br. sh., 4' very fract. brown & black shale.		
			6214	6234	10½'	1'8" hd. sh., 4" fine firm oil sd., 2" shale, 2' fine firm oil sd., 6" hd. sh.,1' fine good oil sd., 1' hd. sh., 3'10" fine firm good oil sd., w/ 3" stk. shale.		
			6234	6251	3'	2½' very hd. sandstone shell, 6" med. fine fair oil sd.		
			6251	6271	19½'	1'3" fine firm good oil sd., 9" shale, 2' fine firm good oil sd., 8" shale, 4'10" fine firm fair oil sd., w/ few 2" stks. sh., 10' hd. cse. fair to poor oil sd.		
			6271	6284	6'	3' fine firm good oil sd., 6" hd. shale, 1½' med. to fine fair oil sd., 4" shale, 8" fine oil sd.		
			6284	6301	6'	1' sandstone shell, 1' fine good oil sd., 1' hd. sh.,3" sandstone shell, 1'3" fine firm fair oil sd., 1' sandstone shell, 6" sh.		
			6301	6321	18'	3" shell, 5' fine firm good oil sd., 2'9" hd. br. sh., 5'8" fine firm good oil sd.,1'4" sandstone shell, 3' fine firm good oil sd.		

FORM 101-A. 62953 2-31 20M
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DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

CORE RECORD OF OIL OR GAS WELL

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M., Elevation 92. Well No. FIELD #18

In compliance with the provisions of Section 18, Chapter 718, Statutes of 1915, as amended, the information given herewith is a complete and correct record of all cores taken in this well to the depth on the accompanying log.

Signed [signature]

Date June 23rd, 1931 Title Chief Petroleum Engr.
(President, Secretary or Agent)

DATE	MAKE OF BARREL	SIZE OF BARREL	FROM (DEPTH)	TO (DEPTH)	CORE RECOVERED	DESCRIPTION OF CORE	ETHER TEST	CONDITION OF CORE
			6321	6341	20'	13½' med. fine hard rich oil sd., 6" slickensided br. shale, 6' med. fine hard rich oil sand.		
			6341	6361	4'	1' firm fine rich oil sd., 3' soft fine good oil sd.		
			6361	6381	9'	3' fine firm rich oil sd., w/one 2" stk. shale, 1' hd. shell, 5' fine firm good oil sd.		
			6381	6401	9½'	2'8" hd. cse. good oil sd., 4" sandstone shell, 3' hd. cse. good oil sd., 2½' hd. sandstone shell, 1' fine fairly soft good oil sd.		
			6401	6421	5'	4'8" hd. med. fine oil sd., 4" hd. sdy. sh.		
			6421	6441	6'	Fine firm soft good oil sd.		
			6441	6458	4'3"	4' hd. med. fine good oil sd., 3" hard dark sandstone shell.		
			6550	6560	5'	2½' br. sdy. sh., 5-6° dips., 2½' br. sh. w/ stks. med. gray water sd.		
			6560	6570	7½'	Med. grained gray water sd., w/ few small stks. sdy. shale		
			6570	6580	7½'	1' hd. sdstone shell, 6" fine gray sd., and br. sh. & 6' med. grained soft gray water sand.		
			6650	6660	6'	6" br. sh., 4" fine poor oil sd., 4" br. sh., 7" fine poor oil sd., 2' br. shale, some slickensiding, 3" hd. dark gray sd., 2' br. sh., stks. fine gray sd.		
			6749	6759	3'8"	1'2" hd. sandstone shell, 1'6" fract. black shale, 1' fine firm gray sd., stkd. w/ oil sd.		
			6846	6854	2½'	1' hd. sandstone shell, 1½' cse. poor oil sd., stks. gray sd.,wet.		
			6854	6866	4'	Med. fine firm gray sd., stkd. w/ poor oil sd.		
			6866	6877	11'	Br. sh., stks. fine good oil sd., 90-95% shale, dip 19°.		

FORM 101-A. 82953 2-31 20M
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STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

CORE RECORD OF OIL OR GAS WELL

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M., Elevation 92. Well No. FIELD #18

In compliance with the provisions of Section 18, Chapter 718, Statutes of 1915, as amended, the information given herewith is a complete and correct record of all cores taken in this well to the depth on the accompanying log.

Signed [signature]

Date June 23rd, 1931

Title Chief Petroleum Engr.
(President, Secretary or Agent)

DATE	MAKE OF BARREL	SIZE OF BARREL	FROM (DEPTH)	TO (DEPTH)	CORE RECOVERED	DESCRIPTION OF CORE	ETHER TEST	CONDITION OF CORE
			6877	6887	9½'	5'4" firm brown shale w/ one 2" stk. fine good oil sd., free oil in fractures. Dip 19°, 4'2" soft good oil sd.		
			6887	6898	9½'	4" hd. oil sd., 5'2" fine firm good oil sd., 6" hd. sdy. sh., 3½' fine soft good oil sd.		
			6898	6909	8'	fine firm good oil sand.		
			6909	6920	3'4"	10" fine good oil sd., 1' sdy. br. sh., 1½' fine firm good oil sd.		
			6920	6930	8'	6" hd. br. sh., 5½' fine good oil sd., 1½' hd. sdstone shell, 6" fine soft good oil sand.		
			6930	6940	6'	1' fine good oil sd., 6" sdy. sh., 4½' fine fair oil sd., does not look rich.		
			6940	6951	3'	3" very hard shell, 1½' fine soft good oil sd., 1' stks. br. sh. & oil sd.		
			6951	6962	11'	4" black sdy. sh., 1'8" water sd., 3' med. coarse poor oil sd., 6" sdy. sh., 2'6" water sd., 1½' sdy. black sh., 1½' water sand		
			6962	6970	2'	8" hd. sh., 10" gray water sd., 6" hd. sandstone shell.		
			6970	6981	10'	1' sandstone shell, 6' med. fine gray water sd.,,couple thin stks. shale, 2' hard br. shale, 1' soft gray sand.		
			6981	7001	13'	6' br. sh., couple thin stks. fine gray sand, 7' soft gray water sd., couple thin stks. shale, Dip 20°.		
			7001	7006	1-1/3'	3" hard shale, 13" firm gr. water sand.		
			7006	7018	3½'	2" gray water sd., 1'4" hard sh., 2' hard sandstone shell.		
			7018	7038	9'	3' hard shale, 1' br. sdy. sh., 1½' gr. water sd., & wet oil sd., 3" sh., 6" soft gr. sd., 9" hd. sh., 2' soft fine gr. sd.,		

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DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

CORE RECORD OF OIL OR GAS WELL

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M., Elevation 92. Well No. FIELD #18

In compliance with the provisions of Section 18, Chapter 718, Statutes of 1915, as amended, the information given herewith is a complete and correct record of all cores taken in this well to the depth on the accompanying log.

Signed [signature]

Date June 23rd, 1931 Title Chief Petroleum Engr.
(President, Secretary or Agent)

DATE	MAKE OF BARREL	SIZE OF BARREL	FROM (DEPTH)	TO (DEPTH)	CORE RECOVERED	DESCRIPTION OF CORE	ETHER TEST	CONDITION OF CORE
						couple 2" stks. sh., Dip about 20°.		
			7038	7053	11'	1' soft gray sd., 6" sandstone shell, 9½' soft gray water sd., couple 2" stks. br. sh.		
			7053	7068	4'	2½" br. sh., free oil in planes, 6" fine rich oil sd., 1' hd. sdy. sh.		
			7068	7088	10'	8½' br. shale and sdy. br. shale w/ one 2" stk. oil sd., 1½' fine soft gr. sd.		
			7088	7105	10½'	1' br. sh., soft gr. sd., 9' firm and soft gr. water sd., 6" hd. sandstone shell.		
			7105	7122	12'	1½' hd. sandstone shell, 3½' med. gr. sd., 1½' hd. sandstone shell, 5½' med. soft gr. water sand.		
			7122	7135	6'	3" sandstone shell, 2'9" br. sdy. sh. & fine gr. sd., 3' soft gr. water sd., little oil staining, but all wet.		
			7135	7153	7'3"	5" stky hd. sh., sdy. br. sh., couple stks. firm gr. sd., 6" soft gr. sd., 9" br. shale, stks. fine gr. sd., 1' fine soft gr. sand.		
			7153	7167	7'4"	5'3" hd. br. sdy. sh., 1½' fine soft gr. sd., 7" br. sh., stks. gr. sd.		
			7167	7187	7'3"	2'9" soft med. fine good oil sd., good cut, 1½' hd. br. sh., 6" soft fine oil sd., 3" br. sh., 2'3" fine soft & firm oil sd., good cut, 2" sh. on bottom.		
			7187	7207	9'	5½" hd. br. sh., 3½' fine soft gr. water sd., couple 2" stks. sh., Dip about 15°.		
			7207	7227	20'	Hd. br. sh., few thin stks. gr. sd.		

FORM 101-A. 82953 2-31 20M
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DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

CORE RECORD OF OIL OR GAS WELL

FIELD LONG BEACH COMPANY THE TEXAS COMPANY

Sec. 19, T. 4S, R. 12W, S.B. B. & M., Elevation 92. Well No. FIELD #18

In compliance with the provisions of Section 18, Chapter 718, Statutes of 1915, as amended, the information given herewith is a complete and correct record of all cores taken in this well to the depth on the accompanying log.

Signed J. J. Wilbur Jr.

Date June 23rd, 1931 Title Chief Petroleum Engr.
(President, Secretary or Agent)

DATE	MAKE OF BARREL	SIZE OF BARREL	FROM (DEPTH)	TO (DEPTH)	CORE RECOVERED	DESCRIPTION OF CORE	ETHER TEST	CONDITION OF CORE
			7276	7296	9½'	5' firm poor oil sd., w/ 1-2" and 1-4" shell, 1' fine soft poor oil sand, 6" sandstone shell, 3' hd. sh., stks. soft fair oil sd.		
			7296	7308	5½'	4' fine soft fair oil sd., 4" sandstone shell, 1'2" soft fine oil sd., & sdy. shale.		
			7308	7319	6'	hd. br. sh., w/ one thin lense gr. sd., near bottom, Dip 30°.		
			7319	7329	5'	4'8" fine oil sd. & br. sh., all mixed up, 4" hd. shale.		
			7329	7349	9'	1½' firm rich oil sd., 2' hd. sh., 2½' hd. oil sd., 3' fine soft good oil sd., w/ 4" stk. sh. near bottom.		
			7349	7367	6'	3' hd. dk. br. shale w/ little sand, 3' fine good oil sd., stks. shale, 75% sd. - 29° dip.		
			7367	7386	8' 4'	Med. fine good oil sd., 4' br. shale, thin stks. fine good oil sd., 95% sh.		
			7386	7404	6'	8" hd. shale, 1' med. fine good oil sd., 4'10" br. sh., couple thin stks. oil sd. at top.		
			7404	7424	12'	2' hard good oil sd., 1' hd. sh. 3½' fine hd. fair oil sd., stks. hd. sh., 2½' med. hd. oil sd., w/ one stk. shale, 4" sandstone shell, 2'8" soft and firm good oil sd.		
			7424	7443	9'	3' med. fine good oil sd., 3' hd. sandstone shell, 3' fine soft good oil sd.		
			7443	7463	15"	Fine hard good oil sd., w/ thin hd. gray stk.		
			7463	7483	13'	Med. fine soft & firm gr. water sd., w/ stks. showing oil, couple 1" stks. sdy. shale near bottom.		

FORM 109-A. 81365 12-30 20M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T -1-22929

Los Angeles, Cal. April 17, 1931.

Mr. V. E. Wilhelm,
Los Angeles, Cal.

121

Agent for THE TEXAS Company

DEAR SIR:

Operations at your well No. "FIELDS" 18 Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Oil Field, in Los Angeles County, were witnessed by F. C. Hodges, representative of the supervisor, on April 14, 1931. There was also present D. K. Weaver, Engineer, and C. W. Sweet, Foreman.

Casing Record 13" S.P. cem. 788'; 8¼" cem. 4230', W.S.O.; 5¾" cem. 6210', W.S.O.; T.D. present hole 7483'; plugged with cement 7483'-6825'; and 6500'-6442'; Junk: (1st hole) 6¼" perf. 4273'-4529'; T.D. (1st hole) 4529', plugged with cement 4529'-4280'.

The operations were performed for the purpose of testing the location and hardness of a cement plug proposed to be placed from 6500' to 6435' in the process of plugging off bottom water.

and the data and conclusions are as follows:

MR. WEAVER REPORTED THE FOLLOWING:

1. The hole was cleaned out to 6500'.
2. On April 7, 1931, 35 sacks of Victor cement was pumped in thru 2½" drill pipe hung at 6500'. The top of the cement was located at 6260' and the hole was cleaned out to 6486'.
3. On April 11, 1931, 35 sacks of Victor cement was pumped in thru 2½" tubing hung at 6436' and a pressure of 250 lb. was applied.

THE INSPECTOR NOTED THAT the cement plug at the reported depth of 6442' supported part of the weight of the drill pipe.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 6442' ARE APPROVED.

cc-Company 2
Long Beach
FCH:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Huguenin Deputy

FORM 109-B. 82427 1-31 6M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off
(BAILING)

No. T -1-22899

Los Angeles, Cal. April 9, 1931.

Mr. V. H. Wilhelm,
Los Angeles, Cal.

Agent for THE TEXAS Company

DEAR SIR:

Your well No. "FIELDS" 18, Sec. 19, T. 4 S., R. 12 W., S.B. B. & M.,
Long Beach Oil Field, in Los Angeles County, was tested for
shut-off of water on April 6 (Time and date), 1931. Mr F. C. Hodges,
designated by the supervisor, was present as prescribed in Section 19, Chapter 718, Statutes 1915, as amended, and there were also present D. K. Weaver, Engineer, and
E. J. McEuen, Driller.

Location of water tested between 4230'-6210' and normal fluid level Not reported.

Depth and manner of water shut-off: { 6210 ft. of 5¾ in. 22.5 lb. / xft. of xxxxx in xxxxx lb.x } casing was { cemented / 3/28/31 / xlanded } in Shale Formation
at 6210 ft. with 150 sacks Victor cement by Casing method.

Water string was landed in 7-5/8" rotary (Size, rotary or cable tool) hole.

Casing record of well 13" S.P. cem. 788'; 8¼" cem. 4230', W.S.O.; 5¾" as above; 2½" tubing hung at 6089' for this test only. Junk: (1st hole) 6¼" perf. 4273'-4529'; T.D. (1st hole) 4529', plugged with cement 4529'-4280'.

Reported total depth of hole 7483 ft. Hole ~~bridged~~ plugged w/c 7483'-6828', 6500'-6435' and bridged w/c present from 6245 ft. to 6210 ft. Hole cleaned out to 6215 ft. for this test.

At time of test depth of hole measured 6213 ft. and bailer brought up sample of shale, sand and set cement.

At 3:00 p.m., April 5, 1931 (Time and date) oil bailed to showing ft., drilling fluid { ~~bailed~~ / swabbed } to 3000 ft.

At 10:00 a.m., April 6, 1931 (Time and date) top of oil found at showing ft., top of fluid found at 2960 ft.

Result of test:

MR. WEAVER REPORTED THE FOLLOWING:

1. A casing test was made by applying a pressure of 500 lb. to the inside of the casing for 1 hr. without loss.
2. 35' of set cement was drilled out of the 5¾" casing, equivalent to 4 sacks.

THE INSPECTOR NOTED THE FOLLOWING:

1. Gas was issuing from the 5¾" casing during the test.
2. The fluid rose 40' in 19 hr., equivalent to 1.2 bbl. per 24 hr.
3. A fluid sample from 6213' consisted of medium gas-cut, oily mud that tasted fresh.

THE SHUT-OFF IS APPROVED.

cc-Company 2
Long Beach
FCH:CH

R. D. BUSH
State Oil and Gas Supervisor

By E. Huguenin Deputy

FORM 109-A. 81365 12-30 20M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T -1-22870

Los Angeles, Cal. March 30, 1931.

Mr. V. H. Wilhelm,
Los Angeles, Cal.

Agent for THE TEXAS Company

DEAR SIR:

Operations at your well No. "FIELDS" 18 Section 19, T. 4 S., R. 12 W., S. B. B. & M., Long Beach Oil Field, in Los Angeles County, were witnessed by Paul J. Howard, representative of the supervisor, on March 27, 1931. There was also present D. K. WEAVER, Engineer, and E. J. McEuen, Driller.

Casing Record 13" S.P. cem. 788'; 8¼" cem. 4230', W.S.O.; T.D. 7483'; plugged with cement 7483' to 6828' and 6500' to 6435'. Junk: (1st hole) 6¼" perf. 4273'-4529'; T.D. 4529'; plugged with cement 4529' to 4280'.

The operations were performed for the purpose of demonstrating that the formations between 4230' and 6210' were mudded until the loss was not more than 4 bbl. per hr.

and the data and conclusions are as follows:

MR. WEAVER REPORTED THE FOLLOWING:

1. A 7-5/8" rotary hole was drilled from 4230' to 7483'.
2. The hole was filled with heavy mud from 6828' to 6500'.
3. Cement bridges were placed in the hole from 6500' to 6435' and from 6245' to 6210'. The latter bridge was placed for the sole purpose of aiding in securing a test of shut-off.
4. Mud fluid was circulated for 28 hr. prior to the test.
5. No record was kept of the loss of mud fluid prior to the test.
6. The drill pipe was hanging at 6200' during the test.
7. Cores were taken from the following important depth:
   6170' - 6220' Shale with a few thin streaks of oil sand.

THE INSPECTOR NOTED THE FOLLOWING:

1. During a circulation test from 9:00 a. m. to 9:30 a. m. mud fluid was loss from the pit at the rate of 3.0 bbl. per hr.
2. The cement bridge at 6210' supported 9 points of the weight of the drill pipe.

THE MUDDING OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED.

Oral approval given to cement 5¾" casing at 6210' is hereby confirmed.

cc-Company 2
Long Beach
PJH:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Hugenin Deputy

FORM 109-A. 81365 12-30 20M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T -1-22856

Los Angeles, Cal. March 27, 1931.

Mr. V. H. Wilhelm,
Los Angeles, Cal.

Agent for THE TEXAS Company

DEAR SIR:

Operations at your well No. "FIELDS" 18 Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Oil Field, in Los Angeles County, were witnessed by Paul J. Howard, representative of the supervisor, on March 25, 1931. There was also present D. K. Weaver, Engineer, and E. J. McEuen, Driller.

Casing Record 13" S.P. cem. 788'; 8¼" cem. 4230', W.S.O.; T.D. 7483'; plugged with cement 7483'-6828'; Junk: 6¼" landed 4529'. perf. 4273'-4529', pulled from 4273'; T.D. 4529'; plugged with cement 4529'-4280'.

The operations were performed for the purpose of testing the location and hardness of a cement plug proposed to be placed from 7483' to 6850' in the process of plugging.

and the data and conclusions are as follows:

MR. WEAVER REPORTED THE FOLLOWING:

1. On March 21, 1931, 170 sacks Victor cement was pumped into the hole thru 4" drill pipe hung at 7481'.
2. The top of the cement was located at 6828'.

THE INSPECTOR NOTED THAT The plug at 6828' supported 6 points of the weight of the drill pipe.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 6828' ARE APPROVED.

cc-Company 2
Long Beach
PJH:OH
CRB

R. D. BUSH
State Oil and Gas Supervisor

By E. Huguenin Deputy

FORM 111. 79322 9-30 20M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P-1-23170

Los Angeles, Cal. March 27, 1931.

Mr. V. H. Wilhelm,
Los Angeles, Cal.
Agent for THE TEXAS Company

Dear Sir:

Your supplementary proposal to redrill oil string and deepen Well No. "FIELDS" 18,
Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Oil Field, Los Angeles County,
dated March 25, 1931, received March 26, 1931, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

Records in addition to, or at variance with those shown in the notice:
The 8½" shut-off was approved.

THE NOTICE STATES:
"The new conditions are as follows:
13" S.P. cem. 788'
8-1/4" cem. 4230'
6-1/4" landed 4529' incl. 307' perfs. Pulled from 4273'. Plugged w/ 40 sacks cement under pressure 4529-4280.
Total depth 7483'
Cored shale 6170-6220'
" oil zone 6220-6450'
" water sands 6550-6650/6750 and continuous 6850 to 7319. Cored oil zone 7319-7440 and water sands to 7483'."

PROPOSAL:
"We now propose
Plug hole w/ cement under pressure 7483' to 6850' and have plug witnessed. Fill with heavy mud to 6500'. Put in cement plug 6500-6435'. Cement solid string of 5-3/4" casing 6215'. Test shoe, and set 4-3/4" flush joint perf. liner 6210 to 6435 and attempt to produce."

DECISION:
THE PROPOSAL IS APPROVED PROVIDED THAT THIS DIVISION SHALL BE NOTIFIED TO WITNESS the location and hardness of the cement plug at 6435'.

cc-Company 2
Long Beach
WJC:OH

GFB

R. D. BUSH
State Oil and Gas Supervisor
By E. H. Guerin Deputy

FORM 123. 66215 6-29 5M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAR 26 1931
LOS ANGELES, CALIFORNIA

Supplementary Notice

Long Beach, Cal. March 25, 1931

MR. E. Huguenin

Deputy State Oil and Gas Supervisor

Los Angeles, Cal.

DEAR SIR:

Please be advised that our notice to you dated November 7, 1930,

stating our intention to redrill and deepen well No. "Fields" 18,
(Drill, deepen, redrill, abandon)

Sec. 19, T. 4 S, R. 12 W, S.B. B. & M. Long Beach Oil Field

Los Angeles County, must be amended on account of changed or recently discovered conditions.

The new conditions are as follows:

13" S.P. cem. 788'
8-1/4" cem. 4230'
6-1/4" landed 4529' incl. 307' perfs. Pulled from 4273'. Plugged w/ 40 sacks cement under pressure 4529-4280.
Total depth 7483'
Cored shale 6170-6220'
" oil zone 6220-6450'
" water sands 6550-6650-6750 and continuous 6850 to 7319. Cored oil zone 7319-7440 and water sands to 7483'.

We now propose

Plug hole w/ cement under pressure 7483' to 6850' and have plug witnessed. Fill with heavy mud to 6500'. Put in cement plug 6500-6435'. Cement solid string of 5-3/4" casing 6215'. Test shoe, and set 4-3/4" flush joint perf. liner 6210 to 6435 and attempt to produce.

Reference to file of data

Maps	Field	Cross Section	Cards	Forms	
					✓

Respectfully yours

(Name of Company)

By The Texas Co.

FORM 111. 79322 9-30 20M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P-1-22652

Los Angeles, Cal. November 12, 1930.

MR. V. H. Wilhelm,

Los Angeles, Cal.

121

Agent for THE TEXAS Company

DEAR SIR:

Your proposal to redrill and deepen oil string/ Well No. "FIELDS" 18,

Section 19, T. 4-S., R. 12-W. S.B. B. & M., Long Beach Oil Field, Los Angeles County,

dated Nov. 7, 1930, received Nov. 8, 1930, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

Records in addition to or at variance with those shown in the notice:
The 8¼" shut-off was approved.
Total depth 4529'.

THE NOTICE STATES:
"The present condition of the well is as follows:
13" S.P. cemented at 788'
8¼" Casing " at 4230'
6¼" Casing landed at 4529' including 307' Perforations
Produced before curtailment
35 barrels oil - 10 barrels water daily."

PROPOSAL:
"The proposed work is as follows:
To plug 6¼" solid of cement 4280'-4529'.
Pull 6¼" from 4280, redrill and deepen to 7500', cementing 6-5/8" casing at 6500' with 5" oil string on bottom."

DECISION:
THE PROPOSAL IS APPROVED PROVIDED THAT:

1. The proposed cement plug from 4529' to 4280' shall be placed under a minimum pressure of 500 lb.
2. Adequate blow-out prevention equipment shall be provided and ready for operation at all times.
3. Any hole to be sidetracked at any time during the drilling of this well shall be completely filled with cement.
4. The formations to be left back of the 6-5/8" casing shall be mudded by open circulation until the loss is not more than 2.0 bbl. per hr.
5. The exact cementing depth for the 6-5/8" casing shall be determined by careful coring, beginning not lower than 6150'.
6. Sufficient cement shall be used to fill back of the 6-5/8" casing to reach to at least 1000' above the shoe.
7. The column of mud fluid back of the 6-5/8" casing shall be maintained to the surface for at least 30 days after cementing this casing.
8. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   (a) Final mudding operations before cementing the 6-5/8" casing.
   (b) Bailing test of the 6-5/8" shut-Off.

cc-Company 2
Long Beach

GP:GH

R. D. BUSH
State Oil and Gas Supervisor

By [signature] Deputy

FORM 107. 68217 6-29 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
NOV 8 - 1930
LOS ANGELES, CALIFORNIA

Notice of Intention to Deepen, Redrill, Plug or Alter Casing in Well

This notice must be given fifteen days before work begins when possible

Los Angeles, Cal. November 7th, 19 30

MR. E. Huguenin,

Deputy State Oil and Gas Supervisor

Los Angeles, Cal.

DEAR SIR:

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of deepening, redrilling, plugging or altering casing at well No. Fields #18
(Cross out unnecessary words)
, Sec. 19, T. 4-S, R. 12-W, S.B. B. & M.
Long Beach Oil Field, Los Angeles County.

The present condition of the well is as follows:

13" S.P. cemented at 788'
8¼"Casing " "4230'
6¼"Casing landed "4529' including 307' Perforations

Produced before curtailment

35 barrels oil - 10 barrels water daily

The proposed work is as follows:

To plug 6¼" solid of cement 4280' - 4529'.

Pull 6¼" from 4280, redrill and deepen to 7500', cementing 6 5/8" casing at 6500' with 5" oil string on bottom.

redrill o.s. & deepen

Reference to file of data

Maps	Model	Cross section	Cards	Forms	
				✓	✓

Respectfully yours

The Texas Company
Name of Company or Operator

By V. H. Wilhelm
Chief Petroleum Engineer R

ADDRESS NOTICE TO DEPUTY STATE OIL AND GAS SUPERVISOR IN CHARGE OF DISTRICT WHERE WELL IS LOCATED

Form 100.

Fill th ink in with typewriter. Write on one side of p only

CALIFORNIA STATE MINING BUREAU

FERRY BUILDING, SAN FRANCISCO

LOG OF OIL OR GAS WELL

CALIFORNIA STATE MINING BUREAU
RECEIVED
JUL 10 1926
Department of Petroleum and Gas
LOS ANGELES, CALIFORNIA

FIELD Long Beach COMPANY California Petroleum Corp. of Cal.

Township 4S Range 12W Section 19 Elevation 92' Number of Well Fields #18

In compliance with the provisions of Chapter 718, Statutes 1915, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Signed J. P. Thomas

Date July 8, 1926 Title Engineer.
(President, Secretary or Agent)

Reference to file of data

	Cross Section	Cards	
			✓

The summary on this page is for the ORIGINAL condition of the well

OIL SANDS

1st sand from 4232 to 4235 4th sand from ____ to ____
2d sand from 4525 to 4529 5th sand from ____ to ____
3d sand from ____ to ____ 6th sand from ____ to ____

IMPORTANT WATER SANDS

1st sand from ____ to ____ 3d sand from ____ to ____
2d sand from ____ to ____ 4th sand from ____ to ____

CASING RECORD

Size of Casing	Where Landed	Where Cut	Weight Per Foot	Threads Per Inch	Kind of Shoe	Make of Casing	Cemented Yes	Cemented No	Number Sacks
13"	788		S.P.			Here.	x		100
8¼"	4230		36#	8		Std.Seam.	x		400
6¼"	4529		26#	10		" "		x	

CEMENTING OR OTHER SHUT-OFF RECORD

Casing, Size	Sacks	Time Set	Method	Test and Result (Give water level and bailing results)
8¼"	400	5 days	Perkins	Bailed to 2000. No fluid entered well in 12 hrs. WSOOK

PLUGS AND ADAPTERS

Heaving Plug—Material ____ Length ____ Where set ____

Adapters —Material ____ Size ____

TOOLS

Rotary Tools were used from 0 ft. to 4529 ft.

Cable Tools were used from ____ ft. to ____ ft.

PERFORATIONS

State clearly whether a machine was used or casing was drilled in shop

From	To	Size of Holes	Number of Rows	Holes Per Foot	Machine—Shop
4222 ft.	4529 ft.	EMS Screen			
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				

Thirty days after completion well produced 67 barrels of oil per day.

The gravity of oil was 17.6 degrees Baumé. Water in oil amounted to 23.3 per cent.

FORM 103. 43286 1-26 10M

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

HISTORY OF OIL OR GAS WELL

CALIFORNIA STATE MINING BUREAU
RECEIVED
Department of Petroleum and Gas

FIELD Long Beach COMPANY California Petroleum Corp. of Cal.

Township 4S, *Range* 12W, *Section* 19, *Number of well* Fields #18

Signed J P Thomas

Date July 8, 1926 Title Engineer.

(*President, Secretary or Agent*)

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

	Cross Section	Cards

Spudded well in 2-4-26.

Drilled to 788' and cemented 13" S.P. at 788' w/100 sax McDuffy treated cement, by Perkins.

Drilled to 4235' and took mud test, which was witnessed and approved by your Department.

Cemented 4230' of 8¼" 36# Standard Seamless csg. at 4230' w/400 sax McDuffy treated cement, under 800# pressure, by Perkins.

Drilled out cement 4194-4235.

Bailed to 2000'. No fluid entered well in 12 hrs. Your Department witnessed and approved the shut-off.

Drilled to 4829' and landed 6¼" 26# Standard Seamless csg. incl. 307' EMS Screen on bottom.

Swabbed and bailed well. Pumped to sump 4-5-25

4-6-26 Produced 80 bbl. 15.8 grav. 16% water, 18% emulsion.

NAMES OF DRILLERS

A. L. Anders

F. C. Brown

Homer Batson

NAMES OF TOOL DRESSERS

S. G. Vanzant

F. N. Bakers

F. Camp

Date drilling started 2-4-26

Date well was completed 4-6-26

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Name of Formation
Top of Formation	Bottom of Formation		
0	500	500	Sand & gravel
	735	235	Sand, gravel & shale
	760	25	Hard sand
	788	28	Shale
	858	70	Sand & shale
	1155	247	Sandy shale
	1225	70	Sticky shale
	1235	10	Hard sand
	1388	153	Sand & gravel
	1658	270	Sand & shale
	1700	42	Sandy shale
	1800	100	Sand & stks. hard sand
	1820	20	Sticky shale
	1900	80	Sand
	1930	30	Sticky shale
	2015	85	Stky.sh. & stks. hard sand
	2165	150	Sticky shale
	2185	20	Sandy shale
	2230	45	Sticky shale
	2305	75	Sandy shale
	2425	120	Sticky shale
	2435	10	Sandy shale
	2455	20	Sticky shale
	2550	95	Sticky shale & stks. sand
	2635	85	Hard sandy shale
	2665	30	Sticky shale
	2675	10	Hard sand
	2760	85	Sandy shale
	2875	115	Stky.sh. & stks. hard sand
	2890	15	Sandy shale
	3003	113	Sticky sh. & stks. hard sd.
	3015	12	Hard sand
	3038	23	Sticky shale
	3065	27	Hard sand & stky.shale
	3110	45	Stky.sh. w/stks. sand
	3135	25	Tough shale
	3185	50	Sandy shale
	3195	10	Hard sand
	3215	20	Hard sandy shale
	3275	60	Hard sand
	3300	25	Stky.sh. w/stks. hard sand
	3306	6	Sticky shale
	3331	25	Stky.sh. w/stks. hard sand

Form 101. 32282 4-24 15M

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

CALIFORNIA STATE MINING BUREAU
RECEIVED
JUL 10 1926
Department of Petroleum

LOG OF OIL OR GAS WELL—Continued

FIELD Long Beach COMPANY California Petroleum Corp. of Cal.

Township 4S, *Range* 12W, *Section* 19, *Number of well* Fields #18

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Name of Formation
Top of Formation	Bottom of Formation		
3331	3336	5	Hard sand
	3368	32	Sticky shale
	3378	10	Hard sand
	3408	30	Stky. sh. & hard sand
	3500	92	Sandy shale
	3515	15	Hard sandy shale
	3555	40	Sticky shale
	3570	15	Sandy sh. stks. hard sand
	3618	48	Sandy shale
	3665	47	Sandy sh. stks. hard sand
	3738	73	Hard sand
	3756	18	Hard sand & stks. shale
	3771	15	Tough shale
	3818	47	Hard sand
	3851	33	Sticky shale
	3933	82	Hard sand
	3935	2	Sticky shale
	3940	5	Hard sand
	3963	23	Sandy sh. w/stks. hard sand
	4000	37	Sandy shale
	4013	13	Sticky shale
	4033	20	Sandy shale
	4060	27	Sandy sh. w/stks. hard sand
	4070	10	Hard sand
	4072	2	Shell
	4073	1	Sand
	4096	23	Hard sand
	4110	14	Sticky shale
	4120	10	Sandy shale
	4150	30	Hard sand
	4170	20	Hard sandy shale
	4232	62	Brown shale, continuous core 4200-4235
	4235	3	Brown shale stkd. w/oil sand
	4239	4	Sandy shale
	4258	19	Hard sand
	4275	17	Sandy shale w/stks. hard sand
	4295	20	Hard sand & sandy shale
	4320	25	Sandy shell & stks. sand
	4321	1	Hard sand & shell
	4382	61	Hard sand stks. shale
	4443	61	Hard sand
	4450	7	Sticky shale
	4465	15	Hard sand & sandy shale
	4525	60	Sandy shale
	4529	4	Oil sand, cored

FORM 109-B. 39807 7-25 10M

CALI_ _RNIA STATE MINING B[ ]EAU

DEPARTMENT OF PETROLEUM AND GAS

Report on Test of Water Shut-off

(BAILING)

No. T-1-10178

Los Angeles, Cal. March 30, 1926

Mr. J. R. Thomas

Montebello, Cal.

Agent for CALIFORNIA PETROLEUM CORPORATION OF ~~CALIFORNIA~~ Company CALIFORNIA.

DEAR SIR:

Your well No. "FIELDS" 18, Sec. 19, T. 4 S, R. 12 W, S.B. B. & M., Long Beach Oil Field, in Los Angeles County, was tested for shut-off of water on March 17, Time and date 1926. Mr. V. AUSTIN, designated by the supervisor, was present as prescribed in Section 19, Chapter 718, Statutes 1915, as amended, and there were also present Frank Halfen, Foreman and R. R. Crandall, Engineer

Location of water tested above 4230 and normal fluid level not determined

Depth and manner of water shut-off: { 4230 ft. of 8¼ in. 36 lb. / ____ ft. of ____ in. ____ lb. } casing was { cemented / ~~landed~~ } 4-11-26 in brown shale Formation

at 4230 ft. with 400 sacks Santa Cruz cement by Perkins method; 12" Rotary Size and kind tools were used in landing water string. The last 100 sacks of cement was treated with quick setting chemical.

Casing record of well 13" S. P. cemented at 788', 8¼" as above

Reported total depth of hole 4235 ft. Hole bridged from - ft. to - ft. Hole cleaned out to 4235 ft. for this test.

At time of test depth of hole measured 4232 ft. and bailer brought up sample of sand

At 4:30 a.m. Mar. 17, 1926, Time and date oil bailed to - ft., ~~water~~ fluid bailed to 2000 ft.

At 4:30 p.m. Mar. 17, 1926 Time and date top of oil found at - ft., top of ~~water~~ fluid found at 2000 ft.

Result of bailing test:

MR. HALFEN REPORTED THE FOLLOWING:
1. No casing test was made.
2. 36' of set cement was drilled out of the 8¼" casing.

THE INSPECTOR NOTED THE FOLLOWING:
1. No fluid entered the well while standing 12 hrs. for test.
2. The fluid samples taken were as follows:
   from the top - heavy mud fluid
   " "bottom - " " " showing some gas.

THE SHUT OFF IS APPROVED.

cc-J.R.Thomas
Long Beach

VA:LH

R. D. BUSH,
State Oil and Gas Supervisor

By E. Haguenin Deputy

106. 32204 4-24 10M

CALIFORNIA STATE MINING BUREAU
RECEIVED
MAR 18 1926
Department of Petroleum and Gas
LOS ANGELES, CAL.

CALIF[ ]NIA STATE MINING BU[ ]AU

DEPARTMENT OF PETROLEUM AND GAS

Notice of Test of Water Shut-off

This notice must be given at least five days before the test, and a longer time is desirable

Montebello, Cal. March 15, 1926

MR. E. Huguenin,
Deputy State Oil and Gas Supervisor

Los Angeles, Cal.

DEAR SIR:

In compliance with Section 19, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to test the shut-off of water in well number Fields #18, Sec. 19, T. 4S, R. 12W, S.B. B. & M., Long Beach Oil Field, Los Angeles County, on the 16th day of March 1926

8¼ inch 36 lb. casing was ~~landed~~/cemented in brown shale (Formation) at 4230 (Depth)

on March 11, (Date) 1926

400 sacks S.C. (Kind) of cement were used.

The Perkins method was used in placing cement.

Fluid level will be bailed to a depth of 2000 feet and left undisturbed for at least 12 hours before your inspection.

The well is 4235 feet deep. There ~~is~~/is not a plug or bridge from x feet to x feet.

Respectfully yours,

California Petroleum Corp. of Cal.
(Name of Company or Operator)

By J. R. Thomas
Engineer.

Address notice to Deputy State Oil and Gas Supervisor in charge of district where well is located

Reference to file of data

Maps	Model	Cross Section	Cards	Logs	
	3/24/26			114	✓

FORM 109-A. 39906 7-25 1M

CALI RNIA STATE MINING BU EAU
DEPARTMENT OF PETROLEUM AND GAS

Special Report on Operations Witnessed

No. T-1-10126

Los Angeles Cal. March 18 1926

Mr. J. R. Thomas

Montebello Cal.

Agent for CALIFORNIA PETROLEUM CORPORATION OF ~~CALIFORNIA~~ Company CALIFORNIA

DEAR SIR:

Operations at your well No. "FIELDS" 18 Section 19, T. 4 S, R. 12 W, S.B. B. & M.,

Long Beach Oil Field, in Los Angeles County, were witnessed by

V. Austin, representative of the supervisor,

on Mar. 10, 1926. There were also present R. R. Crandall, Engineer and C. W. Shaw, Foreman

Casing Record 13" S.P. cemented at 788', only

The operations were performed for the purpose of testing the effectiveness of the mudding of the formations between 788' and 4230'.

and the data and conclusions are as follows:

MR. CRANDALL REPORTED THE FOLLOWING:
1. A 12" rotary hole was drilled from 788' to 4235'.
2. Mud fluid was circulated for 12 hr. prior to the test.
3. No record was kept of the loss of mud fluid prior to the test.
4. The drill pipe was hanging at 4230' during the test.

THE INSPECTOR NOTED THAT during a circulation test from 10:30 a.m. to 11 a.m. mud fluid was lost from the pit at the rate of 4 bbl. per hr.

THE MUDDING OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED.

Oral approval given to cement 8¼" casing at 4230' is hereby confirmed.

cc--J. R. Thomas
Long Beach

VA:D

R. D. BUSH,
State Oil and Gas Supervisor

By E. Huguenin Deputy

FORM 111. 39803 7-25 10M

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

Report on Proposed Operations

No. P -1-12459

Los Angeles, Cal. January 27, 1926

Mr. J. R. Thomas

Montebello, Cal.

Agent for CALIFORNIA PETROLEUM CORPORATION OF ~~XXXXX~~ Company CALIFORNIA

DEAR SIR:

Your proposal to drill Well No. "FIELDS" 18,

Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Oil Field, Los Angeles County,

dated Jan. 12, 1926, received Jan. 20, 1926, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:
"The well is 160' S. of N. prop. line and 660' E. from int. c/l Atlantic Ave. & Crest Drive. Dist. parallel and at right angles to c/l streets.
The elevation of the derrick floor above sea level is 92.00'.
We estimate that the first productive oil or gas sand should be encountered at a depth of about--------feet, more or less."

PROPOSAL:
"We propose to use the following strings of casing either cementing or landing them as here indicated:

Size of Casing	Weight	New or Second Hand	Depth	Landed or Cemented
13	S.P.	New	800	Cemented
8¼	36#	"	4270	"
6¼	26#	"	4560	Landed

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing."

RECOMMENDATION:
We estimate that the top of the oil zone should be encountered at a depth of about 4205' at this location.

THE PROPOSAL IS APPROVED WITH THE FOLLOWING RECOMMENDATIONS:
1. The exact top of the oil zone shall be located be careful coring below a depth of 4185'.
2. Effective mudding of the formations to be left back of the 8¼" casing shall be demonstrated by circulating mud fluid through the drill pipe hanging just off bottom after drilling and reaming to the cementing depth for this casing until the loss is not more than 5 bbl. per hr.

KINDLY NOTIFY THIS DEPARTMENT TO WITNESS:
1. Final mudding operations before cementing the 8¼" casing.
2. A bailing test of the 8¼" shut off.

cc--J. R. Thomas
Long Beach

R. D. BUSH,
State Oil and Gas Supervisor

By E. Ferguson Deputy

LWS:L

Form 105. 36617 1-25 10M

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

JAN 20 1926

Department of Petroleum and Gas
LOS ANGELES, CAL.

NOTICE OF INTENTION TO DRILL NEW WELL

037-11543

This notice must be given before drilling begins

TEXACO INC.

Montebello, Cal. Jan. 12, 1926

MR. E. Huguenin,

Deputy State Oil and Gas Supervisor

Los Angeles, Cal.

DEAR SIR:

"Field" 18

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of drilling well number Fields 18 Section 19 T. 4S R. 12W, S.B. B. & M., Long Beach Oil Field, Los Angeles County.

* The well is 160 feet ~~N.~~ or S. of N. prop. line and 660 feet E. ~~or W.~~ from Int. c/l Atlantic Ave. & Crest Drive,
(Give location in distance from section corners or other corners of legal subdivision)
Dist. parallel and at right angles to c/l streets.

The elevation of the derrick floor above sea level is 92.00 feet.

We propose to use the following strings of casing either cementing or landing them as here indicated:

Size of Casing, Inches	Weight, Lb. Per Foot	New or Second Hand	Depth	Landed or Cemented
13"	S.P.	New	800	Cemented
8¼"	36#	"	4270	"
6¼"	26#	"	4560	Landed

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing.

We estimate that the first productive oil or gas sand should be encountered at a depth of about ..... feet, more or less.

Respectfully yours,

Address .....

California Petroleum Corp. of Cal.
(Name of Company or Operator)

Telephone number .....

By J. R. Thomas
Engineer.

Address notice to Deputy State Oil and Gas Supervisor in charge of district where well is located

Reference to file of data

		Cross section	Cards	Forms 114	Forms 121
#20					
HMO. 1/20/26	HMO 1/21/26			✓	✓

+ Correy to HMO 1/21/26

OB HMO. 1/21/26

CalGEM Oil Well Files
API 037-00338
AW-1

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF WELL PLUGGING AND ABANDONMENT

Cypress, California

January 27, 2006

Craig C. Barto, Agent
SIGNAL HILL PETROLEUM, INC.
2901 Orange Avenue
Signal Hill, CA 90755

Your report of the plugging and **abandonment** of well **AW-1**, A.P.I. No. **037-00338**, Section **19**, T. **4**S, R. **12**W, S.B. B & M., **Long Beach** Field, **Los Angeles** County, dated **4-9-04**, received **4-14-04**, has been examined in conjunction with operations witnessed and records filed in this office.

We have determined that all of the requirements of this Division have been fulfilled relative to plugging and **abandonment** of the well, removal of well equipment and junk, and the filing of well records.

NOTE:

1. Surface plugging completed on **3-19-04**.
2. Surface inspection made and approved on **11-18-05**.

Hal Bopp
State Oil and Gas Supervisor

By: _____
For: R. K. Baker, *Deputy Supervisor*

BLANKET BOND

CC: Update
L.A. County Assessor
L.A. County Fire Prevention Bureau
L.B. Dept of Building & Planning
Dept. of Oil Properties
City of Signal Hill

CJM:dt

OG159 3-23-99

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST – RECORDS RECEIVED AND WELL STATUS

Company:	**Signal Hill Petroleum, Inc.**	Well: **AW-1**
API#:	**037-00338**	Sec. **19**, T. **4S**, R.**12W**. S. B. B. & M.
County:	**Los Angeles**	Field: **Long Beach**

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
History (Form OG103)	**4/14/04**
Core Record (Form OG101)	
Directional Survey	
Sidewall Samples	
Date final records received.	
Electric Logs:	
Other:	

STATUS

Producing	☐	Drilling	☐
Abandoned	☑	Idle	☐
Reabandoned	☐	Other	☐

WELL TYPE

Oil	☐	Waterflood	☒
Gas	☐	Water Disposal	☐
Water Source	☐	Cyclic Steam	☐
Observation	☐	Steam Flood	☐
Exploratory	☐	Fire Flood	☐
Dry Hole	☐	Other	☐

EFFECTIVE DATE: 3/19/04

REMARKS:

ENGINEERS CHECK LIST	
☑	Summary, History & Core Record (Dupl.)
☐	Electric Log
☑	Operator's Name
☑	Signature
☑	Well Designation
☐	Location
☐	Elevation
☑	Notices
☐	"T" Reports
☐	Casing Record
☑	Plugs
☐	Directional Survey
☐	Production/Injection (FAP Codes:)
☐	E Well on Prod., enter EDP
☑	Surface Inspection Required 11/18/05 Ok SCH
☐	Surface inspection Waived (Island)
☐	Well site restoration deferred (common cellar)
☑	Final Letter Required AB: ☒ REAB: ☐
☐	Other:

CLERICAL CHECK LIST
Location change
Elevation change
Form OGD121
Form OGD150b (Release of Bond)
Duplicate logs to archives
Notice of Records Due
EDP 6/7/04 (a)
District Date Base
Final Letter (OG159) 2/9/2006
Update Center (a)

FIELD CHECK LIST

Date Surface Inspection Completed: 11/18/05 Ok SCH

Other:

RECORDS NOT APPROVED	RECORDS APPROVED mb / 5-20-04
(Reason:) T/Surface/FL/MW	(Signature)
	RELEASE BOND
	Date Eligible
	(Use date last needed records received.)
	MAP AND MAP BOOK 138
	Map 6/10/04 (MW)

OGD2 5/16/01 CYPRESS

F KR 4-7-04

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

Operator Signal Hill Petroleum, Inc. Field Long Beach County Los Angeles
Well Signal Hill West Unit AW-1 , Sec 19 , T 4S , R 12W , SB B.&M.
A.P.I. No. 037-00338 Name Dave Slater (Person submitting report) Title Vice President (President, Secretary or Agent)
Date April 9 2004

Signature [signature]

2901 Orange Avenue, Long Beach, CA 90806 (Address)
(562) 595-6440 (Telephone Number)
Fax (562)426-4587

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date	
2004 3/16 to 3/19	MIRU, installed BOPE, approved by Inspector Moser, tagged fill at 3294' and cleaned out to 4345', witnessed by Inspector Wells. Placed 59 CF Class G cement at 4343' with Inspector Wells waiving witnessing of work. Inspector Moser witnessed tag at 4090' and mudding of well. Placed 53 CF Class G cement at 1920', witnessed by Inspector Moser who also witnessed tag at 1680' and mudding to surface. Placed 30 CF Class G cement at 100' to surface witnessed by Inspector Moser.RDMO. Cut and plated casing 5' below final grade.

OG103 (8/93/GSR1/5M)

Apr 14 04 08:54a p.4

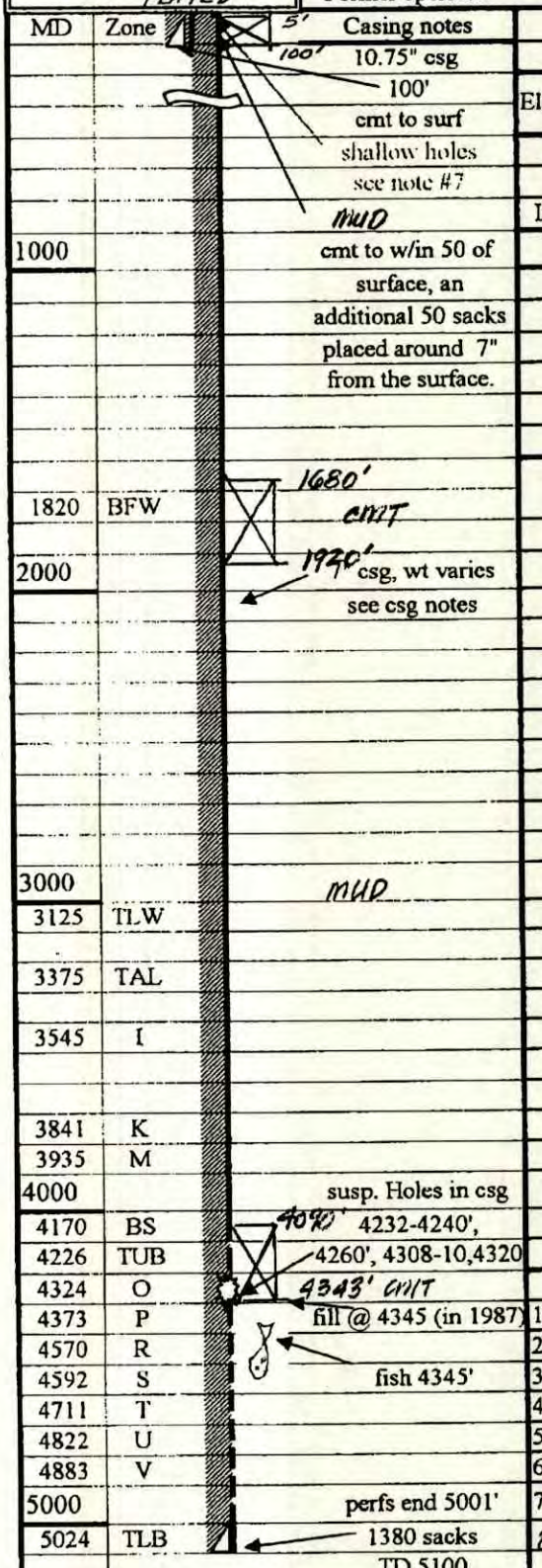
SIGNAL HILL PETROLEUM

PLATED

Well Name:	AW1	Type:	Inj	Location:		RMA:	Field Lease
Unit:	West		Sec/Tw/R	19	4s	12w	
API number:	03700338		Lambert N	4045.45	E:	4233.03	
Former name:	Field #37, AIW1		Street	470' W. & 500' S. c/l Calif. & 33rd St.			
Former operator:	Texaco		Compl./ spud date:	########	########		idle
			Original or Redrill:	Original			since
City:	Signal Hill		Current Status/as of:	idle	2/6/2001		Sep-87

Elevations:	PBTD	TD	TVD	MAT	KB	DF
		5100	5050	91	102	

Logs Available:	induction		spinner	caliper	
Date of logs:	1966		1986	1987	
Logging company:	Lane			Tiger	



CASING

size	top	base	wt/grade	sx cmt	hole size	top cmt
10.75	0	100	32.5	0	unk	0
7	0	25	32			
7	25	4099	23			
7	4099	5100	32	1380	9.875	0

Effective Perforated Intervals

Top	Base	Type	Zone	Sand	ft open	completion
4260	4290	3-.5" hpf	UBN	TUB	30	1966
4290	4300	1-.5"hpf	UBN	TUB	10	1966
4300	4325	3-.5" hpf	UBN	TUB	25	1966
4325	4365	2-.5"hpf	UBN	O	40	1966
4365	4410	1-.5"hpf	UBN	P	45	1966
4610	4640	2-.5"hpf	UBN	S	30	1966
4660	4675	1-.5"hpf	UBN	S	15	1966
4675	4710	2-.5"hpf	UBN	S	35	1966
4768	4788	2-.5"hpf	UBN	T	20	1966
4788	4820	3-.5" hpf	UBN	T	32	1966
4850	4865	2-.5"hpf	UBN	U	15	1966
4865	4885	3-.5" hpf	UBN	U	20	1966
4912	4922	2-.5"hpf	UBN	V	10	1966
4922	4942	3-.5" hpf	UBN	V	20	1966
4942	4965	2-.5"hpf	UBN	V	23	1966
4976	5001	2-.5"hpf	UBN	V	25	1966
4450	4570	1-.5"hpf	UBN	P	120	1976
4590	4640	1-.5"hpf	UBN	S	50	1976
4660	4710	1-.5"hpf	UBN	S	50	1976
4750	4820	1-.5"hpf	UBN	T	70	1976
4830	4885	1-.5"hpf	UBN	U	55	1976
4910	4965	1-.5"hpf	UBN	V	55	1976
4975	4995	1-.5"hpf	UBN	V	20	1976

NOTES

1) Put on injection 3/2/67
2) completion totals: TUB 65', O 40 ', P 165', S 130', T 70', U 55", V 80'.
3) holes in csg 4225-4245 found 10/22/87 (Tiger caliper)
4) fish in hole @ 4345': 3 cones off 5.875" bit on fill or collapsed casing
5) Returns of clay, cmt, FeO3, sand, from 4260' susp. Hole in csg.
6) DOG did not require a WSO, CBL showed good bonding.
7) 5/31/85 inj surv. Finds hole @ 24' in 7" csg.
8) Abandoned 3/19/04

Mechanical Detail as of: 2/7/2001 Prepared by: BWD

Apr 14 04 08:55a p.5

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

No. T 104-0180

REPORT ON OPERATIONS

WATERFLOOD PROJECT

Cypress, California
5/13/2004

Craig C. Barto, Agent
SIGNAL HILL PETROLEUM, INC.
2901 Orange Avenue
Signal Hill, CA 90755

Your operations at well **AW-1,** A.P.I. No. **037-00338**, Sec. **19**, T. **4S.**, R. **12W**, S.B. B. & M., **Long Beach** Field, **Los Angeles** County, were witnessed on **3/19/2004**. **E. P. Moser**, representative of the supervisor, was present from **0930** to **1100**. There was also present **H. Howard, Rig Foreman**.

Present condition of well: **10 3/4" cem 100'; 7" cem 5100', perfs @ int 4260'-5001', holes 24' & 4225'. Junk below 4345'. TD 5100'. Plugged w/cem 5100'-5090', 4343'-4090', 1920'-1680' & 100'-0'.**

The operations were performed for the purpose of witnessing the plugging operations in the process of abandonment.

DECISION: APPROVED.

NOTE: The required Class II2M blowout prevention equipment was inspected and approved on **3/18/2004**.

DEFICIENCIES: None.

CONTRACTOR: MMI Services

MG:bd

cc: Update

Hal Bopp
State Oil and Gas Supervisor

By: _____
For: R. K. Baker, *Deputy Supervisor*

Surface Inspection Approved 11/18/2005 SCH

OG109 3-16-99

104-0180

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOUR

CEMENTING/PLUGGING MEMO

Operator SIGNAL HILL PET., INC. Well No. AW-1
API No. 037-00338 Sec. 19, T. 4S, R. 12W, SB B&M
Field LONG BEACH, County LOS ANGELES. On 3/19/04,
Mr. / Ms. E. MOSER, representative of the supervisor, was present from 930 to 1100.
There were also present H. HOWARD - RF
Casing record of well: 10 3/4" cem 100'; 7" cem 5100', perfs @ int 4260'-5001', holes 24' & 4225', Junk below 4345', TD 5100'. Plugged w/cem 5100'-5090', 4343'-4090', 1920'-1680' & 100'-0'.
The operations were performed for the purpose of (L)

☒ The plugging/cementing operations as witnessed and reported are approved.

☐ The location and hardness of the cement plug @ _____' are approved.

Hole size: _____" fr. _____' to _____'; _____" to _____' & _____" to _____'

Casing				Cemented			Top of Fill		Squeezed Away	Final Press.	Perfs.
Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			

Casing/tubing recovered: _____" shot/cut at _____', _____', _____' pulled fr. _____';
_____" shot/cut at _____', _____', _____' pulled fr. _____'.

Junk (in hole): _____

Hole fluid (bailed to) at _____'. Witnessed by _____

Mudding	Date	bbls.	Displaced	Poured	Fill	Engr.
73#	3/18/04	94	4090		1920'±	E. MOSER
73#	3/19/04	72	1680		0'	E. MOSER

NOTE: (k) I.M. 3/18/04 C/O 4345'

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engr.	Depth	Wt/Sample	Date & Time	Engr.
3/17/04	59CF	T@ 4343	RPT. BY	H. HOWARD	4090'	ATW	3/18/04 0930	E. MOSER
3/18/04	53CF	T@ 1920'	1335	E. MOSER	1680	ATW	3/19/04 0800	E. MOSER
3/19/04	30CF	T@ 100'	1030	E. MOSER	0'	VISUAL	3/19/04 1030	E. MOSER

API No. 037-00338 DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES T_____

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator SIGNAL HILL PET., INC. Well AW-1 Sec. 19 T. 4S R. 12W

Field LONG BEACH County LOS ANGELES Spud Date _____

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	3/18/04		(1030 to 1030)		
2nd			(to)		

Contractor MMI Rig# _____ Contractor's Rep. & Title H. HOWARD - RE

Casing record of well: MEMO

OPERATION: Testing (inspecting) the blowout prevention equipment and installation. Critical well? Y____ N X

DECISION: The blowout prevention equipment and its installation on the 10 3/4 " casing are approved.

Proposed Well Opns: ABANDON . MACP: _____ psi

Hole size: _____ " fr. _____ ' to _____ ' , _____ " to _____ ' & _____ " to _____ '

REQUIRED BOPE CLASS: 2M

CASING RECORD OF BOPE ANCHOR STRING					Cement Details	Top of Cement	
Size	Weight(s)	Grade(s)	Shoe at	CP at		Casing	Annulus

BOP STACK

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul
HD	2 1/8	SHAFFER	E	13		
RD	CSO	"	E	13		

TEST DATA

Gal. to Close	Recovery Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure _____ psi

Total Rated Pump Output _____ gpm Fluid Level

Distance From Well Bore _____ ft. _____

	Accum. Manufacturer	Capacity	Precharge
1		gal.	psi
2		gal.	psi

	CONTROL STATIONS	Elec.	Hyd.	Pneu.
	Manifold at accumulator unit			
	Remote at Driller's station			
✓	Other: HAND PUMP			

	EMERG. BACKUP SYSTEM			Press.	Wkg. Fluid
✓	N_2 Cylinders	1	L=55"	2500	gal.
	Other:	2	L= "		gal.
		3	L= "		gal.
		4	L= "		gal.
		5	L= "		gal.
		6	L= "		gal.
			TOTAL:		gal.

TOTAL:

AUXILIARY EQUIPMENT

		No.	Size (in.)	Rated Press.	Connections: Weld	Flange	Thread	Test Press.
	Fill-up Line							
✓	Kill Line		2	2M			✓	
✓	Control Valve(s)	2		2M			✓	
	Check Valve(s)							
	Aux. Pump Connect.							
	Choke Line							
	Control Valve(s)							
	Pressure Gauge							
	Adjustable Choke(s)							
	Bleed Line							
	Upper Kelly Cock							
	Lower Kelly Cock							
	Standpipe Valve							
	Standpipe Press. Gauge							
✓	Pipe Safety Valve		2 1/8					
	Internal Preventer							

	HOLE FLUID MONITORING EQUIPMENT	Alarm Type: Audible	Visual	Class
	Calibrated Mud Pit			A
	Pit Level Indicator			B
	Pump Stroke Counter			B
	Pit Level Recorder			C
	Flow Sensor			C
	Mud Totalizer			C
	Calibrated Trip Tank			C
	Other:			C

Hole Fluid Type	Weight	Storage Pits (Type & Size)
LEASE H2O		

REMARKS AND DEFICIENCIES: NONE

OGD9 (4/03/UCP/3M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

No. P 104-0101

412 (Field Code)

06 (Area Code)

-- (New Pool Code)

15 (Old Pool Code)

PERMIT TO CONDUCT WELL OPERATIONS

WATERFLOOD PROJECT

Craig C. Barto, Agent
SIGNAL HILL PETROLEUM, INC.
2901 Orange Avenue
Signal Hill CA 90755

Cypress, California
March 2, 2004

Your proposal to **abandon** well **AW-1**, A.P.I. No. **037-00338**, Section **19**, T. **4S**, R. **12W**, **S.B.** B. & M., **Long Beach** Field, **Old** area, **Brown** pool, **Los Angeles** County, dated **2-23-04**, received **2-23-04** has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment with hydraulic controls, equivalent to this Division's Class **II2M** requirements, or better, shall be installed and maintained in operating condition.
2. All portions of the well not plugged with cement shall be filled with clay base mud having a minimum density of 72 lb/cu ft and a minimum gel-shear strength of 25 lb/100 sq ft.
3. The cement plug proposed to be placed to **1620'** shall extend from **1920'** to **1720'**.
4. This Division shall be consulted and a Supplementary Notice may be required before making any changes in the proposed program.
5. **THIS DIVISION SHALL BE NOTIFIED TO:**
   a. Inspect the installed blowout prevention equipment prior to commencing downhole operations.
   b. Witness the location and hardness of the cement plug from **4345'** to **4125'**.
   c. Witness the mudding of the hole.
   d. Witness the placing, location and hardness of the cement plug from **1920'** to **1720'**.
   e. Witness the placing, location and hardness of the cement plug from **100'** to **surface.**
   f. Inspect and approve the cleanup of the well site within 60 days after placement of the surface plug.

NOTE: The proposed surface plug shall not contain rock or gravel.

3/12/04 Carlson/Harvey w MMS confirmed tagging of cem plug for BFW (@1820) from 1920' to 1720'.

DS:ds

cc: Update
EDP
City Signal Hill
BLANKET BOND

Engineer: D. Sanchez

Phone: 714/816-6847

Hal Bopp
State Oil and Gas Supervisor

By _____
For R. K. Baker, *Deputy Supervisor*

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.

OG 111

2-23-04 KTL

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

S/DS

Notice of Intention to Abandon Well

P# 104-0101

FOR DIVISION USE ONLY			
CARDS	BOND	FORM OGD114	FORM OGD121
	BB VB	2/28/04	2/24/04

DIVISION OF OIL AND GAS

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to abandon well Signal Hill West Unit AW-1, API No. 037-00338

Sec. 19, T. 4S, R. 12W, SB B. & M., Long Beach Field, Los Angeles County.

commencing work on Mar-04

The present condition of the well is:

1. Total depth 5100'
2. Complete casing record, including plugs and perforations (present hole)
   See Attached Casing Plat
3. Last produced _____ (Date) _____ (Oil, B/D) _____ (Gas, Mcf/D) _____ (Water, B/D)
   or
4. Last injected Sep-87 (Date) _____ (Water, B/D) _____ (Gas, Mcf/D) _____ (Surface Pressure)

Additional data for dry hole (show depths):

5. Oil or gas shows
6. Stratigraphic markers
7. Formation and age at total depth
8. Base of fresh water sands 1820'

9. Is this a critical well according to the definition on the reverse side of this form? x Yes No

The proposed work is as follows: Propose to Abandon.

MIRU, remove equipment, install BOPE and notify DOGGR. Clean out well to 4345'. Place Class G cement plug to 4160', tag for DOGGR. Mud to 1820', place 200' Glass G cement from 1820'-1620'. Tag for DOGGR and place mud to surface. Place Glass G cement plug 100' to surface, cut and plate casing 6' below final grade. Clean location.

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address 2901 Orange Avenue (Street)

Long Beach (City) California (State) 90806 (Zip)

Telephone Number (562) (Area Code) 595-6440 (Number)

Fax: (562) 426-4587

Signal Hill Petroleum, Inc. (Name of Operator)

By David L. Slater, Vice President / General Manager. (Print Name)

(Signature) 02/23/04 (Date)

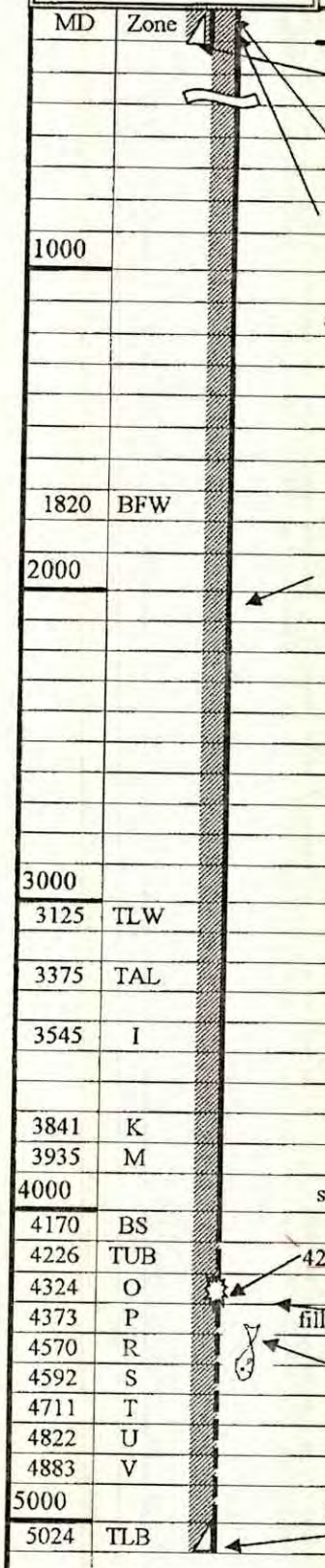
OG108 (5/90/GSR1/5M)

SIGNAL HILL PETROLEUM

Well Name:	AW1	Type:	Inj	Location:		RMA:	Field Lease
Unit:	West	Sec/Tw/R	19	4s	12w		
API number:	03700338	Lambert N	4045.45	E:	4233.03		
Former name:	Field #37, AIW1	Street	470' W. & 500' S. c/l Calif. & 33rd St.				
Former operator:	Texaco	Compl./ spud date:	#######	########		idle	
City:	Signal Hill	Original or Redrill:	Original			since	
		Current Status/as of:	idle	2/6/2001		Sep-87	

Elevations:	PBTD	TD	TVD	MAT	KB	DF
		5100	5050	91	102	

Logs Available:	induction		spinner	caliper	
Date of logs:	1966		1986	1987	
Logging company:	Lane			Tiger	



Casing notes

10.75" csg 100' cmt to surf shallow holes see note #7

cmt to w/in 50 of surface, an additional 50 sacks placed around 7" from the surface.

7" csg, wt varies see csg notes

susp. Holes in csg 4232-4240', 4260', 4308-10,4320

fill @ 4345 (in 1987)

fish 4345'

perfs end 5001'

1380 sacks

TD 5100

CASING

size	top	base	wt/grade	sx cmt	hole size	top cmt
10.75	0	100	32.5	0	unk	0
7	0	25	32			
7	25	4099	23			
7	4099	5100	32	1380	9.875	0

Effective Perforated Intervals

Top	Base	Type	Zone	Sand	ft open	completion
4260	4290	3-.5" hpf	UBN	TUB	30	1966
4290	4300	1-.5"hpf	UBN	TUB	10	1966
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4750	4820	1-.5"hpf	UBN	T	70	1976
4830	4885	1-.5"hpf	UBN	U	55	1976
4910	4965	1-.5"hpf	UBN	V	55	1976
4975	4995	1-.5"hpf	UBN	V	20	1976

NOTES

1) Put on injection 3/2/67
2) completion totals: TUB 65', O 40 ', P 165', S 130', T 70', U 55", V 80'.
3) holes in csg 4225-4245 found 10/22/87 (Tiger caliper)
4) fish in hole @ 4345': 3 cones off 5.875" bit on fill or collapsed casing
5) Returns of clay, cmt, FeO3, sand, from 4260' susp. Hole in csg.
6) DOG did not require a WSO, CBL showed good bonding.
7) 5/31/85 inj surv. Finds hole @ 24' in 7" csg.

Mechanical Detail as of: 2/7/2001 Prepared by: BWD

WELL TRANSFER NOTICE

EFFEC FEBRUARY 17, 1994,
TEXACO EXPLORATION & PRODUCTION INC.
TRANS SIGNAL HILL WEST UNIT WELLS
TO
SIGNAL HILL PETROLEUM INC.

SEE OGD156 DATED 2-28-94

DIVISION OF OIL AND GAS
CHECK LIST - RECORDS RECEIVED AND WELL STATUS

Company Texaco Inc. Well No. AW-1

API No. 037-00338 Sec. 19, T. 4S, R. 12W, SB B.&M.

County L.A. Field Long Beach

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
✓ History (Form OG103)	9-21-77
Core Record (Form OG101)	
Directional Survey	
Sidewall Samples	
✓ Other Spinner	10-17-77
Date final records received	
Electric logs:	

STATUS		STATUS	
Producing - Oil	___	Water Disposal	✓
Idle - Oil	___	Water Flood	___
Abandoned - Oil	___	Steam Flood	___
Drilling - Idle	___	Fire Flood	___
Abandoned - Dry Hole	___	Air Injection	___
Producing - Gas	___	Gas Injection	___
Idle - Gas	___	CO_2 Injection	___
Abandoned - Gas	___	LPG Injection	___
Gas-Open to Oil Zone	___	Observation	___
Water Flood Source	___		

DATE 9-8-76
RECOMPLETED
REMARKS

ENGINEER'S CHECK LIST

1. Summary, History, & Core record (dupl.) ✓
2. Electric Log =
3. Operator's Name ✓
4. Signature ✓
5. Well Designation =
6. Location =
7. Elevation =
8. Notices ✓
9. "T" Reports ✓
10. Casing Record =
11. Plugs =
12. Surface Inspection =
13. Production =
14. E Well on Prod. Dir. Sur. =

CLERICAL CHECK LIST

1. Location change ___ (F-OGD165) ___
2. Elevation change ___ (F-OGD165) ___
3. Form OGD121 ___
4. Form OG159 (Final Letter) ___
5. Form OGD150b (Release of Bond) ___
6. Duplicate logs to archives ___
7. Notice of Records due (F-OGD170) ___

Records to PI 8/28/77

BB

RECORDS NOT APPROVED
Reason: Need Spinner Request rec'd

RECORDS APPROVED 10-26-77 RFC

RELEASE BOND
Date Eligible
(Use date last needed records were received.)
MAP AND MAP BOOK
NC DC. 10-5-77

LONG BEACH OFFICE - USE REVERSE SIDE

OGD2 (3-77-GSR1-4M)

FORM 103

SUBMIT IN DUPLICATE

62802-705 5-72 20M ⓢ OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR TEXACO Inc. FIELD Long Beach,

(037-00338)

Well No. AW-1 (Formerly Field #37 Sec. 19, T. 4S, R. 12W, SB B. & M.

Date September 16, 19 77 Signed A B Dann

3350 Wilshire Blvd
Los Angeles, CA 90010, (213) 385-0515 Title General Superintendent

(Address) (Telephone Number) (President, Secretary or Agent)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date

Conversion of well Field #37 from a producing well to an injection well to be known as AW-1.

1976

8-31 Rigged up and bled down well. Unset packer. Unlanded tubing laying down 2-7/8" tubing. Pick up bit & 7" scraper. Measured and picked up 2-7/8" drill pipe. Ran in to 2356'.

9-2 Continued to measure & pick-up drill pipe. Tagged top of fill @ 5042'. Drilled out fill to 5100'. Circulated with 240 bbls fresh water. Perf. one ½" hole/ft. 4450'-4570', 4590'-4640', 4660'-4710', 4750'-4820', 4830'-4885', 4910'-4965', 4975'-4995', = 420'.

9-3 Ran in with 5-7/8" bit & 7" scraper to 5100'. Circulated hole clean with hot water. Lay down bit and scraper. Run in to 4200' with circulating washer.

9-4 Continued to run in with circulating washer. Set tool @ 5010. Pick-up to 4995'. Displace drill pipe with 23 bbls of acid wash perfs. from 4995'-4450' with 5 gals per ft of acid (2100 gals). Pulled out and replaced cups. Ran in to 4200'.

9-5 Continued to run in with circulating washer. Washed perfs from 4995'-4450= 420 holes with 10.5 gallons of 12% HCL, 3% HF acid, and 500 gallons of 7½% of HCL buffer. Displaced acid into formation with 200 bbls of H_2O. Ran in openended to 1400'.

9-6 Down time - holiday.

9-7 Pumped down annulus and down drill pipe 100 bbls. Clean water - bled well off. Continued to run in to 5100' - no fill. Layed down drill pipe.

9-8 Removed BOPE. Set packer. Swab shoe @ 4427-81. Installed well head and released rig. Well idle pending injection start up.

RECEIVED

GAP:wdp

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

WATER FLOOD

No. T 176-851

Mr. Leo McCann, Agent
TEXACO INC.
P.O. Box 3756
Los Angeles, CA 90051

Long Beach, Calif.
Nov. 29, 1976

DEAR SIR:

Operations at well No. AW-1, API No. 037-00338, Sec. 19, T. 4S, R. 12W, S.B. B & M. Long Beach Field, in Los Angeles County, were witnessed on 11/18/76. Mr. G. W. Stark, Engineer, representative of the supervisor was present from 0900 to 0930. There were also present F. Coffman, Engineer.

Present condition of well: 10-3/4" cem. 100'; 7" cem. 5100', perfs. at intervals 4260'-4410' and 4610'-4942'. T.D. 5100'.
4450-4995

The operations were performed for the purpose of demonstrating that all of the injection fluid is confined to the formations below 4610'. 4450

DECISION: THE OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED AS INDICATING THAT ALL OF THE INJECTION FLUID IS CONFINED TO THE FORMATIONS BELOW 4610' AT THIS TIME.

GWS:d

Needs Summary, History, & 1 copy of Spinner Survey.

KH 12-6-76

M. F. MEFFERD, Acting Chief

By M. B. Albright Deputy

OG109 (2-75—OSP—20M)

30986-705 2-75 20M ① ◇ OSP

FORM 157

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

Long Beach, California

July 16, 1976

Mr. L. McCann, Agent
Texaco Inc.
3350 Wilshire Blvd.
Los Angeles, CA 90010

DEAR SIR:

Your ~~request dated~~ notices dated 7-15-76, relative to change in designation of well(s) in Sec. 19, T. 4 S., R 12 W., S.B. B. & M., Long Beach field, Los Angeles County, District No. 1, has been received; and in accordance with Section 3203, Public Resources Code, reading in part as follows:

> "* * * The number or designation by which any well heretofore drilled has been known, and the number or designation specified for any well in a notice filed as required by Section 3203, shall not be changed without first obtaining a written consent of the Supervisor."

the proposed change in designation is hereby authorized as follows:

Well Nos. A1W1, A20, A26, A10, will hereafter be known as well Nos. AW-1 (037-00338), AW-2 (037-11555), AW-3 (037-11793), AW-10 (037-11556), respectively.

Corrections Made as Follows:	By Whom
Form 114	
" 115	
" 121 ✓	ag
" 148	
Cards	
Production Reports ✓	cc
Well Records (Folders ✓	ag
(Reports	
Field Maps 130 ✓	
Map Book 7/26/76 ✓	HHB

HAROLD W. BERTHOLF
~~JOHN E. MATTHEWS, JR.~~
State Oil and Gas Supervisor

By M. B. Albright
Deputy Supervisor

ag
cc: Hrod. Dept.
Conservation Committee

59810-705 1-72 5M ① OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 176-513

LONG BEACH WATER-FLOOD
WEST UNIT, BROWN ZONE

Mr. Leo McCann, Agent
TEXACO INC.
P.O. Box 3756
Los Angeles, CA 90051

Long Beach, Calif.
July 20, 1976

DEAR SIR:

Your proposal to rework injection Well No. AW-1 (037-00338),
Section 19, T. 4S, R. 12W, S.B. B. & M., Long Beach Field, Los Angeles County,
dated 7/15/76, received 7/16/76, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. A COPY OF THIS APPROVAL SHALL BE POSTED AT THE WELL SITE PRIOR TO COMMENCING OPERATIONS.
2. Blowout prevention equipment with a minimum 3000 psi working pressure shall be installed and maintained in operating condition during all stages of perforating.
3. This well shall conform to the provisions set forth in our letter of July 31, 1975, approving the project.
4. Well records, under Sec. 3215 of the Public Resources Code, are received 60 days after recompletion of the well.
5. THIS DIVISION SHALL BE NOTIFIED TO WITNESS THE RUNNING OF A TEMPERATURE, SPINNER AND/OR RADIOACTIVE SURVEY TO CONFIRM THAT THE INJECTION WATER IS CONFINED TO THE INTENDED ZONE OF INJECTION.

RFC:d

cc Dept. Water Resources
Regional Water Quality Control Board
Production Dept.
Project File
County Industrial Waste Division

Blanket Bond

HAROLD W. BERTHOLF,
JOHN F. MATTHEWS, Jr., State Oil and Gas Supervisor

Original signed

By T.M.B. Albright, Deputy

25476-705 7-74 50M ①D OSP
OG 111

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Notice of Intention to Rework Well

5

This notice and indemnity or cash bond shall be filed, and approval given, before rework begins. If operations have not commenced within one year of receipt of the notice, this notice will be considered cancelled.

Rework

FOR DIVISION USE ONLY		
BOND	FORMS	
	114	121
B	✓	✓

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3. Public Resources Code, notice is hereby given that it is our intention to rework well No. (SHWU) AIW1 to be named AW-1, API No. 00338,

Sec. 19, T. 4S., R. 12W, S.B. B. & M., Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 5100'

2. Complete casing record, including plugs and perforations:
7", 23#, J-55 & 7", 32# N-80 csg from 5100' to surface.
Cmtd solid to surface.
Perfs: 4260'-4410', 4610'-4640', 4660'-4710', 4768'-4820', 4850'-4885', 4912'-4967', and 4976'-5001'

3. Present producing zone name Brown Zone in which well is to be recompleted Brown

4. Present zone pressure ±3500 psi New zone pressure ±3500 psi

5. Last produced _____ (Date) _____ (Oil, B/D) _____ (Water, B/D) _____ (Gas, Mcf/D)

or

6. Last injected Present (Date) ±1800 (Water, B/D) - (Gas, Mcf) ±1900 (Surface pressure, psig.)

The proposed work is as follows: ow
1. Perforate the folling intervals with one 1/2" hole/ft: 4450'-4570'; 4590'-4640'; 4660'-4710'; 4750'-4820';4830'-4885'; 4910'-4965' and 4975'-4995'.
2. Acid wash the above intervals with 25 gal/ft of 12% HCl-3% HF
3. Return well to service as an injector and run injection survey when injectivity stabilizes.

NOTE: Name of well to be changed from AIW1 to AW-1

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address 3350 Wilshire Blvd. (Street)
Los Angeles, (City) Calif. (State) 90010 (Zip)
Telephone Number (213) 385-0515

TEXACO Inc. (Name of Operator)
By L. McCann (Name) 7-15-76 (Date)
Asst. General Super.
Type of Organization Corp. (Corporation, Partnership, Individual, etc.)

FORM 107 (REV. 1-73)

10340-705 1-73 15M ② OSP

See Ownership File, Signal Hill West Unit Agreement, Texaco Inc. (Unit Operator), for Forms 156 and 157 dated 3-14-75.

WORK PERFORMED:

Drill ____ Redrill ____ Deepen ____

Plug ____ Alter casing ____

Water flood ✓ Water disposal ____

Abandon ____

Other ____

STATUS: (Date)

Producing ____

Recomp. prod. ____

Water flood 3-2-67

Water disposal ____

Abandoned ____

Other ____

MAP AND BOOK NC Ox

RECORDS FILED & DATE: Clerk Scott

✓ Summary (dup.) 4/13/67

Log & Core (dup.) ____

✓ History (dup.) 4/13/67

Induction E-log 112-5088 4/13/67

Temperature Survey Radio log 7/13/73

✓ D. Survey Surf 5.00 4/24/67

✓ Radioactive tracer + temperature Other 1/31/68

✓ Spinner (2) 3/10/70

(Check records for signature and correct name of operator or well, S.T.R. and field.)

Location OK Notice states ____

Elevation OK Notice states ____

Production Reports ____

(If production reports not received, make notation and inform Sr. Steno. when rec'd.)

If stimulation or disposal well:
Form 121 ____ Folder ____

RECORDS & REQUIREMENTS CHECKED: Eng. [illegible] 70A

✓

✓

✓

✓

✓

✓ 70A

Surface inspection ____

Data needed None ~~Spinner~~ Clerk: 4/24

Request records 4/20/67 F 170 CK 4/20/67

Correct records ____ (Specify) F 165 ____ 165A ____

CARDS ____

BOND: Blanket

Hold ____ Reason ____

Release ____ Date elig. ____ F 150b

End premium year ____
Release requested ____ (Check one)
Bond superseded ____
Well abandoned ____

FINAL LETTER ____ F 159 ____
and
FILE CLEARED ____ F 121 ____

Form 19-A

ORM 100

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

DIVISION OF OIL AND G
RECEIVED
APR 13 1967
DOG

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

INGLEWOOD, CALIFORNIA

Operator TEXACO Inc. Well No. Field #37

Sec. 19, T. 4S, R. 12W, SBM xxxxx Long Beach B. & M. Field Los Angeles County.

Location 1225' E & 890' S. of NWcorner of Sec. 19, T.4S, R.12W, SBM or 470'W & 500' S. of centerline of the intersection of Calif. Ave. and 33rd St. Signal Hill, Los Angeles, County (Give location from property or section corner, or street center lines)

Elevation of ground above sea level 100 feet.

All depth measurements taken from top of Kelly Bushing which is 11.00 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

In compliance with Sec. 3215, of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date March 21, 1967

Signed O W Chonette

H. J. Smith (Engineer or Geologist)

O. W. Chonette (Superintendent)

Title District Superintendent (President, Secretary or Agent)

Commenced drilling 11-28-66

Completed drilling 12-13-66

Total depth 5100' Plugged depth

Junk None

Commenced producing Water Injection (Date) Flowing/gas lift/pumping (Cross out unnecessary words)

GEOLOGICAL MARKERS	DEPTH

Geologic age at total depth: Pliocene

Name of producing zone Brown

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	"Water Injection Well"					
Production after 30 days						

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cementing if through perforations
10-3/4"	100'	Surface	32.5#	New	Smls.	H-40	Dug & set w/rat hole digger.		
7"	5100'	Surface	23#+32#	New	Smls	N-80-J-55	9-7/8"	1380 cu. ft. slurry	

PERFORATED CASING

(Size, top, bottom, perforated intervals, size and spacing of perforation and method.)

7" casing perforated in intervals from 5001' to 4260' as detailed on attached sheet.

Was the well directionally drilled? Yes Electrical Log Depths 5092' to 100' (loggers depth) (Attach Copy of Log)

△ OSP

Perforation:

7" casing perforated in intervals from 5001' to 4260' as follows:

4260'-4290'	3	holes/ft.	(Lane Wells	NCF-2	jet)	1/2"	hole			
4290'-4300'	1	"	"	"	"	"	"	"	"	"
4300'-4325'	3	"	"	"	"	"	"	"	"	"
4325'-4365'	2	"	"	"	"	"	"	"	"	"
4365'-4410'	1	"	"	"	"	"	"	"	"	"
4610'-4640'	2	"	"	"	"	"	"	"	"	"
4660'-4675'	1	"	"	"	"	"	"	"	"	"
4675'-4710'	2	"	"	"	"	"	"	"	"	"
4768'-4788'	2	"	"	"	"	"	"	"	"	"
4788'-4820'	3	"	"	"	"	"	"	"	"	"
4850'-4865'	2	"	"	"	"	"	"	"	"	"
4865'-4885'	3	"	"	"	"	"	"	"	"	"
4912'-4922'	2	"	"	"	"	"	"	"	"	"
4922'-4942'	3	"	"	"	"	"	"	"	"	"
4942'-4967'	2	"	"	"	"	"	"	"	"	"
4976'-5001'	2	"	"	"	"	"	"	"	"	"

Surveys:

Lane Wells - Induction Electrolog from 5092' to 100'.
Welex-Micro-Seismogram Log - Cased Hole from 5085' to 4000'.

Mud Program:

Weight: 71 to 76 #/Cf, Type: Chrome lignosulfonate.
Surface to T.D. Water loss: not over 10cc/30 min.

BIR
Bit Record:

(BIT NO.)	(SIZE)	(KIND)	(TYPE)	(FROM)	(TO)	(FOOTAGE)
1	9-7/8"	Reed	YT3	100'	1572'	1472'
2	9-7/8"	Smith	TDT	1572'	1756'	184'
3	9-7/8"	Reed	YT3J	1756'	2805'	1049'
4	9-7/8"	Security	S3S	2805'	3424'	619'
5	9-7/8"	Hughes	OSC	3424'	3633'	209'
6	9-7/8"	Reed	YT1A	3633'	3920'	287'
7	9-7/8"	Smith	DT2G	3920'	4200'	280'
8	9-7/8"	Reed	YT3J	4200'	4475'	275'
9	9-7/8"	Reed	YT1AJ	4475'	4665'	190'
10	9-7/8"	Smith	DT2G	4665'	4824'	159'
11	9-7/8"	Security	S4J	4824'	4962'	138'
12	9-7/8"	Reed	T1J	4962'	5100'	138'
13	6-1/8"	Reed	YT1A	5056'	5095'	34'

Bit #13 was used for clean out work.

FORM 103

SUBMIT IN DUPLICATE

26535-705 7-64 25M △ OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Texaco Inc. FIELD Long Beach

Well No. Field #37, Sec. 19, T. 4S, R. 12W, SBM B. & M.

Date March 21, 19 67 Signed O. W. Chonette

O. W. Chonette

P. O. Box 3337, Ventura, Calif. 642-6781 Title District Superintendent

(Address) (Telephone Number) (President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. Use this form to report a full account of all important operations during the drilling and testing of the well or during re-drilling, altering of casing, plugging, or abandonment with the dates thereof. Be sure to include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, shooting and initial production data.

Date

1966

DRILLING CONTRACTOR: Atlantic

MUD CONTRACTOR: IMC

11-26 Prepared the location and constructed a cellar. Dug hole for conductor pipe with rat hole digger. Ran and cemented 100' of 10-3/4", 32.5#, H-40 casing as conductor pipe.

11-28 Atlantic Oil Co. moved in and rigged up.

11-29 Installed S900 flange to conductor pipe to accommodate BOPE. Installed BOPE. Spudded a 9-7/8" hole at 2:00 AM and drilled to 300'. Mud: 74 #/cf.

11-30 Circulated and pulled up to conductor pipe and ran back to bottom. Hole was tight. Made a short wiper run and circulated hole clean. Ran in with Dynadrill and drilled to 1780' ±. Laid down Dynadrill. Ran in with bit and drilled to 1811'. Mud 74 #/cf.

12-1 Drilled to 2553' Mud 73 #/cf.
12-2 Drilled to 3290' Mud 72 #/cf.
12-3 Drilled to 3633' Mud 73 #/cf.
12-4 Drilled to 4048' Mud 74 #/cf.
12-5 Drilled to 4426' Mud 72 #/cf.
12-6 Drilled to 4665' Mud 73 #/cf.
12-7 Drilled to 4911' Mud 72 #/cf.
12-8 Drilled to 5100' Mud 72 #/cf.
Circulated hole clean for electric log.

12-9 Ran Lane Wells Induction Electrolog from 5092' to 112' (loggers depth). Ran in with a 9-7/8" bit to 5100'. Circulated hole clean and conditioned mud to run casing. Rigged up and ran 123 jts. of 7", 32#, and 23# casing as follows: 7" Baker Model "G" fill up shoe set at 5100', 100.80' of 7", 32#, N-80 blank casing, 4074.34' of 7", 23#, J-55 blank casing, 44.00' of 7", 32#, N-80 blank casing. Placed cast iron baffle plate at 5056'. Placed centralizers on the bottom 22 joints at the collars. Cemented 7" casing through shoe at 5100' as follows: Pumped in

1000 gallons of mud flush followed by 100 cu. ft. of lease salt water. Mixed and displaced 1380 cu. ft. of slurry consisting of a 1:1:4 mixture (cement, Pozzolan, and % gel). The first 200 cu. ft. was treated with 0.5% CFR-2 followed by 300 cu. ft. of slurry consisting of a 1:1 mixture of cement and Pozzolan treated with 0.5% CFR-2. Used top plug and displaced plug with 1144 cu. ft. of mud. Bumped plug on baffle plate at 5056' with 1000 psi (pressure held). Cement in place at 11:55 PM.

12-10 Had no cement returns to surface. Ran in a 1" pipe and located top of cement at 50'. Cemented top job with 50 sacks of neat cement treated with 3% $CaCl_2$. Removed BOPE. Landed 7" casing. Installed 6" series 900 flange, and tubing head. Pressure tested tubing head to 3000 psi. Pressure test good. Installed BOPE. Closed blind rams and pressure tested casing to 3000 psi for 30 minutes. Pressure test good. Made up 3-1/2" drill pipe and ran in with a 6-1/8" bit to baffle plate at 5056'. Drilled out baffle collar and cement to 5090'. Circulated hole clean and changed over to lease salt water. Pulled out and rigged up Lane Wells logging equipment.

12-11 Ran in Lane Wells Gamma Ray Bond Log. Lane Wells equipment would not work. Pulled out and ran Welex Micro-Seismogram Log (cased hole) from 5085' to 4000' (loggers depth). Log indicated good bonding.

12-12 Lane Wells perforated 7" casing at intervals from 5001' to 4260' as follows:

4260'-4290'	3	holes/ft.		NCF-2	Jet	-	1/2"	hole
4290'-4300'	1	"	"	"	"	"	"	"
4300'-4325'	3	"	"	"	"	"	"	"
4325'-4365'	2	"	"	"	"	"	"	"
4365'-4410'	1	"	"	"	"	"	"	"
4610'-4640'	2	"	"	"	"	"	"	"
4660'-4675'	1	"	"	"	"	"	"	"
4675'-4710'	2	"	"	"	"	"	"	"
4768'-4788'	2	"	"	"	"	"	"	"
4788'-4820'	3	"	"	"	"	"	"	"
4850'-4865'	2	"	"	"	"	"	"	"
4865'-4885'	3	"	"	"	"	"	"	"
4912'-4922'	2		"	"	"	"	"	"
4922'-4942'	3	"	"	"	"	"	"	"

4942'-4967' 2 Holes/ft.,NCF-2 jet, 1/2" holes
4976'-5001' 2 " " " " " " "

Ran in with 6-1/8" bit and casing scraper to 5090', and scraped perforations. Circulated casing clean. Layed down 3-1/2" drill pipe.

12-13 Ran 155 jts. of 2-7/8" used, inspected tubing including Baker Lok-Set retrievable casing packer, (product #646-12), set at 4736' and Baker Model "L" sliding sleeve, (product #810-5), set at 4722'. All the used tubing was Hydrotested to 4,000 psi. Removed BOPE and installed 10' blast nipple. Landed and flanged up tubing. Released rig at 8:00 PM. Tubing string including accessories = 4725' + 11' K.B. = 4736'.

Well idle from 12-13-66 to 3-2-67.

WATER INJECTION DATA

(DATE)	(HOURS INJECTED)	(ZONE)	(BW INJECTED)	(PRESSURE) (PSI)
3-2-67	15	C Upper	325	1,500
3-2-67	15	T Lower	373	1,400
3-3-67	21	C Upper	1,024	1,750
3-3-67	21	T Lower	436	1,700
3-4-67	24	C Upper	344	1,800
3-4-67	24	T Lower	596	1,800
3-5-67	16	C Upper	308	1,800
3-5-67	16	T Lower	596	1,800
3-6-67	16	C Upper	312	1,850
3-6-67	16	T Lower	583	1,850
3-7-67	22	C Upper	442	1,900
3-7-67	22	T Lower	550	1,900
3-8-67	24	C Upper	456	1,875
3-8-67	24	T Lower	606	1,850

FORM 109-D

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 169-424
WATER FLOOD

Mr. O. W. Chonette, Agent
TEXACO INC.
P. O. Box 3337
Ventura, California 93003
Agent for

Inglewood, Calif.
May 12, 1969

DEAR SIR: (037-00338)

Operations at well No. "Field" 37, Sec. 19, T. 4 S, R. 12 W, S.B. B & M.
Long Beach Field, in Los Angeles County, were ~~witnessed~~ reviewed
on May 1, 1967. Mr. A.D. Stockton, Engineer, representative of the supervisor was present
from --- to ---. There were also present ---

Present condition of well: 10-3/4" cem. 100'; 7" cem. 5100', perfs. 4260'-5001'. TD 5100', plugged w/cem. 5100'-5090'.

The operations were performed for the purpose of demonstrating that all of the injection fluid is confined to formations below 4180'.

Mr. ---------- reported:

1. A hole was drilled from the surface to 100' and 10-3/4", 32.5 lb. conductor pipe was cemented at 100', filling behind this casing to the surface.
2. A 9-7/8" hole was drilled from 100' to 300' and a Dynadrill was run to 1780'.
3. A 9-7/8" hole was drilled from 1780' to 5100'.
4. On December 9, 1966, 7", 23 and 32 lb. casing was cemented at 5100', with 1380 cubic feet of a 1:1:4 mixture of cement, pozzolan and gel, filling behind this casing to 50'.
5. An additional 50 sacks of cement was placed around the 7" casing from the surface.
6. The 7" casing was pressure tested at 3000 Psi for 30 minutes.
7. Cement was drilled out of the 7" casing from 5056' to 5090'.
8. The 7" casing was jet-perforated as noted above.

THE ENGINEER NOTED:
The following information is in the history filed by the operator:
An analysis of the temperature survey run on August 22, 1967 indicated there was no upward movement of fluid.

THE OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED as indicating that all of the injection fluid is confined to the formation below 4180' at this time.

NOTE: This report was delayed pending interpretation of the injection profile surveys.

ADS:nw

cc H. J. Smith (2)

F. E. KASLINE
State Oil and Gas Supervisor

By Robert Scott Matthews Jr. Deputy

W/S

21022-705 5-68 15M ② OSP

FORM 111

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 166-1240

WATER FLOOD

Mr. O. W. Chonette
P. O. Box 3337
Ventura, California

Inglewood, Calif.
November 1, 1966

Agent for TEXACO INC.

DEAR SIR:

Your proposal to drill water flood Well No. "Field" 37, Section 19, T. 4 S, R. 12 W, S.B. B. & M., Long Beach Field, Los Angeles County, dated July 22,1966, received Oct. 21,1966, has been examined in conjunction with records filed in this office. Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES

"Legal description of mineral-right lease, consisting of 60.0 acres is as follows:
Do mineral and surface leases coincide? Yes X No
Location of Well: 1225 feet East along section line and 890 feet South at right angles to said line from the Northwest corner of section 19, T. 4S, R. 12W, S.B.B.&M.
Elevation of ground above sea level 100'± feet mat datum.
All depth measurements taken from top of K.B. which is 11± feet above ground."

PROPOSAL

"PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade and Type	Top	Bottom	Cementing Depths
10-3/4"	32.75#	H-40	Surface	90'	-
7"	23&26#	J-55 & N-80	Surface	5100'	5100'

Intended zone of completion: Brown 4240-5100' Estimated total depth 5100'
Note: This well will be used for water injection in our existing water flood.
It is understood that if changes in this plan become necessary we are to notify you immediately."

DECISION

THE PROPOSAL IS APPROVED PROVIDED:

1. A monthly statement shall be filed with this Division on our Form 110-B showing the amount of fluid injected, pressure required, and source of injected water.
2. An analysis of the fluid to be injected shall be submitted upon request.
3. Injection shall cease if any evidence of damage or failure of water shut-off is observed, or upon written notice from this Division.
4. This Division shall be furnished within 30 days after injection is started sufficient data to confirm that the injection fluid is confined to the intended zone of injection.
5. Sufficient data shall be maintained and shall be open to inspection by personnel of this Division to establish that no damage is occurring due to excessive injection pressure.
6. Sufficient cement shall be used to fill back of the 7" casing to reach above the base of the fresh waters which is at approx. 1800'.

NOTE:

1. The base of the fresh water sands is at 1800'±. The fresh water will be protected by the 7" casing cemented at 5100' with sufficient cement to fill to 1800' or higher.
2. The water to be injected tests about 1800 G/G sodium chloride, and is water produced from neighboring wells.
3. The strata into which water is to be injected contain a mixture of oil and salt water. The salt water tests approx. 1800 G/G sodium chloride.

E. R. MURRAY-AARON, State Oil and Gas Supervisor

By CONTINUED ON PAGE 2, Deputy

①T OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Proposed Operations

WATER FLOOD

No. P 166-1240

Page 2

TEXACO INC. ~~xCompany~~

Well No. "Field" 37, Section 19, T. 4 S, R. 12 W, S.B. B. & M.,
4. Approx. Surface Location of Well: 890' S., 1225 E. from NW cor. of Sec.

JFM:nw

cc Sacramento (3)
R. J. Smith (2)
Co. Ind. Waste Div.

Blanket Bond

E. R. MURRAY-AARON, State Oil and Gas Supervisor

By _____, Deputy

FORM 111X
27541-705 7-64 3500 OSP

FORM 105

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Notice of Intention to Drill New Well

This notice and surety bond must be filed before drilling begins

DIVISION OF OIL AND GAS
RECEIVED
037-00338 S
OCT 21 1966
INGLEWOOD, CALIFORNIA

Ventura, Calif. July 22, 1966

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division III, Article 4, Public Resources Code, notice is hereby given that it is our intention to commence drilling well No. "Field" #37 Aw-1, Sec. 19, T. 4S, R. 12W, S.B. B. & M., Long Beach Field, Los Angeles County.

Legal description of mineral-right lease, consisting of 60.0 acres, is as follows: - (Attach map or plat to scale)

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
130	Aw 10-29	W	blanket	W	W

Do mineral and surface leases coincide? Yes X No ____ If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.

Location of Well: 1225 feet East (Direction) along section line and 890 feet South (Direction)

at right angles to said line from the Northwest corner of section 19,

T.4S, R.12W, S.B.B.&M.

Elevation of ground above sea level 100'± feet mat datum.

All depth measurements taken from top of K.B. (Derrick Floor, Rotary Table or Kelly Bushing) which is 11± feet above ground.

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES A.P.I.	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS
10-3/4"	32.75#	H-40	Surface	90'	-
7"	23&26#	J-55 & N-80	Surface	5100'	5100'

Intended zone(s) of completion: Brown (Name) 4240-5100' (Depth, top and bottom) Estimated total depth 5100'

Note: This well will be used for water injection in our existing water flood.

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address P. O. Box 3337
Ventura, California 93003

Telephone Number 1-805-642-6781

Texaco Inc. (Name of Operator)

By O. W. Chonette
O. W. Chonette, Dist. Supt.

Type of Organization Corporation (Corporation, Partnership, Individual, etc.)

27537-705 7-64 20M △ OSP

CalGEM Oil Well Files
API 037-00410
“Field” 36

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF PROPERTY AND WELL TRANSFER

Field or County		District
Imperial Co., Wilmington, L.A. Co., W. Coyote, Montebello, Beverly Hills, Seal Beach, El Segundo, Inglewood, Rosecrans, Venice Beach, Las Cienegas, S. Salt Lake, Dominguez, Hyperion, Lawndale, Leffingwell, Long Beach, Los Angeles Downtown, Potrero, Salt Lake, Santa Fe Springs, Cheviot Hills, Sherman, Torrance, Whittier, Howard Townsite, Huntington Beach, Yorba Linda, Orange Co., Richfield, Kraemer, W. Newport, Sunset Beach, Belmont Offshore		District 1 (Cypress, California)
Former owner: ChevronTexaco Exploration & Production Co.	C5680	Date: 9/23/2005

Well Name	API Number	Section Township Range
See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA	See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA	See Attached List For Complete List of Wells See Operator Folder (C5640) Chevron U.S.A. Inc. Dist. 1, Cypress, CA

Description of the land upon which the well (s) is (are) located.
Various

Date of transfer	New owner		Type of organization
7/11/2005		Chevron U.S.A. Inc. **C5640**	Corp.
	Address:	9525 Camino Media Bakersfield, CA 93311	Telephone: 661/654-7065
Reported by	OG30A received in Sacramento 9/2005		
Confirmed by	Same as above		
New operator new status: **PA**	Designation of Agent: Greg Leyendecker, Agent		
Old operator new status: **AB**	Remarks: For further information see Operator file (C5640) Chevron U.S.A. Inc.		

OPERATOR STATUS ABBREVIATIONS

PA – Producing Active
NPA- No potential, Active
PI- Potential Inactive
NPI-No potential, Inactive
AB-Abandoned or No More Wells

cc: Update; Envir Desk (2); File
Conservation Committee
Harold W. Bertholf, Inc.
L.A. & Orange County Assessors
WellStats – Cypress Dist. 1
WellStats – Sacrament HQS

Deputy Supervisor: R. K. Baker

Signature: Richard K. Baker, District Deputy

FORM AND RECORD CHECK LIST

Form or Record	Initials	Date	Form or Record	Initials	Date
Form OGD121	—	—	Map and Book		
Operator Card	(cc)	9-23-05	Notice cancellations	—	—
Well Records	(cc)	9/26/05 —	Bond Status BB	(cc)	9-23-05
Log Records	(cc)	9/26/05 —	EDP HQS	J.C	7-11-05
Production Reports	—	—	Data Base Rdy DL	GM	9-26-05

WELL TRANSFER NOTICE

Effective August 22, 2002

Chevron USA Inc.
Texaco California Inc.
And
Texaco Exploration and Production, Inc.

Transferred ALL THEIR WELLS
To

ChevronTexaco Exploration & Production Company

See OGD156 dated October 18, 2002 in Operator File for ChevronTexaco Exploration & Production Company (C5680) for details

FORM 159

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT OF WELL ABANDONMENT

830 North La Brea
Inglewood, California

September 16, 1971

Mr. M. E. Benson, Agent
TEXACO INC.
P. O. Box 3337
Ventura, CA 93003

DEAR SIR:

Your report of abandonment of Well No. "Field" 36 (037-00410), Sec. 19, T. 4S, R. 12W, S.B. B. & M., Long Beach field, Los Angeles County, dated September 9, 1971 received Sept. 10, 1971 has been examined in conjunction with records filed in this office.

A review of the reports and records shows that the requirements of this Division, which are based on all information filed with it, have been fulfilled.

DL:rk
cc Wesley G. Bruer
G. C. Cady (2)
Production Dept.
Conservation Comm.
Fire Prevention Engr
Fire Prevention Bureau
Dept of Bldg & Safety, LB
Fire Dept, LB

BLANKET BOND

WESLEY G. BRUER
~~F. E. KASLINE~~
State Oil and Gas Supervisor

By W L Ingram
Deputy Supervisor

31486-705 4-69 10M OSP

WORK PERFORMED:

Drill ____ Redrill ____ Deepen ____

Plug ____ Alter casing ____

Water flood ✓ Water disposal ____

Abandon ✓

Other ____

BROWN

STATUS: (Date)

Producing ____

Recomp. prod. ____

Water flood ____

Water disposal ____

Abandoned 7-26-71

Other ____

MAP AND BOOK ✱ Clamar

130 (SW 33rd & California)

RECORDS FILED & DATE: Clerk [illegible]

Summary (dup.) ____

Log & Core (dup.) ____

✓ History (dup.) 9-10-71

E-log ____

Radio log ____

D. Survey ____

Other ____

(Check records for signature and correct name of operator or well, S.T.R. and field.)

Location ____ Notice states ____

Elevation ____ Notice states ____

Production Reports ____

(If production reports not received, make notation and inform Sr. Steno. when rec'd.)

If stimulation or disposal well:
Form 121 ____ Folder ____

RECORDS & REQUIREMENTS CHECKED: Eng. [illegible]

✓

Surface inspection OK

Data needed NONE

Clerk:

Request records ____ F 170 __

Correct records ____ (Specify) F 165 __ 165A __

CARDS ____

BOND: Blanket

Hold ____ Reason ____

Release ____ Date elig. ____ F 150b __

End premium year ____
Release requested ____ (Check)
Bond superseded ____ (one)
Well abandoned ____

FINAL LETTER ✓ F 159 RK
and
FILE CLEARED ✓ F 121 [illegible]

Form 19-A

FORM 103

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
SEP 10 1971
INGLEWOOD, CALIFORNIA

History of Oil or Gas Well

OPERATOR TEXACO INC. FIELD Long Beach

Well No. Field #36, Sec. 19, T. 4S, R. 12W, S.B. B. & M.

Date September 9, 1971 Signed M. E. Benson

P. O. Box 3337
Ventura, Calif. 93003 (805) 642-6781 Title District Superintendent
(Address) (Telephone Number) (President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. Use this form to report a full account of all important operations during the drilling and testing of the well or during re-drilling, altering of casing, plugging, or abandonment with the dates thereof. Be sure to include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, shooting and initial production data.

Date

PRESENT CONDITION:

Total Depth: 5160'

Casing: 13-3/8", 61#, J-55 Surface to 59'
10-3/4", 32.75#, J-55 59' to 2012'
2-1/2", 6.4#, J-55 #1 - Surface to 5146'.
#2 - Surface to 5126'.
#3 - Surface to 5133'
#4 - Surface to 4771'.
Cemented to surface.

Perforated at intervals 4250' to 5060'. Never produced.
Water Injector.

PROPOSED WORK:

Cement all strings beginning with string #3 (deepest perforated interval), then strings #1, #2, #4. Division of Oil and Gas to witness placement of cement.

Cut casings off at least 10' below ground level, weld on steel plate and abandon. Division of Oil and Gas to witness plate.

1971

SUMMARY

7-19

Dowell moved in, rigged up and connected equipment to string #3. Pumped into tubing 50 cu.ft. of water followed by 130 cu.ft. of neat cement. Started getting oil returns from string #2. Connected string #2 to vacuum truck and squeezed string #3 with 160 cu.ft. cement. Total cement in string #3, 290 cu.ft. Good cement returns to surface in string #2. Plug was witnessed and approved by Division of Oil and Gas. Connected to string #1 and pumped into tubing 50 cu.ft. water followed by 81 cu.ft. neat cement. Pressured up to 1000 psi, good returns to surface. Cement job on string #1 witnessed and approved by Division of Oil and Gas. Connected equipment to string #4 and pumped 5 cu.ft. of water into tubing, pressured to 1500 psi. Held pressure for 20 minutes, bled pressure off well and released cementers.

DIVISION OF OIL AND GAS
RECEIVED
SEP 10 1971
INGLEWOOD, CALIFORNIA

7-20 Allied Oil Well Service Co. moved in, rigged up and ran a 1-3/4" bailer in string #4 to 4184', pulled, no cement. Reran bailer to 4186', pulled and recovered hard sand and some black oily material. Released rig and shut down.

7-21 Standing idle.

7-22 Moved in Company production hoist and ran 1-1/4" tubing to 1038' in string #4. Pumped in 50 cu.ft. water and displaced well fluid. Pumped in 30 sacks of neat cement in 3 stages filling from 1038' to surface. Witnessed and approved by Division of Oil and Gas.

7-23 through 7-25 Idle.

7-26 Cleaned out 10' below ground level, cut off 16" conductor pipe, 13-3/8" surface casing and four strings of 2-7/8" tubing 10' below the surface. Welded a steel plate on each string of tubing and on the 13-3/8" casing. Witnessed and approved by a representative of the city of Signal Hill. Cleaned up location and restored to natural contours. The plugging operations were witnessed and approved by the Division of Oil and Gas. The well is abandoned.

VSR:sc

FORM 109-D

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 171-722

WATER FLOOD

Mr. M. E. Benson, Agent
TEXACO INC.
P. O. Box 3337
Ventura, CA 93003

Inglewood, Calif.
July 29, 1971

DEAR SIR: (037-00410)

Operations at well No. "Field" 36, Sec. 19, T. 4 S, R. 12 W, S.B. B & M. Long Beach Field, in Los Angeles County, were witnessed on July 22, 1971. Mr. L. Olson, Engineer, representative of the supervisor was present from 0920 to 1030. There were also present A. Hambly, Foreman & Wm. Reid, Hoist Operator

Present condition of well: 13-3/8" x 10-3/4" cem. 2012'; 2-7/8" cem. 5146', perf. 4590'-4738', bridge plug 4749'; plugged w/cem. 2500'± to surface; 2-7/8" cem. 5126', cp 4210', 4432', 4560', & 4749', perfs. 4240'-4415', plugged w/cem. 4240'± to surface; 2-7/8" cem. 5133', perf. 4780'-5060'. Junk 1½" tubing 4793'-4928', plugged w/cem. 4780'± to surface; 2-7/8" cem. 4771', perf. 4450'-4556', plugged w/cem. 1038' to surface. TD 5160'.

The operations were performed for the purpose of witnessing the plugging operations in the process of abandonment.

Mr. ---------- reported:

MR. L. OLSON, ENGINEER, WAS PRESENT AT THE WELL FROM 0800 TO 1400 ON JULY 19, 1971, AND MR. HAMBLY REPORTED THAT 1½" tubing was left in the 2-7/8" casing cemented at 5133', from 4793' to 4928'.

THE ENGINEER NOTED:

1. Two hundred and ninety cubic feet of cement was pumped down the 2-7/8" casing cemented at 5133', filling from 4780'± to the surface, and also that cement returned to the surface through the 2-7/8" casing cemented at 5126', filling it from 4240'± to the surface.
2. Eighty one cubic feet of cement was pumped into the 2-7/8" casing cemented at 5146' under a final pressure of 2500 psi, filling from 2500'± to the surface.
3. No cement could be displaced into the 2-7/8" casing cemented at 4771' under a pressure of 1500 psi.

MR. L. OLSON, ENGINEER, WAS PRESENT AT THE WELL FROM 0845 TO 0900 ON JULY 20, 1971, AND NOTED THAT the bailer was spudded on hard fill at 4186' in the 2-7/8" casing cemented at 4771' and brought up a sample of sand and scale.

MR. L. OLSON, ENGINEER, WAS PRESENT AT THE WELL FROM 0920 TO 1030 ON JULY 22, 1971, AND NOTED THAT 30 sacks of cement was pumped into the 2-7/8" casing cemented at 4771' in stages through 1½" tubing beginning at 1038', filling to the surface.

THE PLUGGING OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED.

LO:nw

cc H. J. Smith (2)
Prod. Dept.

WESLEY G. BRUER

~~F. E. KASLINE~~
~~State~~ Oil and Gas Supervisor

By W L Ingram Deputy

w/s

48443-705 11-70 15M ② OSP

Wesley G. Bruer

July 7, 1971

WATER-FLOOD PROJECT
Texaco Inc.
Long Beach Field
Brown Zone
Well No. "Field" 36

Inglewood

We are enclosing three copies of report No. P171-603, dated July 7, 1971, issued in answer to a proposal by Texaco Inc. to abandon water flood well No. "Field" 36 (037-00410), Sec. 19, T. 4 S., R. 12 W., S.B.B.& M., Long Beach field.

The base of the fresh water sands is at 1,800 feet. The fresh water is protected by 10 3/4-inch casing cemented at 2,012 feet with sufficient cement to fill the annular space behind this casing to the surface.

This well was originally approved for water-flood service in our letter dated July 24, 1963.

W. L. Ingram
Deputy Supervisor

MM:nw

Enc.

cc A. D. Stockton
Production Department

FORM 111

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 171-603

WATER FLOOD

Mr. M. E. Benson, Agent
TEXACO, INC.
P. O. Box 3337
Ventura, CA 93003

Inglewood, Calif.
July 7, 1971

DEAR SIR:

(037-00410)

Your proposal to abandon water flood Well No. "Field" 36, Section 19, T. 4 S, R. 12 W, S.B. B. & M., Long Beach Field, Los Angeles County, dated 6/2/71, received 6/29/71, has been examined in conjunction with records filed in this office.

NOTE: 2-1/2" cem. 5146', perf. 4590'-4738', bridge plug 4749'; 2-1/2" cem. 5126', cp 4210', 4432', 4560' & 4749', perfs. 4240'-4415'; 2-1/2" cem. 5133', perf. 4780'-5060', fish top @ 4769'; 2-1/2" cem. 4771', perf. 4450'-4556'.

THE PROPOSAL IS APPROVED PROVIDED:

1. Heavy rotary mud shall be used to replace any oil or water in the hole and to fill all portions of the hole not plugged with cement.
2. THIS DIVISION SHALL BE NOTIFIED TO WITNESS the plugging operations.

NOTE:

1. The base of the fresh water sands is at 1800'. The fresh water is protected by the 10-3/4" casing cemented at 2012' with sufficient cement to fill to the surface.
2. Approx. Surface Location of Well: 880' S., 1265' E. fr. NW cor. Sec. 19.

MM:nw

cc Sacramento (3)
H. J. Smith (2)
Co. Ind. Waste Div.

Blanket Bond

WESLEY G. BRUER
~~F. E. KASLINE, State~~ Oil and Gas Supervisor

By W. L. Ingram, Deputy

① △ OSP

FORM 108. 24227-705 8-68 10M ② OSP

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
JUN 29 1971
INGLEWOOD, CALIFORNIA

Notice of Intention to Abandon Well

This notice must be given at least five days before work is to begin; one copy only

Ventura, Calif. June 2, 19 71

DIVISION OF OIL AND GAS

In compliance with Division 3, Public Resources Code, notice is hereby given that it is our intention to abandon

Well No. "Field #36 (Water Injection)", Sec. 19, T. 4S,

R. 12W, S.B. B. & M., Long Beach Field, Los Angeles County,

commencing work on July 28, 19 71.

The present condition of the well is:

1. Total depth: 5160'

2. Complete casing record, including plugs:

13-3/8", 61#, J-55 Surf. to 59'
10-3/4", 32.75#, J-55 59' to 2012'
2-1/2", 6.4#, J-55 #1-Surf. to 5146'
#2-Surf. to 5126'
#3-Surf. to 5133'
#4-Surf. to 4771'

Cemented to Surface
Perfs @ intervals 4240' to 5060'

3. Last produced Never
(Date) (Oil, B/D) (Gas, Mcf/D) (Water, B/D)

Additional data for dry hole

4. Oil or gas showings and results of tests:

5. Stratigraphic markers and depths:

6. Age of formation at bottom:

7. Base of fresh water sands:

The proposed work is as follows:

1. Completely fill all strings with cement, beginning with String #3 (deepest perforated interval), then Strings #1, #4, and #2. DOG to witness placement of cement.

2. Cut off the casings at least 10' below ground level, weld on steel plate, and abandon the well. DOG to witness plate.

Note: The above proposal has been discussed with and verbally approved by Mr. Doug Stockton of the Division of Oil and Gas, as of 5-19-71.

Abandon

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
		ARG	B	ARG	ARG ✓

P. O. Box 3337
Ventura, Calif. 93003
(Address)

(805) 642-6781
(Telephone No.)

Texaco Inc.
(Name of Operator)

By M. E. Benson
M. E. Benson, Dist. Supt.

KCS:ni

FORM 109-D

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 169-22
WATER FLOOD

Mr. O. W. Chonette, Agent
TEXACO INC.
P. O. Box 3337
~~Agent for~~ Ventura, California 93003

Inglewood, Calif.
January 8, 1969

DEAR SIR: (037-00410)

Operations at well No. "Field" 36, Sec. 19, T. 4 S, R. 12 W, S.B. B & M.
Long Beach Field, in Los Angeles County, were witnessed
on ----- . Mr. ----- , representative of the supervisor was present
from ---- to ---- . There were also present ------

Present condition of well: 13-3/8" cem. 59'; 10-3/4" cem. 2012'; 2-1/2" as follows: String #1: 2-1/2" cem. 4771', cp 4210', 4432', 4560' & 4749', perf. 4590'-4640' & 4667'-4738', bridge plug 4749'. String #2: 2-1/2" ld. 5126', 4210', 4432', 4560', 4749' & 4771', WSO above 4240', perf. 4240'-4330' & 4346'-4415'. String #3: 2-1/2" ld. 5133', 4210', 4432', 4560', 4749' & 4771'.* String #4: 2-1/2" ld. 5146', 4210', 4432', 4560', 4749' & 4771', perf. 4450'-4656'. TD 5160'. * perf. (intervals) 4780'-5060'.

The operations were performed for the purpose of demonstrating that all of the injection fluid is confined to the formations below 4240' in string #2.

Mr. ---------- reported:

The following information is in the history filed by the operator:
String #1 was bridged at 4749' with a bridge plug.

An examination of the water injection profile curve based on a Radioactivity survey run at an injection rate of 290 B/D and a pressure of 1900 Psi indicates no upward fluid movement.

NOTE: An analysis of the temperature survey run on August 22, 1967 confirmed there was no upward fluid movement.

THE OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED as indicating that all of the injection fluid is confined to the formations below 4240' at this time in string #2.

LA:nw

cc H. J. Smith (2)

F. E. KASLINE
E. R. MURRAY-AARON
State Oil and Gas Supervisor

By Robert Matthews, Jr. Deputy

90947-705 3-67 15M ② OSP

FORM 103

SUBMIT IN DUPLICATE

D06 △ OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Texaco, Inc. FIELD Long Beach

Well No. "Field #36 (W.I.)", Sec. 19, T. 4-S, R. 12-W, SBM B. & M.

Date August 29, 19 67 Signed O. W. Chonette /s/
O. W. Chonette

Box 3337, Ventura, Calif., 642-6781 Title District Superintendent
(Address) (Telephone Number) (President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. Use this form to report a full account of all important operations during the drilling and testing of the well or during re-drilling, altering of casing, plugging, or abandonment with the dates thereof. Be sure to include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, shooting and initial production data.

Date

Present Condition: Total Depth 5160'

Casing: 13 3/8", 61#, J-55 Conductor cemented at 59'.
10 3/4", 32 3/4#, J-55 Surface to 2012', cemented.

String #1 - 2 1/2", 6.4#, J-55 Surf. to 5146'. Perf'd. one 1/2" hole/foot at intervals from 4590' to 4783'.

String #2 - 2 1/2", 6.4#, J-55 Surf. to 5126'. Perf'd one 1/2" hole/foot at intervals from 4240' to 4515'.

String #3 - 2 1/2", 6.4#, J-55 Surf. to 5133'. Perf'd three 1/2" holes/foot from 4780' to 4915' and one 1/2" hole/foot from 4995' to 5060', at intervals.

String #4 - 2 1/2", 6.4#, J-55 Surf. to 4771'. Perf'd one 1/2" hole/foot from 4450' to 4556', at intervals.

Purpose: To isolate String #3 from Strings #1, #2 & #4, and to clean out Strings #1, #2 & #3.

1966

Contractor: Maddox Production Company

Maddox

3-28-67 String #3 - Ran in w/saw tooth collar on bottom. Hit fill at 4788 Circ. to 4816. Cont. to circ. to 4905'.

3-29-67 Using power swivel circ. to 4917. Pull 1 1/4" macaroni out of #3 and run into #1. Circulated #1 to 4850'. Found that 4 singles + about 15' of 1 1/4" had been left in #3. Pulled 1 1/4" out of #1 and ran in #2. Ran 2 1/4" fishing tool in #1 on jars and sinker bars. Stop at 595'. Pulled out. Found fill at 5050 in #2. Circ. in #2 from 5050 to 5101.

DIVISION OF OIL AND GAS
RECEIVED

OCT 5 1967

INGLEWOOD, CALIFORNIA

3-30-67 Circ. 5101 to 5126' in #2. Ran 2 1/16" feeler on sand line. Stop at 4763'. Ran 2 1/4" broach in #1 on macaroni. Stop at 4776. Pulled out and made up 2 5/16" scraper. Ran in #2. Stopped at 4581, then went to 4763. Stopped. Ran 2 5/16" scraper in #1. Stop at 4396. Made up 2" I.B. on sand line and ran in #3. Get pickup at 4723. Pulled out. Ran spear on 1 1/4" to 4776'. Did not engage fish. Pulled out. Ran 1 3/4" I.B. sand line. Stop at 4506'. Good picture of bad pipe.

3-31-67 Ran 2 5/16" scraper on 1 5/8" sinker bar in #1. Stop at 4392. Ran 2 5/16" scraper on macaroni. Stop at 4780'. Pulled out of #1 and ran spear on macaroni in #3. Pulled up 2 stands off bottom. 74 stands in #3. Ran 2 5/16" scraper in #1 on sand line. Stopped at 4396'. Worked to 4405'. Pulled out of #1. Pulled macaroni out of #3. Did not recover fish.

4-1-67 Rig up to run bridge plug in #1. McCullough. Could not get below 4660'. Ran 2 1/8" I.B. in #3 on macaroni. Stop at 4506. Set down all weight. Pulled out. No impression. Laid down macaroni, released rig.

4-2 to 6-26 Standing idle.

6-27-67 Contractor - Allied Oilwell Service.
Ran in #3 with 1 1/4" Servco flat bottom junk/mill on 151 joints of 1 1/4" macaroni. Stopped at 4768'. Broke circulation at 4768. Started milling using 800 psi on Bower Power swivel & 30 RPM in high gear. Dropped to 4769' and stopped. Pulled back through 4768' several times. Mill hung up both ways. Continued milling at 4769'. Made approximately 4 inches and pulled out. No excessive torque developed. Left mill in the hole. It appeared to have split or spread the 1 1/4" Baash Ross External Flush Tool Joint box as it was evident that the threads on the sub, which was screwed into the mill (box up) had been rotating inside of something. The threads were rolled over. Ran in with 2 1/8" I.B on sand line. Stopped at 4767 and indicated 2 1/2" casing swaged in. Ran in with 1" X 1 1/4" Die Tap. Tapped into fish at 4769. Fish hung up slightly at 4768'. Pulled out and found that the mill fish had been engaged but not recovered.

Moved to #1 and attempted to run Baker scraper.
Would not go into the casing at the surface. Ran condra scraper. Stopped at 4691. Scraped clean to 4785.

6-28-67 Pulled out and found that the scraper had been left in the hole. Ran fishing tool. Engaged fish at 4780' and recovered same. Ran 2 1/2" Halliburton SDC Packer Bridge Plug & set same with rubber at 4750' and top of plug at 4749'. Pulled out with setting tool and moved to

String #3. Ran in with Die Tap rigged to catch 1 1/4" Servco Mill. Engaged fish at 4769' and recovered same. Repaired damaged tool joint and ran in hole (#3) with 1 1/4" mill on macaroni. Tagged

fish (1 1/4" tubing fish) at 4769. Broke circulation and milled 4 inches. Pulled out and found that the mill had been left in the hole. The threads were worn off of the bottom joint of the 1 1/4" tubing. Bottom joint polished 3 1/2 feet above the mill, indicating bad pipe at that point. Ran back in hole.

6-29-67 Pulled and laid down macaroni tubing. Released contractor.

7-1-67 Hooked up well head to inject in String #2 and #3.

7-2-67 Resumed injection in String #2.

7-4-67 Resumed injection in String #3.

Date	STRING #2 BBLS./INJ.	STRING #2 PRESS	STRING #3 BBLS. INJ.	STRING #3 PRESS.	TOTAL BBLS. INJ
7-2-67	582	1850	-	-	582
7-3-67	406	1650	-	-	406
7-4-67	192	1750	643	1550	835
7-5-67	173	1800	625	1575	798
7-6-67	161	1800	615	1600	776
7-7-67	122	1775	531	1550	653
7-8-67	307	1800	560	1575	867
7-9-67	340	1825	565	1600	905
7-10-67	329	1825	538	1600	867
7-11-67	347	1825	564	1600	911
7-12-67	366	1850	581	1625	947
7-13-67	186	1200	315	1000	501
7-14-67	301	1825	579	1600	880
8-5-67	345	1850	625	1625	970
8-6-67	327	1850	603	1625	930
8-7-67	286	1825	541	1575	827
8-8-67	313	1825	578	1600	891
8-9-67	331	1825	588	1600	919
8-10-67	313	1825	554	1600	867

8-22-67 Ran Tracer survey in String #2. Copy to be attached to history.

Present condition same as prior to remedial work except String #1 plugged @ 4749 - 4750 , and a 1 1/4" tubing fish in String #3 with top of fish at 4769 and a 1 1/4" Servco mill on top of the fish.

E. R. Murray-Aaron

October 10, 1966

WATER-FLOOD WELL
Texaco Inc.
Brown Zone
Long Beach Field

Inglewood

Enclosed are three copies of report No. P166-1116, dated October 10, 1966, issued in answer to a proposal by Texaco Inc. to plug water flood well No. "Field" 36, Sec. 19, T. 4 S., R. 12 W., S.B.B. & M., Long Beach field.

The base of the fresh water sands is at about 1800'. The fresh water is protected by the 10-3/4" casing cemented at 2012' with sufficient cement to fill the annular space behind this casing to the surface.

This well was originally approved for water flood in report No. P163-905, dated July 24, 1963.

Wm. C. Bailey, Jr.

Deputy Supervisor

JFM:nw

cc John F. Matthews
Prod. Dept.

Encl.

D 092

FORM 103

SUBMIT IN DUPLICATE

26535-705 7-64 25M △ OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Texaco Inc. FIELD Long Beach

Well No. "FIELD" #36, Sec. 19, T. 4S, R. 12W, S.B. B. & M.

Date July 27, 1966 Signed O. W. Chonette
O. W. Chonette

P. O. Box 3337, Ventura, Calif. 642-6781 Title District Superintendent
(Address) (Telephone Number) (President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. Use this form to report a full account of all important operations during the drilling and testing of the well or during re-drilling, altering of casing, plugging, or abandonment with the dates thereof. Be sure to include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, shooting and initial production data.

Date

PURPOSE: To re-perforate String #3 from 4780' - 4850' and 4880' - 4915' for injectivity improvement.

MECHANICAL CONDITION: Total depth 5160'

Casing - 13-3/8", 61#, J-55, surface to 59'
10-3/4", 32-3/4#, J-55, surface to 2012'

#1 - 2-1/2", 6.4#, J-55, Surf. to 5146' - perforated 4590-4738' at intervals one 1/2" hole/ft.

#2 - " " " Surf. to 5126' - perforated 4240 - 4415' at intervals one 1/2" hole/ft.

#4 - " " " Surf. to 4771' - perforated 4450 - 4556' at intervals one 1/2" hole/ft.

#3 - " " " Surf. to 5133' - perforated 4780 - 4850', 4880 - 4915', 4955 - 5010', and 5035 - 5060', one 1/2" hole/ft.

Injection: The injectivity in String #3 had decreased to 0.0174 B/D/psi (Nov. 1965). This was equal to 40 B/D at 2300 psi.

1966

Contractor: Maddox Production Company, Inc.

2-22 Rigged up and ran 1-1/4" tubing in String #2. Found sand fill at 4231'.

2-23 Circulated sand out of hole to 5100'. Ran 2-3/8" scraper to 4202' where it stopped. Ran 2-1/4" scraper to 5070'. Ran 1-1/4" tubing in String #3 and found fill at 4768'. Circulated out sand to 4963'.

DIVISION OF OIL AND GAS
RECEIVED
AUG 4 1966
INGLEWOOD, CALIFORNIA

2-24 String #3: Circulated fill out to 5060'. The 1-1/4" tubing would not go below 5060'. Ran 1-1/4" scraper to 5060'. Rigged up Go Western to perforate. Go Western lost an expendable carrier, strip gun in String #3 at about 1500'. Ran various spears on the sand line and recovered only small pieces of the fish.

2-25 String #3: Ran spear on 1-1/4" tubing and sand line and pushed fish down about 20'. Ran 2-1/2" mill on 1-1/4" tubing.

2-26 String #3: Ran mill to 1520'. Ran 2-3/8" scraper to 1500'. Ran 2-3/16" feeler to 1650'. Ran spear to 1650' and recovered small pieces of wire. Ran 2-1/2" mill to 1520'. Milled and pushed gun to 5060' and circulated. Ran 2-3/8" feeler in String #2 and could not go below 4208'. Go Western ran 2-1/8" feeler in String #3 and could not go to bottom. Ran 2-3/16" feeler on sand line to 5060'. Go Western ran to bottom with 2-1/8" jet gun and perforated String #3 from 4915' to 4880' with 2-1/2" holes/ ft. They could not get to bottom with the next gun.

2-27 Ran 2-3/8" feeler to 4906' on sandline. Go Western ran a 1-11/16" jet gun and perforated String #3 from 4850' to 4780' with two 1/2" holes/ft.

2-28 Laid down tubing and rigged up well for injection.

Injectivity after repair: Well was placed on injection 3-1-66. From 3-21 to 3-26, the injectivity into String #3 averaged 0.221 B/D/psi (an increase of 12.7 times the prior rate). This was equal to 510 B/D at 2300 psi.

Final Mechanical Condition: Same as the initial mechanical condition except that String #3 is perforated with three 1/2" holes/ft. from 4915' to 4880' and from 4850' to 4780'.

FORM 111

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 166-1116

WATER FLOOD

Mr. O. W. Chonette
P. O. Box 3337
Ventura, California

Inglewood, Calif.
October 10, 1966

Agent for TEXACO INC.

DEAR SIR:

Your proposal to plug water flood Well No. "Field" 36, Section 19, T. 4 S, R 12 W, S.B. B. & M., Long Beach Field, Los Angeles County, dated July 27, 1966, received Oct. 3, 1966, has been examined in conjunction with records filed in this office. Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES

"The present condition of the well is as follows:

1. Total depth. 5160'
2. Complete casing record, including plugs: 13-3/8", 61#, J-55, surface to 59', cmt'd.
   10-3/4", 32-3/4#, J-55, surf. to 2012', cmtd.

String #1 - 2-1/2", 6.4#, J-55, Surf. to 5146' - perforated 1 - 1/2" hole per ft.
4590' - 4738' at intervals

" #2 - " " " " " 5126' - perforated 1 - 1/2" hole per ft.
4240' - 4415' at intervals

" #4 - " " " " " 4771' - perforated 1 - 1/2" hole per ft.
4450' - 4556' at intervals

" #3 - " " " " " 5133'- perforated 3 - 1/2" holes per ft.
4780' - 4915' at intervals.
perforated 1 - 1/2" hole per ft.
4995' - 5060' at intervals.

3. Last produced. Water injection well."

PROPOSAL

"The proposed work is as follows:

1. To place a bridge plug in String #1 at 4750' to prevent undesirable fluid movement. This bridge plug is to permanently abandon String #1 below 4750'. Verbal approval to permanently abandon String #1 below 4750' with a bridge plug was obtained from your Mr. John F. Matthews, Jr. on April 14, 1966. done
2. To run injection surveys in Strings #2 & #3."

DECISION

THE PROPOSAL IS APPROVED PROVIDED THAT this Division shall be furnished within 30 days after injection is started sufficient data to confirm that the injection fluid is confined to the intended zone of injection.

JFM:nw

cc Sacramento (3)
R. J. Smith
Co. Ind. Waste Div.

Blanket Bond

W/C

E. R. MURRAY-AARON, State Oil and Gas Supervisor

By Wm C Bailey, Jr. Deputy

1T OSP

FORM 107

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS
RECEIVED
OCT 3 1966
INGLEWOOD, CALIFORNIA

DIVISION OF OIL AND GAS

Notice of Intention to Deepen, Redrill, Plug or Alter Casing in Well

This notice must be given before work begins; one copy only

Long Beach, Calif. July 27, 1966

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of ~~deepening~~ ~~redrilling~~ plugging ~~altering~~ casting at Well No. Field #36
(Cross out unnecessary words)

, Sec. 19, T. 4S, R. 12W, S.B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 5160'

2. Complete casing record, including plugs: 13-3/8", 61#, J-55, surface to 59', cmt'd.
10-3/4", 32-3/4#, J-55, surf. to 2012', cmt'd.

String #1 - 2-1/2", 6.4#, J-55, Surf. to 5146' - perforated 1 - 1/2" hole per ft. 4590' - 4738' at intervals

" #2 - " " " " " 5126' - perforated 1 - 1/2" hole per ft. 4240' - 4415' at intervals.

" #4 - " " " " " 4771' - perforated 1 - 1/2" hole per ft. 4450' - 4556' at intervals.

" #3 - " " " " " 5133' - perforated 3 - 1/2" holes per ft. 4780' - 4915' at intervals.
perforated 1 - 1/2" hole per ft. 4995' - 5060' at intervals.

3. Last produced. Water injection well.
(Date) (Oil, B/D) (Water, B/D) (Gas Mcf/D)

The proposed work is as follows:

1. To place a bridge plug in String #1 at 4750' to prevent undesirable fluid movement. This bridge plug is to permanently abandon String #1 below 4750'. Verbal approval to permanently abandon String #1 below 4750' with a bridge plug was obtained from your Mr. John F. Matthews, Jr. on April 14, 1966.

2. To run injection surveys in Strings #2 & #3.

plug

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
			blanket	W	W

P. O. Box 3337, Ventura, Calif. (Address)

Texaco Inc. (Name of Operator)

642-6781 (Telephone No.)

By O. W. Chonette
O. W. Chonette, Dist. Supt.

ADDRESS ONE COPY OF NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

39529-705 1-65 15M ② OSP

E. R. MURRAY-AARON

March 30, 1966

WATER-FLOOD WELL
Texaco Inc.
Brown Zone
Long Beach Field

Inglewood

Enclosed are three copies of report No. P 166-394, dated March 30, 1966, issued in answer to a proposal by Texaco Inc. to alter casing and return to water flood injection well No. "Field" 36, Sec. 19, T. 4 S., R. 12 W., S.B.B.&M.,Long Beach field.

The base of the fresh water sands is at about 1800'. The fresh water is protected by 10-3/4" casing cemented at 2012' with sufficient cement to fill to the surface.

This well was originally approved for injection service in report No. P 163-905 dated July 24, 1963.

Wm. C. Bailey, Jr.

Deputy Supervisor

JFM:es

cc - Mr. John Matthews, Jr.
Production Dept.

FORM 111

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 166-394

WATER FLOOD

Mr. O. W. Chonette
P. O. Box 3337
Ventura, California
Agent for TEXACO INC.

Inglewood, Calif.
March 30, 1966

DEAR SIR:

Your alter casing and return proposal to to water flood Well No. "Field" 36, Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, Los Angeles County, dated Mar. 16, 1966 received Mar. 25, 1966, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:

"The present condition of the well is as follows:

1. Total depth. 5160'
2. Complete casing record, including plugs:
   13-3/8", 61#, J-55, surface to 59'
   10-3/4", 32-3/4#, J-55, 59' to 2012'
   #1 - 2-1/2", 6.4#, J-55, Surface to 5146' - perforated 4590'-4738' at intervals one ½" hole/ft.
   #2 - 2-1/2", 6.4#, J-55, surface to 5126' - perforated 4240'-4415' at intervals one 1/2"hole/ft.
   #3 - 2-1/2", 6.4#, J-55, surface to 5133' - perforated 4780'-5060' at intervals one 1/2" hole/ft.
   #4 - 2-1/2", 6.4#, J-55, surface to 4771' - perforated 4450'-4556' at intervals one 1/2" hole/ft.
3. Last produced. Injection Well"

PROPOSAL:

"The proposed work is as follows:
To re-perforate String #3 with two 1/2" holes per foot from 4780' to 4850' and from 4880' to 4915' (K.B.)."

DECISION:

THE PROPOSAL IS APPROVED.

JFM:es

cc - Sacramento (3)
Mr. P. O. Giddens
Mr. R. J. Smith

W/S

BLANKET BOND.

E. R. MURRAY-AARON, State Oil and Gas Supervisor

By Wm C. Bailey, Deputy

18755-705 3-64 50M ⓘT OSP

FORM 107

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAR 25 1966
INGLEWOOD, CALIFORNIA

Notice of Intention to Deepen, Redrill, Plug or Alter Casing in Well

This notice must be given before work begins; one copy only

Ventura Calif. March 16, 1966

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of ~~deepening, redrilling, plugging or~~ altering casing at Well No. Field #36
(Cross out unnecessary words)

, Sec. 19, T. 4 S, R. 12 W, S.B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 5160'

2. Complete casing record, including plugs:

13-3/8", 61#, J-55, surface to 59'
10-3/4", 32-3/4#, J-55, 59' to 2012'
#1 - 2-1/2", 6.4#, J-55, Surface to 5146' - perforated 4590'-4738' at intervals one ½" hole/ft.
#2 - 2-1/2", 6.4#, J-55, surface to 5126' - perforated 4240'-4415' at intervals one ½" hole/ft.
#3 - 2-1/2", 6.4#, J-55, surface to 5133' - perforated 4780'-5060' at intervals one ½" hole/ft.
#4 - 2-1/2", 6.4#, J-55, surface to 4771' - perforated 4450'-4556' at intervals one ½" hole/ft.

3. Last produced. Injection Well (Date) (Oil, B/D) (Water, B/D) (Gas Mcf/D)

The proposed work is as follows:

To re-perforate String #3 with two ½" holes per foot from 4780' to 4850' and from 4880' to 4915' (K.B.).

alter casing

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
			Blanket	mj	mj

1215 East San Antonio Drive
(Address) Long Beach
GArfield 3-7994
(Telephone No.)

TEXACO Inc.
(Name of Operator)
By O. W. Chonette /pds
O.W.Chonette, Dist. Supt.

ADDRESS ONE COPY OF NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

20501-705 4-64 15M ② OSP

TRIANGLE SERVICE, II

RECEIVED

SURVEY DATA SHEET

JUL 1 1964

Radioactive Tracer Survey

Order No. 603-4

Company Texaco, Inc.

Date February 14, 1964

Well "Field" #36 (String #2)

Field/Location Long Beach

Co. Rep. K. C. Smith

Survey Engr. D. Willis, D. Goldman

WELL DATA

Zero Point gnd.+10.7'

T.D. 4940'

	SIZE	WT.	DEPTH
Casing			t b
Liner			t b
Tubing	2 1/2"		4940'

Pressure 500 psi

Tools TSI (R/A tracer)

Meter Rate _____ bpd

Flow Loss _____ bpd

Net Rate _____ bpd

Depth _____ Reset to _____

Perforations 4240' to 4330', 4346' to 4415'

Time	Depth	Count	Avg. Count	
		See attached sheet for survey procedure and conclusions.		

Run No.	Type	Line Spd.	Direction	Calib.	Depth	100% Counts

Depth	Count	Depth	Count	Depth	Count	Depth	Count

Texaco, Inc. Field #36 (String #2)
Radioactive tracer survey
2-14-64

PURPOSE OF SURVEY

To determine if water being injected into the well at the surface or coming into the well from wells no. 1 and no. 4 at approximately 4940', is moving up above the perforations behind the pipe.

PROCEDURE

The TSI R/A tracer tool with the gamma detector spaced 4 feet below was lowered to 4200'. At this point radioactive iodine solution was injected into the tubing while water was being injected into the well. After waiting several minutes the tool was lowered slowly until an increase in radioactivity was detected.

Four separate determinations were made, each indicated increasing activity at a depth of 4260' to 4280', this activity decreasing on subsequent runs through the interval.

CONCLUSIONS

No indication could be found of water movement upwards above the perforations behind the pipe.

100

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

Operator TEXACO Inc. Well No. Field #36

Sec. 19, T. 4S., R. 12W., S.B. B. & M. Long Beach Field Los Angeles County.

Location 500'S and 400'W from the intersection of the centerlines of California Ave. & 33rd St.
(Give location from property or section corner, or street center lines)

Elevation of ground above sea level 91.3 feet USGS.

All depth measurements taken from top of Kelly Bushing which is 10.7 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

In compliance with Sec. 3215, of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date January 9, 1964

Signed T. R. Beauchamp

P. O. Giddens
(Engineer or Geologist)

(Superintendent)

Title District Superintendent
(President, Secretary or Agent)

Commenced drilling 10/15/63

Completed drilling 11/ 4/63

Total depth 5160' Plugged depth

Junk None

GEOLOGICAL MARKERS	DEPTH

Geologic age at total depth: Lower Pliocene

Commenced producing - (Date) Flowing/gas lift/pumping (Cross out unnecessary words)

Name of producing zone Brown

Water Injection Well

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production						
Production after 30 days						

DIVISION OF OIL AND GAS
RECEIVED
JAN 10 1964
INGLEWOOD, CALIFORNIA

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cementing if through perforations
13-3/8"	59'	Surf.	61#	New	Smls	J-55	15"		
10-3/4"	2012'	59'	32.75#	New	Smls	J-55	15"	235	
2-1/2"	5146'	Surf.	6.4#	New	Smls	J-55	9-7/8"	420	
Note: 4 Strings of 2½" were cemented at 4771', 5126', 5133' and 5146'.									

PERFORATED CASING
(Size, top, bottom, perforated intervals, size and spacing of perforation and method.)

String #1 - 4590' to 4640' and 4667' to 4738'
String #2 - 4240' to 4330' and 4346' to 4415'
String #3 - 4780' to 4850', 4880' to 4915', 4955' to 5010' and 5035' to 5060'
String #4 - 4450' to 4656'

Electrical Log Depths 2012' to 5160' (Attach Copy of Log)

SPO

FORM 103

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA

DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR TEXACO Inc. FIELD Long Beach

Well No. Field #36, Sec. 19, T. 4S., R. 12W., S.B. B. & M.

Date January 9, 1964 Signed T. R. Beauchamp

1215 E. San Antonio Dr.
Long Beach 7, Calif. (Address) Garfield 3-7994 (Telephone Number) Title District Superintendent (President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. Use this form to report a full account of all important operations during the drilling and testing of the well or during re-drilling, altering of casing, plugging, or abandonment with the dates thereof. Be sure to include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, shooting and initial production data.

Date	
1963	CONTRACTOR - ATLANTIC OIL COMPANY
10/15	Spudded at 3:00 AM and drilled a 10-5/8" hole to 1337'. There was 20' of 16" conductor pipe in place.
10/16	Drilled to 1340', set whipstock #1 and drilled to 1758'.
10/17	Drilled to 2026' and opened the hole to 15" to 1391'.
10/18	Opened the hole to 2025'. Ran 48 joints (1953') of 10-3/4", 32.75#, J-55 casing with one joint of 13-3/8", 54.5#, J-55 casing on top. Cemented with the shoe at 2012' with 185 sacks of class A cement mixed 1 to 1 with possolan plus 18% gel followed with 50 sacks of neat cement (1210 cubic feet of slurry). Cement returned to the surface.
10/19	Installed blowout prevention equipment and tested the casing to 800 psi for 15 minutes. Drilled a 9-7/8" hole to 2261'.
10/20	Drilled to 2373', set whipstock #2 and drilled to 2552'.
10/23	Drilled to 3835', set whipstock #3 and drilled to 3891'.
10/24	Drilled to 3942' and changed from a fresh water-gel mud to a lignosulfonate salt water mud using lease produced water.
10/27	Drilled a 9-7/8" hole to 5160' (total depth).
10/28	Ran an electric log. Ran a bit to bottom and laid down the drill string. Ran a string of 2-1/2" to 5150' and started a second string. The collars would not pass. Pulled the 2-1/2" casing and sent all the 2-1/2" to have the collars tapered to feather edges. The casing collars were tapered on the upper side with a 1/8" flat shoulder. The shoulders had to be eliminated.

DIVISION OF OIL AND GAS
RECEIVED
JAN 10 1964
INGLEWOOD, CALIFORNIA

10/29 Picked up the drill string, ran a bit to 5160' and circulated.

10/30 Laid down the drill string and ran 2-1/2" casing String #1 to 5146' (164 joints) and hung in the North hole of the suspension plate. Used a guide shoe and a float collar one joint up. Ran String #2 to 5126' (164 joints) and hung in the West hole of the suspension plate. Used a bull plug shoe and Otis type A sliding sleeves at 4210', 4432', 4560' and 4749'. The sliding sleeves were closed.

10/31 Ran String #3 to 5133' (163 joints) and hung in the East hole of the suspension plate. Used a bull plug shoe. Ran String #4 to 4771' and hung in the South hole of the suspension plate. Used a bull plug shoe. Cemented through String #1 with 240 sacks of class A cement mixed 1 to 1 with pozzolan plus 18% gel followed with 130 sacks mixed 1 to 1 with pozzolan plus 4% gel (1875 cubic feet of slurry). Cement did not return to the surface. Ran 3/4" line pipe to 60' and pumped in 50 sacks of neat cement. Cement returned to the surface. Removed the 13-3/8" casing head and suspension plate.

11/ 1 Ran 1-1/4" drill pipe with Otis actuators and opened the sliding sleeve at 4749' and squeeze cemented with 50 sacks. Breakdown pressure - 800 psi. Final pumping pressure - 3500 psi. Closed the sleeve and circulated. After 3 hours, opened the sleeve and tested to 2000 psi. Closed the sleeve and pulled up.

11/ 2 Opened the sleeve at 4560' and squeeze cemented with 50 sacks. Pumping pressure - 2300 psi. Final pumping pressure - 2900 psi. Closed the sleeve. After 5-1/2 hours, opened the sleeve and broke down the cement with 800 psi. Re-squeeze cemented with 50 sacks. Final pumping pressure - 2700 psi. Closed the sleeve and pulled up. Opened the sleeve at 4432' and started to squeeze cement. The pumping truck broke down after 15 sacks were pumped in. Closed the sleeve and backscuttled. Opened the sleeve and squeeze cemented with 50 sacks. Breakdown pressure - 2000 psi. Final pumping pressure - 2500 psi. Closed the sleeve.

11/ 3 After 5 hours, re-squeezed with 50 sacks. Breakdown pressure - 1800 psi. Final pumping pressure - 2500 psi. Closed the sleeve and pulled up. Opened the sleeve at 4210' and squeeze cemented with 65 sacks. Breakdown pressure - 2700 psi. Final pumping pressure - 1500 psi. Closed the sleeve. After 5 hours, re-squeezed with 65 sacks. Final pumping pressure - 1800 psi. Closed the sleeve, lowered the drill pipe to 4470' and circulated. Pressure tested the casings. Strings #1, #2 and #4 held 4000 psi. String #3 would not hold pressure.

11/ 4 Ran a plug on a wire line which set in collars. Found the leak in String #3 at the shoe. Apparently the cement bull plug shoe had been damaged while being run. Set a 2-1/2" cast iron bridge plug at 5080' and tested the string to 4000 psi. Released the rig.

11/19 Rigged up to perforate. The individual strings were directionally perforated as follows:

#1	4590' to 4640' and 4667' to 4738'
#2	4240' to 4330' and 4346' to 4415'
#3	4780' to 4850', 4880' to 4915', 4955' to 5010', and 5035' to 5060'
#4	4450' to 4556'

One 1/2" jet hole per foot was used. After each gun was oriented and fired, water was pumped in to make sure there was no fluid communication between strings. The crew worked only during the daylight hours. The work was completed on 12/2/63 and each string shut in until water injection can begin.

FINAL MECHANICAL CONDITION: Total Depth - 5160'.

Casing -	13-3/8", 61#, J-55		Surface to 59'
	10-3/4", 32.75#, J-55		59' to 2012'
	2-1/2", 6.4#, J-55	#1	Surface to 5146'
	2-1/2", 6.4#, J-55	#2	Surface to 5126'
	2-1/2", 6.4#, J-55	#3	Surface to 5133'
	2-1/2", 6.4#, J-55	#4	Surface to 4771'

Perforations - One 1/2" jet hole/ft.	#1	4590' to 4640'
		4667' to 4738'
	#2	4240' to 4330'
		4346' to 4415'
	#3	4780' to 4850'
		4880' to 4915'
		4995' to 5010'
		5035' to 5060'
	#4	4450' to 4556'

Note: All measurements were from the Kelly Bushing.

POG:tb

DIVISION OF OIL AND GAS
RECEIVED
OCT 21 1963
INGLEWOOD, CALIFORNIA

State of California
The Resources Agency of California
REGIONAL WATER POLLUTION CONTROL BOARD NO. 4
217 West First St.- Room 907- Los Angeles 90012
October 18, 1963

Texaco, Incorporated
1215 E. San Antonio Drive
Long Beach 7, California
Attn:T.R. Beauchamp

Re:Reinjection, Oil Field Brine, Long Beach Field - Texaco, Inc. - (File 63-118)

Gentlemen:

Reference is made to our letter dated September 13, 1963, which transmitted a draft of tentative requirements for the wastes discharged at the subject site.

Pursuant to Section 13054 of the Water Code of the State of California, this Regional Water Pollution Control Board at its meeting held on October 16, 1963, reviewed these tentative requirements, considering all factors in the case, and adopted Resolution 63-50 (copy attached) prescribing requirements for this waste discharge.

Very truly yours,

REGIONAL WATER POLLUTION CONTROL BOARD NO. 4

Linne C. Larson

LINNE C. LARSON, Executive Officer

LCL:V
encl.
cc:Long Beach Water Department
State Div.Oil & Gas,Inglewood
State Dept.Water Resources
State Dept. of Public Health

FORM R-1

State of California
Resources Agency
REGIONAL WATER POLLUTION CONTROL BOARD NO. 4
Los Angeles Region

RESOLUTION NO. 63-50

PRESCRIBING REQUIREMENTS FOR REINJECTION OF OIL FIELD BRINE
TEXACO, INCORPORATED
Long Beach Field, Los Angeles County, California
(File 63-118)

WHEREAS, TEXACO, INCORPORATED,has filed a proposal with the State Division of Oil and Gas to convert a well for water injection (No. "Field" 36) located in Section 19, T4S, R12W, S.B.B.&M., Long Beach, Los Angeles County. This proposal by administrative procedure previously adopted is subject to joint review by the Division of Oil and Gas and this Regional Board; and

WHEREAS, the following information has been submitted by the Division of Oil and Gas with this report:

1. Fresh waters above 1800 feet will be protected by 9-5/8" casing cemented at 2000' with sufficient cement to fill in back of the pipe to the surface.

2. Site of well No. "Field" 36 is 500 feet southerly along property section line and 370 feet westerly at right angles to this line from the northwesterly corner of property, which is also 500 feet southerly along the center line of California Avenue from the center line of 33rd Street, and 400 feet westerly at right angles.

3. Saline water produced from nearby wells will be injected into the Brown Zone, Long Beach Field;

and

WHEREAS, on September 13, 1963, a letter transmitting a tentative draft of this resolution was submitted to Texaco, Incorporated, and copies thereof sent to interested persons and governmental agencies with the advice that objections thereto would be considered by this Board if submitted in writing on or before October 15, 1963; and

WHEREAS, objections and recommendations received have been reviewed and considered by the Board;

NOW, THEREFORE, BE IT RESOLVED, that in order to prevent a condition of pollution in the receiving waters and to prevent the creation of a nuisance in the disposal area, this Regional Water Pollution Control Board, in accordance with authority granted by Division 7 of the Water Code of the State of California, prescribes the following requirements with respect to the proposed saline injection by Texaco, Incorporated, at this site, subject to the provisions of the Water Code, which reads in part that requirements may be revised from time to time:

1. Saline waters shall be confined to disposal sites and in no event shall be permitted to flow upon the surface of the ground, enter water courses or drainage ditches.

2. Waste discharged shall be confined to the substances as defined.

3. All applicable ordinances, laws, rules and regulations of public agencies shall be complied with in the construction, operation and maintenance of the proposed discharge; and

BE IT FURTHER RESOLVED, that in prescribing these requirements, it is the intent of this Board to:

1. Preserve the quality of the receiving waters, insofar as they may be affected by this waste discharge, suitable for such beneficial uses for which they may be utilized.

2. Prevent the creation of a nuisance as a result of the proposed injection; and

BE IT FURTHER RESOLVED, that these requirements do not authorize the commission of any act resulting in injury to the property of another; and

BE IT FURTHER RESOLVED, that Texaco, Incorporated, be further advised that these requirements do not exempt the operator of this waste disposal facility from compliance with any other law which may be applicable. The requirements are not a permit; they do not legalize this waste disposal facility, and they leave unaffected any further restraint on the disposal of wastes at this site which may be contained in other statutes; and

BE IT FURTHER RESOLVED, that the Executive Officer of this Board be authorized and he is hereby directed, to certify and submit copies of this Resolution to Texaco, Incorporated, and to such individuals and agencies as may have need therefor or as may request same.

I, Linne C. Larson, Executive Officer of the Los Angeles Regional Water Pollution Control Board, State of California, do hereby certify that the foregoing is a full, true and correct copy of a resolution adopted by the Los Angeles Regional Water Pollution Control Board at the Board Meeting held on October 16, 1963.

LINNE C. LARSON
Executive Officer

RMH:IF
9-13-63

September 16, 1963

Mr. Fred W. Baxter
Administrative Officer
City of Signal Hill
2175 Cherry Avenue
Signal Hill, California

Dear Mr. Baxter:

Texaco Inc. has informed me that you wish assurance that proper means will be taken to protect fresh water before considering approval of its proposal to drill well No. "Field" 36, Sec. 19, T. 4 S., R. 12 W., S.B.B.& M.,Long Beach field.

Under the "California Laws for Conservation of Petroleum and Gas", the Division of Oil and Gas is responsible for the protection of fresh water reservoirs from pollution or contamination due to subsurface oil and gas operations. Sections 3106, 3220 and 3224 of the Public Resources Code cover these responsibilities. (See enclosed pamphlet.)

Any proposal to drill a well in California for oil, gas, secondary recovery of oil, or waste water disposal must contain an adequate protection plan for fresh water or it is not approved. This applies to Texaco's well No. "Field" 36.

I might add that the California Regional Water Pollution Control Board and the Department of Water Resources work through the Division of Oil and Gas for prevention of contamination of fresh waters due to subsurface oil and gas well operations.

Sincerely,

WM. C. BAILEY
Deputy Supervisor

WCB:rw

Encl

cc Mr. P. O. Giddens, Texaco Inc.

State of California
Resources Agency
REGIONAL WATER POLLUTION CONTROL BOARD NO. 4
217 W. First St.-Room 907-Los Angeles 12,Calif.

September 13, 1963

DIVISION OF OIL AND GAS
RECEIVED
SEP 17 1963
INGLEWOOD, CALIFORNIA

"Field" 36

Texaco, Incorporated
1215 East San Antonio Drive
Long Beach 7, California
Attn: T. R. Beauchamp

Re: Tentative Requirements - **Reinjection,Oil Field Brine, Long Beach Field - Texaco,Inc.(File 63-118)**

Gentlemen:

Reference is made to **Report on Proposed Operations P163-905, dated July 24, 1963, submitted by Division of Oil and Gas,** which in accordance with administrative procedures adopted by this Regional Water Pollution Control Board is accepted as a Report of Waste Discharge, filed with this Board in accordance with Section 13054 of the Water Code of the State of California.

The subject waste discharge has been investigated, and based upon this investigation, the enclosed draft of tentative requirements has been prepared for consideration by this Board.

In accordance with established administrative procedures this Board, at its next regular meeting to be held on **Wednesday, October 16, 1963, at 10 A.M., in the City Council Chambers, City Hall, 225 West Third Street, Oxnard, California,** will consider objections submitted in writing to any or all portions of the attached tentative requirements.

The Board will also consider reports and/or recommendations of State and local governmental agencies, facts brought out by protests, and the attached tentative requirements, and then will take final action by prescribing requirements for this waste discharge.

Should objections be received which appear to have merit, the Board at its discretion may order further investigations before taking final action in prescribing requirements for the subject waste discharge.

Very truly yours,

LINNE C. LARSON, Executive Officer

By Raymond M. Hertel
RAYMOND M. HERTEL
Senior Water Pollution Control Engr.

RMH:IF
Encl.
cc: State Div.Oil&Gas,Inglewood
State Dept.of Public Health
State Dept.of Water Resources
Long Beach Water Department

✓ KK 9-17-63

FORM T-2

TENTATIVE

State of California
Resources Agency
REGIONAL WATER POLLUTION CONTROL BOARD NO. 4
Los Angeles Region

RESOLUTION NO. _____

PRESCRIBING REQUIREMENTS FOR REINJECTION OF OIL FIELD BRINE
TEXACO, INCORPORATED
Long Beach Field, Los Angeles County, California
(File 63-118)

WHEREAS, TEXACO, INCORPORATED,has filed a proposal with the State Division of Oil and Gas to convert a well for water injection (No. "Field" 36) located in Section 19, T4S, R12W, S.B.B.&M., Long Beach, Los Angeles County. This proposal by administrative procedure previously adopted is subject to joint review by the Division of Oil and Gas and this Regional Board; and

WHEREAS, the following information has been submitted by the Division of Oil and Gas with this report:

1. Fresh waters above 1800 feet will be protected by 9-5/8" casing cemented at 2000' with sufficient cement to fill in back of the pipe to the surface.

2. Site of well No. "Field" 36 is 500 feet southerly along property section line and 370 feet westerly at right angles to this line from the northwesterly corner of property, which is also 500 feet southerly along the center line of California Avenue from the center line of 33rd Street, and 400 feet westerly at right angles.

3. Saline water produced from nearby wells will be injected into the Brown Zone, Long Beach Field;

and

WHEREAS, on September 13, 1963, a letter transmitting a tentative draft of this resolution was submitted to Texaco, Incorporated, and copies thereof sent to interested persons and governmental agencies with the advice that objections thereto would be considered by this Board if submitted in writing on or before October 15, 1963; and

WHEREAS, objections and recommendations received have been reviewed and considered by the Board;

BE IT FURTHER RESOLVED, that the Executive Officer of this Board be authorized and he is hereby directed, to certify and submit copies of this Resolution to Texaco, Incorporated, and to such individuals and agencies as may have need therefor or as may request same.

I, Linne C. Larson, Executive Officer of the Los Angeles Regional Water Pollution Control Board, State of California, do hereby certify that the foregoing is a full, true and correct copy of a resolution adopted by the Los Angeles Regional Water Pollution Control Board at the Board Meeting held on October 16, 1963.

LINNE C. LARSON
Executive Officer

RMH:IF
9-13-63

TEXACO
INC.

PETROLEUM PRODUCTS

DIVISION OF OIL AND GAS
RECEIVED
SEP 13 1963
INGLEWOOD, CALIFORNIA

1215 E. San Antonio Drive
Long Beach 7, California
September 12, 1963

FIELD #36 - WATER INJECTION
LONG BEACH FIELD

Mr. W. C. Bailey
Division of Oil and Gas
830 N. LaBrea
Inglewood 3, California

Dear Sir:

The City Administrator for Signal Hill wants assurance that the fresh water will be protected before we can get Signal Hill approval to drill Field #36. He indicated he would accept a letter from you showing your duties and responsibilities and the Sections of the code which apply for that assurance.

Attached is a proposed letter for your signature. It was written in an effort to save your time. I hope it is satisfactory.

Very truly yours,

P. O. Giddens

P. O. Giddens

POR-RW

E. R. MURRAY-AARON

July 24, 1963

WATER FLOOD PROJECT
TEXACO INC.
Long Beach Field
Brown zone

Inglewood

Enclosed are:

1. Copy of a letter from Texaco Inc. accepting responsibility for liability to neighboring operators for a proposed water flood in the Brown zone, Long Beach field.

2. Map showing status of adjoining operators with regard to the proposed water flood.

3. Analysis of produced waters from the various zones in the field.

4. Copy of our letter to the operator approving the plan.

5. Our report No. P 163-905, dated July 24, 1963, in triplicate, issued in answer to the operator's proposal to drill well No. "Field" 36, Sec. 19, T. 4 S., R. 12 W., S. B. B. & M., Long Beach field, as a water flood well in the Brown zone.

Please refer to our letter of November 19, 1962, disapproving the plan as originally proposed for copies of the original letter of proposal, contour map and cross-sections A-A and B-B.

The pool to be flooded is located under property controlled by Texaco Inc. Lateral confinement is provided by faults to the east and west which are believed to be barriers. Edgewater downdip confines the flood on the north. Wells across both faults are presently being produced from the Brown zone by the operator. Monthly fluid level surveys made in these wells and in wells adjacent to the injection well will provide close observation of fluid movement.

The flood will be initiated by drilling one injection well to a down structure location. Additional wells may be added if the flood progresses satisfactorily.

All wells are to be repaired when necessary and new wells completed in a manner to prevent interzonal migration of fluids. Injected water will be filtered and treated waste water from the field. The injection rate and surface pressures will be determined after the program has begun. Close observation will be kept

of the fluid level in neighboring wells to insure that the injection fluid is not raised above the Brown shale which overlies the Brown zone.

The usual notices will be required for work done on existing wells or for new wells to be drilled.

Wm C. Bailey JJZ

Deputy Supervisor

KPL:eb

Encls (5)

CC- Prod. Dept.

July 24, 1963

Mr. T. R. Beauchamp
District Superintendent
Texaco Inc.
1215 East San Antonio Drive
Long Beach 7, California

Water Flood Project
Brown Zone
Long Beach Field

Dear Mr. Beauchamp

We have your Supplementary Notice of Intention to Drill water flood well No. "Field" 36, Sec. 19, T. 4 S., R. 12 W., S. B. B. & M., Long Beach field, and your letters of November 6, 1962, and July 16, 1963, requesting this Division's approval of a proposed water flood project in the Brown zone, Long Beach field.

Your proposal is approved provided:

1. Pressure and fluid level surveys shall be made in the wells neighboring the injector before injection is started and continued thereafter to determine the movement of the injection water. Proof must be available to this Division at all times that pressure within the reservoir being flooded is safely below that necessary to raise fluid up to the fresh water zones. Such surveys shall also be conducted in those wells on the "Field" lease which produce from the Brown zone across the projected boundary faults to the east and west.

2. Accurate records are kept of the production of oil, gas and water from all wells involved and of the amounts of water injected and pressures required. This Division shall have access to all such records.

3. A monthly report on our Form 110-B is furnished this Division showing complete data as to fluid injected and pressures required. This is in addition to the regular monthly production report.

4. A notice is filed when your company intends to:

   a. Drill a water injection well (on our Form 105).
   b. Alter casing and convert a well to water injection (on our Form 107).
   c. Convert a well to water injection even though no mechanical change is required.

Specific requirements will be outlined in our reply to your notice.

5. If in the course of operations it becomes evident that permanent damage might result, the operations shall be discontinued and any recommended remedial work promptly effected.

Sincerely

Wm. C. Bailey

WM. C. BAILEY
Deputy Supervisor

KPL:eb

CC- Mr. E. R. Murray-Aaron

FORM 111

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 163-905

Mr. T. R. Beauchamp
1215 E. San Antonio Drive
Long Beach 7, California
Agent for TEXACO INC.

Inglewood, Calif.
July 24, 1963

WATER FLOOD

DEAR SIR:

Your supplementary proposal to drill water flood Well No. "Field" 36, Section 19, T. 4 S., R. 12 W., S.B. B. & M., Long Beach Field, Los Angeles County, dated July 15, 1963, received July 18, 1963 has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:

"Legal description of mineral-right lease, consisting of 60 acres, is as follows: Farm Lots 15, 22 and 33 of the American Colony Tract as per map recorded in Book 19, Page 89 of Map, Records of Los Angeles County.

Do mineral and surface leases coincide? Yes_____ No X If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.

Location of Well: 500 feet S'ly along property line and 370 feet W'ly at right angles to said section line from the NW'ly corner of property which is also 500' S'ly along the C/L of California Avenue from the C/L of 33rd St. and 400' W'ly at right angles.

Elevation of ground above sea level 91 feet USGS datum.

All depth measurements taken from top of Kelly Bushing which is 10± feet above ground."

PROPOSAL:

"PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade and Type	Top	Bottom	Cementing Depths
9-5/8"	32.3#	H-40, T&C	Surf.	2000'	2000' (to surface)
2-1/2"	6.4#	J-55, T&C	Surf.	5125'	5125'

Intended zone of completion: Brown Zone (Name) 4315' to 5125' (Depth, top and bottom) Estimated total depth 5125'

Note: A 9" hole will be drilled to total depth. Three (3) strings of 2-1/2" will be run to total depth and one (1) string of 2-1/2" will be run to ±4700'. All 2-1/2" strings will be cemented in place and each selectively perforated for water injection.

It is understood that if changes in this plan become necessary we are to notify you immediately."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT

1. A monthly statement shall be filed with this Division on our Form 110-B showing the amount of fluid injected, pressure required, and source of injected water.
2. An analysis of the fluid to be injected shall be submitted upon request.
3. Injection shall cease if any evidence of damage or failure of water shut-off is observed, or upon written notice from this Division.
4. Fluid consistent with good drilling practice shall be used and the column of fluid maintained at all times to the surface, particularly while pulling the drill pipe.
5. Adequate blowout prevention equipment shall be installed and maintained in operating condition at all times.
6. Sufficient cement shall be used to fill back of the 2-1/2" tubing strings to the surface.
7. Temperature surveys shall be run and filed with this Division after the well has been operating for one month and thereafter every six months.

E. R. MURRAY-AARON, State Oil and Gas Supervisor

By (CONTINUED ON PAGE 2), Deputy

79186 1-63 50M SPO

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P163-905

TEXACO INC. ~~XXXXXX~~ Company

Well No. "Field" 36, Section 19, T. 4 S, R. 12 W, S B B. & M.,

NOTE:

1. The base of the fresh water is at 1800'±. The fresh water will be protected by the 9-5/8" casing cemented at 2000' with sufficient cement to fill to the surface.
2. The water to be injected tests about 1800 G/G sodium chloride, and is water produced from neighboring wells.
3. The strata into which water is to be injected contain a mixture of oil and salt water. The salt water tests approx. 1800 G/G sodium chloride.
4. Approx. Surface Location of Well: 880' S., 1265' E. fr. NW cor. Section 19.

KL:es

cc - Company - Long Beach
Dept. of Water Resources
Regional Water Pollution Control Board

1-2-64
Giddens/Loken
Co. expects to have
equipment installed and
well on injection this month.

B/S

BLANKET BOND

FORM 111X
56220 1-62 3,500 SPO

E. R. MURRAY-AARON, State Oil and Gas Supervisor

By Wm. C. Bailey, Deputy

FORM 105

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

* Supplementary Notice of Intention to Drill New Well

This notice and surety bond must be filed before drilling begins

DIVISION OF OIL AND GAS
RECEIVED
JUL 18 1963
INGLEWOOD, CALIFORNIA

* Giddens/Loken 7-19-63 Long Beach Calif. July 15 1963

DIVISION OF OIL AND GAS - Inglewood

In compliance with Section 3203, Division III, Article 4, Public Resources Code, notice is hereby given that it is our intention to commence drilling well No. Field #36 (Water Injection), Sec. 19, T. 4S, R. 12W, SB B. & M., Long Beach Field, Los Angeles County.

Legal description of mineral-right lease, consisting of 60 acres, is as follows: Farm Lots 15, 22 and 33 of the American Colony Tract as per map recorded in Book 19, Page 89 of Map, Records of Los Angeles County.
(Attach map or plat to scale)

Do mineral and surface leases coincide? Yes ____ No X If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.

Location of Well: 500 feet S'ly (Direction) along property section line and 370 feet W'ly (Direction) at right angles to said line from the NW'ly property corner of section which is also 500' S'ly along the C/L of California Avenue from the C/L of 33 rd St. and 400' W'ly at right angles.

Suppl to drill

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
			Blanket	EB	EB

Elevation of ground above sea level 91 feet USGS datum.

All depth measurements taken from top of Kelly Bushing (Derrick Floor, Rotary Table or Kelly Bushing) which is 10+ feet above ground.

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES A.P.I.	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS
9-5/8"	32.3#	H-40, T&C	Surf.	2000'	2000' (to surface)
2-1/2"	6.4#	J-55, T&C	Surf.	5125'	5125'

Intended zone(s) of completion: Brown Zone (Name) 4315' to 5125' (Depth, top and bottom) Estimated total depth 5125'

Note: A 9" hole will be drilled to total depth. Three (3) strings of 2-1/2" will be run to total depth and one (1) string of 2-1/2" will be run to ±4700'. All 2-1/2" strings will be cemented in place and each selectively perforated for water injection.

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address 1215 E. San Antonio Drive
Long Beach 7, California

Telephone Number GA 3-7994

TEXACO Inc. (Name of Operator)

By T. R. Beauchamp, Dist. Superintendent

Type of Organization Corporation (Corporation, Partnership, Individual, etc.)

27035 9-60 20M △ SPO

November 19, 1962

E. R. MURRAY-AARON

PROPOSED WATER
INJECTION PROGRAM
TEXACO INC.
WELL NO. "FIELD" 36
Sec. 19-4S-12W
Long Beach Field

Inglewood

I am enclosing the following regarding a water injection program proposed by Texaco Inc. in the Long Beach field:

1. Copy of letter from Texaco outlining the program.
2. Illustration of proposed completion method.
3. Contour map of lease.
4. Cross section A-A.
5. Cross section B-B.
6. Our P-report No. P162-1068 disapproving the plan.
7. Copy of our letter to Texaco Inc. explaining our reason for disapproving the program.

Deputy Supervisor

WCB:rw

Encls

December 12, 1962

Mr. P. O. Giddens
District Petroleum Engineer
Texaco Inc.
P. O. Box 7221
Long Beach 7, California

Proposed water flood
Texaco "Field" lease
Sec. 19, T. 4 S., R. 12 W.,
S. B. B. & M.,
Long Beach Field

Dear Mr. Giddens:

As promised at our conference on December 6, 1962, regarding the proposed water flood project at Texaco "Field" lease, Long Beach field, we have made further consideration of the data and conditions brought up at this meeting and have discussed the matter again with the Long Beach Water Department. I am sure that an amended proposal for this project could be approved if it contained the following conditions:

1. The 10¾" surface pipe shall be cemented at a point below the bottom of the fresh water sands (about 2,000 feet) with sufficient cement to reach to the surface. The injection strings are then run and cemented in accordance with your original proposal. This is to insure that salt water will be prevented from entering the fresh water sands from the injection well itself.

2. Pressure and fluid level surveys are made in the wells neighboring the injector before injection is started and continued thereafter to adequately determine the movement of the injection water. Proof must be available at all times that pressure within the reservoir being flooded is safely below that necessary to raise fluid up to the fresh water zones. Such surveys shall also be conducted, insofar as possible, in observation wells located outside the confines of the proposed flood area.

3. Written consent of the program is obtained from neighboring operators who might be affected by the water injection or a written acceptance for full responsibility by Texaco Inc. is filed with this office.

A supplementary proposal to drill well No. "Field" 36 must be filed.

Sincerely,

WM. C. BAILEY
Deputy Supervisor

WCB:eb

CC - E. R. Murray-Aaron

November 19, 1962

Mr. T. R. Beauchamp, Agent
Texaco Inc.
P. O. Box 7221
Long Beach 7, California

Notice to Drill Water Injection
Well No. "Field" 36, Sec. 19,
T. 4 S., R. 12 W., S.B.B.& M.,
Long Beach Field

Dear Mr. Beauchamp:

Your Notice of Intention to Drill New Well No. "Field" 36, Sec. 19, T. 4 S., R. 12 W., S.B.B.& M., Long Beach field, for water injection purposes, together with accompanying statements, contour maps and cross sections, was received by this office on November 14, 1962.

This Division is unable to approve this proposal for several reasons:

1. The proposed method of demonstrating a water shut-off as reported by Mr. Smith of your company in a telephone conversation with Engineer Loken of this office, whereby a pressure test would be run on only one of the four strings of 2½-inch casing, cannot be considered to satisfy the requirements of the Division of Oil and Gas.

2. The condition of many wells, both abandoned and producing, in proximity to the proposed flood area, is such that adequate protection of the overlying fresh waters, which extend to a depth of about 1800 feet in this area, as well as the overlying oil sands, cannot be ensured.

3. This Division has no evidence which would indicate that the faults, as depicted on your contour map, would serve as barriers to water migration to the east and west.

Sincerely,

WM. C. BAILEY
Deputy Supervisor

KPL:rw

Encl - Report P162-1068

cc Mr. E. R. Murray-Aaron

TEXACO
INC.

PETROLEUM PRODUCTS

DIVISION OF OIL AND GAS
RECEIVED
NOV 14 1962

P. O. Box 7221
Long Beach 7, California

November 6, 1962

PROPOSED WATER INJECTION
E. S. FIELD LEASE-LONG BEACH FIELD

Mr. W. C. Bailey
Division of Oil and Gas
830 N. La Brea
Inglewood 3, California

Dear Sir:

Texaco plans to inject produced water on its E. S. Field Lease in the Long Beach Field. The purpose of this project is to flood that portion of the Brown Zone above the "W" shale which underlies this 60 acre property. The project will be started as soon as possible. Your permission is requested.

It is our intention to drill an injection well at a low structural position and inject into four intervals through four individual strings of 2-1/2" casing. A sketch of our proposed casing and completion program is attached for your convenience, together with the required Form 105, Notice of Intention to Drill New Well.

The injected water will be confined to the Texaco property as shown on the attached structure map and cross section. There are sealing faults on the east and west of the proposed injection well. The Cherry Hill Fault provides the seal on the south. The zone is completely wet down structure to the north. There are no wells to the north which produce the Brown Zone in the fault block to be flooded.

Very truly yours,

TEXACO INC.

By: P. O. Giddens
P. O. Giddens
District Petroleum Engineer

KCS-RW

CBS

Attach. 2 copies - Structure Map
2 copies each - Cross Section, N-S & E-W
2 copies - Completion Program Sketch

FORM 111

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 162-1068

Mr. T. R. Beauchamp
P. O. Box 7221
Long Beach 7, California
Agent for TEXACO INC.

Inglewood Calif.
November 19, 1962

DEAR SIR:

Your proposal to drill water injection Well No. "Field" 36, Section 19, T. 4 S, R. 12 W, S B B. & M., Long Beach Field, Los Angeles County, dated Nov. 6, 1962, received Nov. 14, 1962, has been examined in conjunction with records filed in this office. Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES
"Legal description of mineral-right lease, consisting of 60.00 acres, is as follows: Farm Lots 15, 22 and 33 of the American Colony Tract as per Map recorded in Book 19, Page 89 of Maps, Records of Los Angeles County
Do mineral and surface leases coincide? Yes ____ No X ____ If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.
Location of Well: 500 feet Sly along property line and 370 feet Wly at right angles to said line from the NWly corner of property which is also 500' Sly along the C/L of California Avenue from the C/L of 33rd St. and 400' Wly at right angles.
Elevation of ground above sea level 91.28 feet U.S.G.S. datum.
All depth measurements taken from top of Kelly Bushing which is ±10 feet above ground."

PROPOSAL
"PROPOSED CASING PROGRAM

Size of casing	Weight	Grade and Type	Top	Bottom	Cementing Depths
13-3/8"	61#	J-55, T&C	Surf.	40'	
10-3/4"	40.5#	J-55, T&C	40	700'	700' (to surface)
2-1/2"	6.4#	J-55, T&C	Surf.	5125'	5125' (to surface)

Intended zone of completion: BROWN ZONE (Name) 4315'± to 5125'± (Depth, top and bottom) Estimated total depth 5125'

NOTE: A 9-7/8" hole will be drilled to total depth. Three (3) strings of 2-1/2" will be run to total depth and one (1) string of 2-1/2" will be run to ±4700'. All strings will be cemented solid to the surface. See the attached sketch for further details.

It is understood that if changes in this plan become necessary we are to notify you immediately."

DECISION
THE PROPOSAL IS NOT APPROVED.

KPL:omh

cc Company - Long Beach

E. R. MURRAY-AARON, State Oil and Gas Supervisor

By _____ Deputy

Blanket Bond

54357 12-61 50M SPO

FORM 105

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Notice of Intention to Drill New Well

This notice and surety bond must be filed before drilling begins

DIVISION OF OIL AND GAS RECEIVED
NOV 14 1962
037-00410
INGLEWOOD, CALIFORNIA

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
			Blanket		

Long Beach, Calif. November 6, 1962

DIVISION OF OIL AND GAS "Field "36

In compliance with Section 3203, Division III, Article 4, Public Resources Code, notice is hereby given that it is our intention to commence drilling well No. FIELD #36 Water Injection, Sec. 19, T. 4S, R. 12W, SB B. & M., Long Beach Field, Los Angeles County.

Legal description of mineral-right lease, consisting of 60.00 acres, is as follows: Farm Lots (Attach map or plat to scale)

15, 22 and 33 of the American Colony Tract as per Map recorded in Book 19, Page 89 of Maps, Records of Los Angeles County

Do mineral and surface leases coincide? Yes ____ No X If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.

Location of Well: 500 feet Sly (Direction) along property ~~section~~ line and 370 feet Wly (Direction)

at right angles to said line from the NWly corner of property ~~section~~ which is also 500' Sly along the C/L of California Avenue from the C/L of 33rd St. and 400' Wly at right angles.

Elevation of ground above sea level 91.28 feet U.S.G.S. datum.

All depth measurements taken from top of Kelly Bushing (Derrick Floor, Rotary Table or Kelly Bushing) which is ±10 feet above ground.

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES A.P.I.	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS
13-3/8"	61#	J-55, T&C	Surf.	40'	
10-3/4"	40.5#	J-55, T&C	40	700'	700' (to surface)
2-1/2"	6.4#	J-55, T&C	Surf.	5125'	5125' (to surface)

Intended zone(s) of completion: BROWN ZONE (Name) 4315'± to 5125'± (Depth, top and bottom) Estimated total depth 5125'

NOTE: A 9-7/8" hole will be drilled to total depth. Three (3) strings of 2-1/2" will be run to total depth and one (1) string of 2-1/2" will be run to ±4700'. All strings will be cemented solid to the surface. See the attached sketch for further details.

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address P. O. Box 7221
Long Beach 7, California

Telephone Number GA 3-7994

TEXACO Inc. (Name of Operator)

By T. R. Beauchamp/mz
T. R. Beauchamp, Dist. Superintendent

Type of Organization Corporation (Corporation, Partnership, Individual, etc.)

KCS/mz
11/6/62

27035 9-60 20M △ SPO

CalGEM Oil Well Files
API 037-11552
A-19

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF WELL PLUGGING AND ABANDONMENT

Cypress, California

January 9, 2006

Craig C. Barto, Agent
SIGNAL HILL PETROLEUM, INC.
2901 Orange Avenue
Signal Hill CA 90755

Your report of the plugging and **abandonment** of well **A-19**, A.P.I. No. **037-11552**, Section **19**, T. **4**S, R. **12**W, S.B. B & M., **Long Beach** Field, **Los Angeles** County, dated **6-2-04**, received **6-03-04**, has been examined in conjunction with operations witnessed and records filed in this office.

We have determined that all of the requirements of this Division have been fulfilled relative to plugging and **abandonment** of the well, removal of well equipment and junk, and the filing of well records.

NOTE:

1. Surface plugging completed on **8-12-04**.
2. Surface inspection made and approved on **11-18-05**.

Hal Bopp
State Oil and Gas Supervisor

By: [signature]
For: R. K. Baker, *Deputy Supervisor*

BLANKET BOND

CC: Update
L.A. County Assessor
L.A. County Fire Prevention Bureau
L.B. Dept. of Building & Planning
Dept. of Oil Properties
City of Signal Hill

CJM:dt

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST – RECORDS RECEIVED AND WELL STATUS

Company:	**Signal Hill Petroleum, Inc.**	Well: **A-19**
API#:	**037-11552**	Sec. **19**, T. **4S**, R.**12W**. S. B. B. & M.
County:	**Los Angeles**	Field: **Long Beach**

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
History (Form OG103)	**6/3/04**
Core Record (Form OG101)	
Directional Survey	
Sidewall Samples	
Date final records received.	
Electric Logs:	
Other:	

STATUS

Producing	☐	Drilling	☐
Abandoned	☑	Idle	☐
Reabandoned	☐	Other	☐

WELL TYPE

Oil	☑	Waterflood	☐
Gas	☐	Water Disposal	☐
Water Source	☐	Cyclic Steam	☐
Observation	☐	Steam Flood	☐
Exploratory	☐	Fire Flood	☐
Dry Hole	☐	Other	☐

EFFECTIVE DATE: 8/12/2004

REMARKS:

	ENGINEERS CHECK LIST
☑	Summary, History & Core Record (Dupl.)
☐	Electric Log
☑	Operator's Name
☑	Signature
☑	Well Designation
☐	Location
☐	Elevation
☑	Notices
☑	"T" Reports
☑	Casing Record
☑	Plugs
☐	Directional Survey
☐	Production/Injection (FAP Codes:)
☐	E Well on Prod., enter EDP
☑	Surface Inspection Required 11/18/05 Ok SCH
☐	Surface inspection Waived (Island)
☐	Well site restoration deferred (common cellar)
☑	Final Letter Required AB: ☒ REAB: ☐
☐	Other:

CLERICAL CHECK LIST
Location change
Elevation change
Form OGD121
Form OGD150b (Release of Bond)
Duplicate logs to archives
Notice of Records Due
EDP 11/29/04 CS
District Date Base
Final Letter (OG159) 1/26/06 VM
Update Center CS

FIELD CHECK LIST

Date Surface Inspection Completed: 11/18/05 Ok SCH

Other:

RECORDS NOT APPROVED
(Reason:)

RECORDS APPROVED
(Signature)
RELEASE BOND
Date Eligible
(Use date last needed records received.)
MAP AND MAP BOOK
Map 136 1/14/05 GB

KTL 6-1-04

F

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

Operator Signal Hill Petroleum, Inc. Field Long Beach County Los Angeles
Well Signal Hill West Unit A-19 , Sec 19 , T 4S , R 12W , SB B.&M.
A.P.I. No. 037-11552 Name David L. Slater (Person submitting report) Title V P / Gen Mgr. (President, Secretary or Agent)
Date 6/2 , 2004

Signature David L. Slater

2901 Orange Avenue, Long Beach, CA 90806 (Address)
(562) 595-6440 (Telephone Number)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date	
4/5/04	MIRU, removed equipment, washed over and removed fish from 4093' to 4105'. In cleaning out to 4353' wash tools became stuck. Recovered washover fish to 4058' with bottom at 4290'. Placed total of 60 CF Class G cement in two jobs starting at 4058' with Inspector Saw witnessing and approving BOPE and tag at 3335', pressure testing of the casing to 300 psig. Placed an additional 16 CF Class G
to	cement to 3234' (per request by DOGGR Engineer Gamache) witnessed by Inspector Saw and mudding to 1880'. Detonated cavity shot 1880'-90', broke down cavity at 1.5 B/M at 900 psig. Placed 101 CF Class G cement at 1446', displaced 69 CF at 900 psig. DOGGR waived witness of job. Tagged top at 1661' with Inspector Wells waiving mudding of well and witnessing of tag. Placed 121 CF Class G cement from 810' to surface with Inspector Brandt waiving witness of work. RDMO and cleaned location.
4/22/04	Will cut and plate casing 5' below final grade.

OG163 (8/83/GSR1/5M)

RECEIVED

JUN 3 - 2004

DIVISION OF OIL, GAS
& GEOTHERMAL RESOURCES
CYPRESS

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

No. T 104-0403

REPORT ON OPERATIONS

Cypress, California
November 16, 2004

Craig C. Barto, Agent
SIGNAL HILL PETROLEUM, INC.
2901 Orange Avenue
Signal Hill, CA 90755

Your operations at well **A19,** A.P.I. No. **037-11552**, Sec. **19**, T. 4S., R. 12W, S.B. B. & M., **Long Beach** Field, **Los Angeles** County, were witnessed on **8/12/04**. **Grace Brandt**, representative of the supervisor, was present from **1230** to **1245**. There was also present **V. Romo, Rig Supervisor**.

Present condition of well: **11 3/4" cem 63'; 5 1/2" ld 4805', cp 80[illegible] & 4227', perf 4190' WSO, perf @ int 4236'-4805', holes 3872', 4037' & 4067', cav shot 1880'. Junk below 4058'. TD 4830'. Plugged w/cem 4058'-3235', 1890'-1661', 810'-5'.**

The operations were performed for the purpose of witnessing the plugging operations in the process of abandonment.

DECISION: APPROVED.

NOTE: The required Class II2M blowout prevention equipment was inspected and approved on **4/16/04**.

DEFICIENCIES: None.

CONTRACTOR: Pool California Energy Services, Inc.

CJM:bw

cc: Update

Hal Bopp
State Oil and Gas Supervisor

By: [signature]
For: R. K. Baker, *Deputy Supervisor*

Surface Inspection Approved 11/18/2005 JCH

OG109 3-16-99

T104-0403 cfr 11/8/04

IVISION OF OIL, GAS, AND GEOTHERMAL RESOURCI

CEMENTING/PLUGGING MEMO

Operator Signal Hill Petroleum, Inc. Well No. A19
API No. 037-11552 Sec. 19, T. 4S, R. 12W, SB B&M
Field Long Beach, County Los Angeles. On 8/12/04,
~~Mr.~~/ Ms. Grace Brandt, representative of the supervisor, was present from 1230 to 1245.
There were also present V. Romo Rig Supervisor
Casing record of well: 11 3/4" cem 63'; 5 1/2 ld 4805', cp 808' + 4227', perf 4190' INTO, perf @ int 4236'-4805', holes 3873', 4037' + 4067', cav shot 1880'. Junk below 4058'. TD 4830. Plugged w/cem 4058'-3235', 1890'-1661'.
The operations were performed for the purpose of (L)
810'-5'.

☒ The plugging/cementing operations as witnessed and reported are approved.

☐ The location and hardness of the cement plug @ _____' are approved.

Hole size: _____" fr. _____' to _____', _____" to _____' & _____" to _____'

Casing				Cemented			Top of Fill		Squeezed Away	Final Press.	Perfs.
Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			
5 1/2"	17#	0	4227'	4/20/04	t @ 1890'	101 cf	1661'	1661'	71 cf	900#	CV 1880'

Casing/tubing recovered: _____" shot/cut at _____', _____', _____' pulled fr. _____';
_____" shot/cut at _____', _____', _____' pulled fr. _____'.
Junk (in hole): below 4058' (4 1/2" wash pipe) backed off from 4058'
Hole fluid (bailed to) at _____'. Witnessed by _____

Mudding	Date	bbls.	Displaced	Poured	Fill	Engr.
72	4/16/04	35	Hbg @ 3235		1880' ±	M Saw
72#	4/21/04	50	T @ 1661		Surface	Reported

NOTE (K) II 2M 4/16/04 4/16/04 Pressure test 5 1/2 csg with 300 psi. OK

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engr.	Depth	Wt/Sample	Date & Time	Engr.
4/15/04	60 ct	Hbg @ 4058	Rptd by A. Aguilar		3335',	High *	4/16/04 09:30	M Saw
4/16/04	15 ct	" " 3335	" " "	"	3235	"	4/16/04 14:00	M Saw
4/20/04	101 cf	t @ 1890'	" "	"	1661'			Rpt'd by AA
4/21/04	121 cf	t @ 810'	"	"	-5	11 3/4" & 5 1/2" Visual	8/12/04 1230	G. Brandt

OGD10 (7/02/OSP/5M) Printed on recycled paper

* OK by M. Gamache

CONTRACTOR:

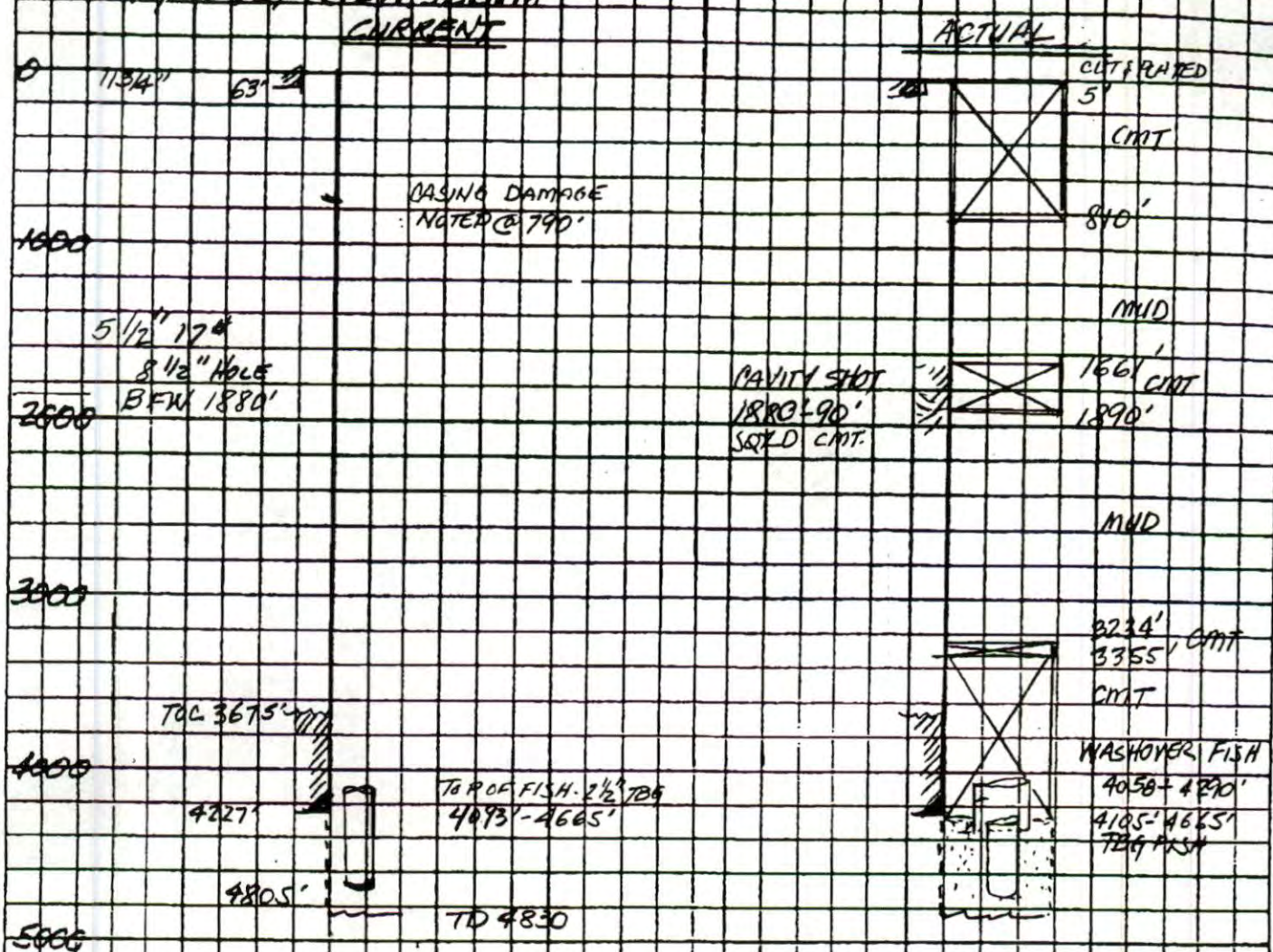
Pool

UNCORRECTABLE DEFICIENCIES:

DEFICIENCIES NOTED AND TO BE CORRECTED:

DEFICIENCIES NOTED AND CORRECTED:

API: 037-11552
ELEV: 81' MAT
SEC 19 T4S, R12W SBB&M



ABANDONED 4/22/04

SCHAUHAUPETROLEUM

SHWU A-19

DATE: 5-20-04	SCALE:
DWG BY: MBW	DWG NO.

API No. 037-11552 DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES T _____

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator Signal Hill Petroleum, Inc. Well A19 Sec. 19 T. 4S R. 12W
Field Long Beach County Los Angeles Spud Date _____

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	4/16/04	M. Saw	(0910 to 0920)	A. Arguila	
2nd			(____ to ____)		

Contractor Pool Rig # _____ Contractor's Rep. & Title _____
Casing record of well: _____

MEMO

OPERATION: ~~Testing~~ (inspecting) the blowout prevention equipment and installation. Critical well? Y ☒ N ☐
DECISION: The blowout prevention equipment and its installation on the _____ " casing are approved.

Proposed Well Opns: Abandon . MACP: _____ psi **REQUIRED BOPE CLASS:**
Hole size: _____ " fr. _____ ' to _____ ', _____ " to _____ ' & _____ " to _____ '

CASING RECORD OF BOPE ANCHOR STRING					Cement Details	Top of Cement	
Size	Weight(s)	Grade(s)	Shoe at	CP at		Casing	Annulus

BOP STACK

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul
RB	2 7/8	Well-specialist	Duke	8	3000	
RA	CSO	"	"	8	"	

TEST DATA

Gal. to Close	Recov. Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure _____ psi
Total Rated Pump Output _____ gpm Fluid Level
Distance from Well Bore _____ ft. _____

	Accum. Manufacturer	Capacity	Precharge
1		gal.	psi
2		gal.	psi

CONTROL STATIONS

		Elec.	Hyd.	Pneu.
	Manifold at accumulator unit			
	Remote at Driller's station			
X	Other: Hand pump			

EMERG. BACKUP SYSTEM

			Press.	Wkg. Fluid
☒	N_2 Cylinders	1 L= 31 "	2M	gal.
☐	Other:	2 L= "		gal.
		3 L= "		gal.
		4 L= "		gal.
		5 L= "		gal.
		6 L= "		gal.
		TOTAL:		ga

HOLE FLUID MONITORING

		Alarm Type: Audible	Alarm Type: Visual	Class
	Calibrated Mud Pit			A
	Pit Level Indicator			
	Pump Stroke Counter			B
	Pit Level Recorder			
	Flow Sensor			C
	Mud Totalizer			
	Calibrated Trip Tank			
	Other:			

TOTAL:

AUXILIARY EQUIPMENT

	No.	Size (in.)	Rated Press.	Connections: Weld	Connections: Flange	Connections: Thread	Test Press.
	Fill-up Line						
X	Kill Line	2	2M			X	
X	Control Valve(s)	2				X	
	Check Valve(s)						
	Aux. Pump Connect.						
	Choke Line						
	Control Valve(s)						
	Pressure Gauge						
	Adjustable Choke(s)						
	Bleed Line						
	Upper Kelly Cock						
	Lower Kelly Cock						
	Standpipe Valve						
	Standpipe Press. Gau.						
X	Pipe Safety Valve	2 1/16					
	Internal Preventer						

Hole Fluid Type	Weight	Storage Pits (Type & Size)

REMARKS AND DEFICIENCIES: _____

OGD9 (9/00)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

No. P 104-0102

412 (Field Code)

06 (Area Code)

-- (New Pool Code)

25 (Old Pool Code)

PERMIT TO CONDUCT WELL OPERATIONS

Craig C. Barto, Agent
SIGNAL HILL PETROLEUM, INC.
2901 Orange Avenue
Signal Hill CA 90755

Cypress, California
March 2, 2004

Your proposal to **abandon** well **A19**, A.P.I. No. **037-11552**, Section **19**, T. **4S**, R. **12W**, **S.B.** B. & M., **Long Beach** Field, **Old** area, **--** pool, **Los Angeles** County, dated **2-23-04**, received **2-23-04** has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment with hydraulic controls, equivalent to this Division's Class **II2M** requirements, or better, shall be installed and maintained in operating condition.
2. All portions of the well not plugged with cement shall be filled with clay base mud having a minimum density of 72 lb/cu ft and a minimum gel-shear strength of 25 lb/100 sq ft.
3. The cavity shot proposed to be at **1801'** shall be at **1880'**.
4. This Division shall be consulted and a Supplementary Notice may be required before making any changes in the proposed program.
5. **THIS DIVISION SHALL BE NOTIFIED TO:**
   a. Inspect the installed blowout prevention equipment prior to commencing downhole operations.
   b. Witness the placing, location and hardness of the cement plug from **4123'** to **3773'**.
   c. Witness the mudding of the hole.
   d. Witness the placing, location and hardness of the cement plug from **1880'** to **1680'**, with sufficient cement to fill to **1680'** behind casing.
   e. Witness the location and hardness of the cement plug at **690'**.
   f. Witness the placing, location and hardness of the cement plug from **100'** to **surface**.
   g. Inspect and approve the cleanup of the well site within 60 days after placement of the surface plug.

NOTE:

1. The proposed surface plug shall not contain rock or gravel.

4-16-04 MS Telcon w/ Vince Ramno. Hung tbg @ 4058, pumped 60 cf, TTOC 3600'. Tagged @ 3335'. Note: 1st stage tbg 4058', pumped 31cf (probably did not displace enough) TTOC 3828. Second stage tbg 3810', pumped 31 cf (but probably more because of 1st stage) TTOC 3600. Tagged 3335'. They will place another 100' plug on top of this suspect plug. DOG to tag. Also they now want to place a cement plug from 810' to surface, DOG to witness placement.

4-15-04 MS Telcon w/ Vince Ramno 562.577.4897 cell
2 7/8" tbg sanded in, freepointed @ 4123, shot off @ 4123'. Tried to wash over, got stuck, wash over pipe (4 1/2") @ 4058'. Will lay a plug from 4058' - 3673', DOG to witness placing & tag. Note: 11 days of fishing.

DS:ds
cc: Update
EDP
City Signal Hill
BLANKET BOND

Engineer: D. Sanchez

Phone: 714/816-6847

Hal Bopp
State Oil and Gas Supervisor

By _____
For R. K. Baker, *Deputy Supervisor*

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.

OG 111

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION

06/05 KCL 2-23-04

DIVISION OF OIL AND GAS

Notice of Intention to Abandon Well P# 104-0102

FOR DIVISION USE ONLY			
CARDS	BOND	FORM OGD114	FORM OGD121
—	BB VB	2/26/04	2/23/04

DIVISION OF OIL AND GAS

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to abandon well Signal Hill West Unit A-19, API No. 037-11552

Sec. 19, T. 4S, R. 12W, SB B. & M., Long Beach Field, Los Angeles County.

commencing work on Mar-04

The present condition of the well is:

1. Total depth 4830'
2. Complete casing record, including plugs and perforations (present hole)
   See Attached Casing Plat
3. Last produced Sep-87 (Date) (Oil, B/D) (Gas, Mcf/D) (Water, B/D)

   or

4. Last injected (Date) (Water, B/D) (Gas, Mcf/D) (Surface Pressure)

Additional data for dry hole (show depths):

5. Oil or gas shows
6. Stratigraphic markers
7. Formation and age at total depth
8. Base of fresh water sands 1880 1811'

9. Is this a critical well according to the definition on the reverse side of this form? x Yes No

The proposed work is as follows: Propose to Abandon.

MIRU, remove equipment, install BOPE and notify DOGGR. Clean out well to 4095'. Place Class G cement plug to 3773', tag for DOGGR. Mud to 1811', detonate cavity shot 1801'-11', place and squeeze 200' Class G cement inside and outside casing (retainer may be required), tag for DOGGR. Mud to surface, place Class G cement from 810'-690', tag for DOGGR, place Class G cement from 100' to surface, cut and plate casing 6' below final grade. Clean location.

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address 2901 Orange Avenue (Street)

Long Beach (City) California (State) 90806 (Zip)

Telephone Number (562) (Area Code) 595-6440 (Number)

Fax: (562) 426-4587

Signal Hill Petroleum, Inc. (Name of Operator)

By David L. Slater, Vice President / General Manager. (Print Name)

David L. Slater (Signature) 02/23/04 (Date)

SIGNAL HILL PETROLEUM

Well Name:	A19	Type:	Oil	Location:		RMA: Field lease
Unit:	West	Sec/Tw/R	19	4s	12w	
API number:	03711552	Lambert N	4041.8	E:	4236.63	
Former name:	Field 27	Street	500' S. & 300' W. c/l 33rd & Calif.			
Former operator:	Texaco	Compl./ spud date:	########	7/8/1953		idle since
City:	Signal Hill	Original or Redrill:	Original			10/1/1987
		Current Status/as of:	idle	########		

Elevations:	PBTD	TD	TVD	MAT	KB	DF
		4830		81	92	

Logs Available:	electric	caliper
Date of logs:	1953	1987
Logging company:	Haliburton	Tiger

CASING

size	top	base	wt/grade	sx cmt	hole size	top cmt
11.75	0	603	40.5	25	unk	0
5.5	0	808	17	180	10.625	0
5.5	808	4227	17	111	8.5	3675
		Liners				
5.5	4227	4830	17	lld		
OPEN HOLE 4805 - 4830						

Effective Perforated Intervals

Top	Base	Type	Zone	Sand	ft open	completion
4236	4303	80mesh	BRN	TUB	67	original
4346	4446	12 row	BRN	P	100	original
4511	4641	6"ctr	BRN	S	130	original
4706	4805	2.5" slots	BRN	T-U	99	original
4805	4830	OPEN	BRN	V	25	original

MD	Zone	Casing notes
		11.75" conductor @ 63' cmt to surf.
		See notes 7 & 8
		DV collar @ 808'
1000		cmt w/ 180 sacks to surface
BFW 1811'		
2000		5.5", 17# csg
3000		
3105	TLW	
3362	TAL	
3530	I	
		calc toc 3675'
3829	K	
3932	M	WSO 4190'
4000		csg holes see# 8
4168	BS	fill to 4095'
4228	TUB	top of fish 4123'
4340	P	Port collar @ 4227'
		cmt w/ 110 sacks
4512	S	5.5" 17# liner
4632	T	perfs from 4236- 4805. ✓
4742	U	open hole
4800	V	4805 to 4830
5000		TD 4830

Notes

1) No formal DOG history in our files.
2) 1953 IP: 62 BOPD, 21 4 gravity, 42% WC.
3) 10.625" hole 63' to 1607', 9.875" hole 1607 - 2529, 8.5" hole2529 - 4830
4) 9/2/87 pump stuck , rods parted, unable to fish, left 2-3/4" rods & pump in tubing.
5) 9/11/87: Tbg stuck, Dialog found free point @ 4123, chem cut @ 4123'. Tag fill @ 4095', attempt to circulate found holes in 5.5" csg.
6) Fish consists of: 17 jts 2.875" buttress, pump shoe, 1jt 2.875" 8 round with 2 - 3/4" rods and pump inside. Pump 2.5"X 2"X 24'.
7) Casing may be parted @ 790' (Dialog 1987)
8) Holes in casing reported @ 3873', 4037', and 4067'. (source: undated plat notes, agrees with blips on caliper log)

WSO

Mechanical Detail as of 1/30/2001 Prepared by: BWD

FILL ABOVE TOP PERF – TRY TO TEST @ 300 PSIG

NOWCAM SERVICES
MIT WORK SHEET

Customer: SHP - WEST Date: 7-14-94

Well: A-19

Tubing: NONE Casing: 5½", 17#

Shot Fluid Level in Casing: 1040 Ft.

Annular Volume: .1305 Cu.Ft./Ft. Factor.

Fluid Wt. #9 Fresh Water Table: 1830 Ft.

Add 200 ft. = Final Fluid Level: 2030 Ft.

1. Final Fluid level 2030 Ft. x .1305 Cu.Ft./Ft.
   = 265 Cu.Ft. Annular Volume.
2. Max BHP = .052 x 9 lb./gal. x 2030 Ft.
   = 950 Psi.
3. Max. Well Head Pressure: 950 Psi.
4. Nitrogen Volume Factor: 50 Scf/Ft. x 265 Cu.Ft. =
5. Approximate Nitrogen Volume: 13250 Scf.
6. Pressure Chart: 320 Psi.
7. Total N2 Pumped: 5,000 Scf.
8. Pressure Guage: _____ Psi.

REPAIRED CSG. @ CLAMP 9-21-87

NO PERFS OPEN
TOP PERF. 4236
FISH @ 4123
FILL @ 4095

WELL TRANSFER NOTICE

EFFEC FEBRUARY 17, 1994,
TEXACO EXPLORATION & PRODUCTION INC.
TRANS SIGNAL HILL WEST UNIT WELLS
TO
SIGNAL HILL PETROLEUM INC.

SEE OGD156 DATED 2-28-94

DIVISION OF OIL AND GAS
CHECK LIST - RECORDS RECEIVED AND WELL STATUS

Company Texaco Well No. A19
API No. 037-11552 Sec. 19, T. 4S, R. 12W, S.B. B.&M.
County L.A. Field Long Beach

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
History (Form OG103)	
Core Record (Form OG101)	
Directional Survey	1/7/82 (2)
Sidewall Samples	
Other	
Date final records received	
Electric logs:	

STATUS		STATUS	
Producing - Oil	___	Water Disposal	___
Idle - Oil	___	Water Flood	___
Abandoned - Oil	___	Steam Flood	___
Drilling - Idle	___	Fire Flood	___
Abandoned - Dry Hole	___	Air Injection	___
Producing - Gas	___	Gas Injection	___
Idle - Gas	___	CO_2 Injection	___
Abandoned - Gas	___	LPG Injection	___
Gas-Open to Oil Zone	___	Observation	___
Water Flood Source	___		

DATE
RECOMPLETED
REMARKS

ENGINEER'S CHECK LIST

1. Summary, History, & Core record (dupl.)
2. Electric Log
3. Operator's Name
4. Signature
5. Well Designation
6. Location
7. Elevation
8. Notices
9. "T" Reports
10. Casing Record
11. Plugs
12. Surface Inspection
13. Production
14. E Well on Prod. Dir. Sur. /

CLERICAL CHECK LIST

1. Location change ___ (F-OGD165)
2. Elevation change ___ (F-OGD165)
3. Form OGD121
4. Form OG159 (Final Letter)
5. Form OGD150b (Release of Bond)
6. Duplicate logs to archives
7. Notice of Records due (F-OGD170)

UPDATE CENTER 1/27/82

BB

RECORDS NOT APPROVED
Reason:

RECORDS APPROVED to 1/18/82

RELEASE BOND
Date Eligible
(Use date last needed records were received.)
MAP AND MAP BOOK N/C

LONG BEACH OFFICE - USE REVERSE SIDE

OGD2 (12/80/DWRR/5M)

See Ownership File, Signal Hill West Unit Agreement, Texaco, Inc. (Unit Operator), for Forms 156 and 157 dated 3-14-75.

STENOGRAPHER

Date Received 10-5-53 Form 100 ✓ 101 ___ 103 ✓

Elec. Log 200 - 4832 (2) Radio Log ___

Direct. Surv. ___ Other Data Inclination sheet

Location OK

Elevation OK Steno. Dcw

ENGINEER

BOND Blanket Release ___ Date Elig ___ 150b ___

End Prem.Yr. ___ Release Requested ___ Superseded Aban. ___

HOLD BOND ___ Reason ___

___

Data Needed None

___ Final Letter ___ Eng. JLW

JLW 10-13-53

RECEIPT FOR 11

Well Summary ✓ (2)

Drillers Log ___

Core Record ___

History ✓ (2)

Elec. Log ✓ (2)

Radio Log ___

Direct.Surv. ___

Redrill ___

Deepen ___

Plug ___

Alter Csg. ___

Abandon ___

10

FORM 100.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT LOG IN DUPLICATE

FILL THIS BLANK IN WITH TYPEWRITER. WRITE ON ONE SIDE OF PAPER ONLY

DIVISION OF OIL AND GAS
RECEIVED
OCT 5 - 1953
LOS ANGELES, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

Operator The Texas Company Field Long Beach

Well No. Field #27 Sec. 19, T. 4-S, R. 12-W, S.B. B. & M.

Location 500'S'ly. & 300'W'ly. from ℄ 33rd St. and California Ave.

Elevation above sea level 92 feet. All depth measurements taken from top of K.B., which is 11.24 feet above ground.

In compliance with the provisions of Chapter 93, Statutes of 1939, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date 9-29-53

Signed R. L. Jackson

F. V. Maloney (Engineer or ~~Geologist~~) R. L. Jackson (Superintendent)

Title Agent (President, Secretary or Agent)

Commenced drilling 7-8-53 Completed drilling 7-24-53 Drilling tools ~~Cable~~ Rotary

Total depth 4830' Plugged depth --

Junk

GEOLOGICAL MARKERS	DEPTH

Commenced producing 7-28-53 (date) ~~Flowing/gas lift/pumping~~ (cross out unnecessary words)

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
7-31-53 Initial production	62	21.4°	42%	20	---	---
Production after 30 days	60	"	40.2%	16	---	---

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cementing if through perforations
11-3/4	63	0	40.5#	Installed as conductor pipe					
5-1/2	4805	0	17#	new	smls.	J-55	10-5/8"	110+	4227
							9-7/8", 8-1/2"	180+	808

PERFORATIONS

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
5-1/2	4236 ft.	4303 ft.	80 mesh	12	6"	2-1/2" straight slot
	4346 ft.	4446 ft.	"	"	"	"
	4511 ft.	4641 ft.	"	"	"	"
	4706 ft.	4805 ft.	"	"	"	"
	ft.	ft.				

Electrical Log Depths 4830 (Attach Copy of Log)

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
OCT 5 - 1953
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR The Texas Company FIELD Long Beach

Well No. Field #27, Sec. 19, T. 4-S, R. 12-W, S.B. B. & M.

from 100

Signed R. L. Jackson

Date 9-29-53 Title Agent

(President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. **Use this form in reporting the history of all important operations at the well, together with the dates thereof, prior to the first production.** Include in your report such information as size of hole drilled to cementing or landing depth of casings, number of sacks of cement used in the plugging, number of sacks or number of feet of cement drilled out of casing, depth at which cement plugs started, and depth at which hard cement encountered. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date	
1953	All measurements taken from K.B. which is 11.24' above ground.
6-30	Set and cemented 63' of 11-3/4" pipe as conductor pipe.
7-1 to 7	Contractor moved in and rigged up.
7-8	Spudded in at 5:00 A.M. Drilled in 10-5/8" hole. Mud Condition: weight, 84#; viscosity, 63; 11% sand; 5.8 cc/30 minutes water loss; 3/32" cake.
7-9	Changed to 9-7/8" bit at 1607' and drilled ahead.
7-10 to 12	Changed to 8-1/2" bit at 2529 and drilled ahead.
7-13 & 14	Twisted off at 3785'. Ran in and recovered fish. Mud condition: weight, 76#; viscosity, 46; 3% sand; 8.8 cc/30 minutes water loss; 2/32" cake.
7-15 to 19	Changed to emulsion mud at 4050'. Mud condition: weight, 70#; viscosity, 72; 2.8 cc/30 minutes water loss; 2% sand; 1/32" cake.
7-20	Drilled ahead in 8-1/2" hole to 4830', total depth and ran electric log. Reamed tight spots to 4750'. Mud condition: weight, 72#; viscosity, 63; 3 cc/30 minutes water loss; 2.5% sand; 1/32" cake.
7-21	Ran 154 joints, 4823' overall, of 5-1/2", 17#, J-55 casing with shoe at 4805'. C.P. Collar at 4227', differential fillup collar at 4160', and D.V. collar at 808'. Perforated: 4236-4303', 4346-4446', 4511-4641', and 4706-4805' with 80 mesh, 12 rows, 6" centers, 2-1/2" straight slots. Cemented 1st stage through C.P. collar at 4227' with 110 sax construction cement, 28 sax perlite, 4% gel. Cemented through D.V. at 808' with 180 sax construction cement, 11% gel. Good returns to surface.
7-22	Drilled out D.V. collar and baffle and cleaned out to 4200'.
7-23	Ran Gun and Tester and shot 4, 1/2" holes at 4190'. Set packer at 4141'. Open 1 hour. Recovered 5' of drilling fluid. Water shut-off witnessed and approved by the Division of Oil & Gas. Ran in and drilled out C.P. collar at 4227' and cleaned out to shoe. Drilled out shoe at 4805' and cleaned out to bottom, 4830'. Changed mud to oil and circulated. Made up and ran in with washer. Washed perforations 4805-4707'.

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
OCT 5 - 1953
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR The Texas Company FIELD Long Beach

Well No. Field #27, Sec. 19, T. 4-S, R. 12-W, S.B. B. & M.

Form 100

Signed R. L. Jackson

Date 9-29-53 Title Agent

(President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. **Use this form in reporting the history of all important operations at the well, together with the dates thereof, prior to the first production.** Include in your report such information as size of hole drilled to cementing or landing depth of casings, number of sacks of cement used in the plugging, number of sacks or number of feet of cement drilled out of casing, depth at which cement plugs started, and depth at which hard cement encountered. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date	
7-24	Washed perforations 4511-4641 and 4346-4446' and 4236-4303'. Laid down drill pipe and removed blowout equipment. Well showed gas and oil. Shut in and contractor moved out.
7-25	Contractor completed moving out.
7-26 & 27	Ran 2" tubing to 4700' and ran rods. Installed pumping unit.
7-28	On pump at 11:30 a.m. Pumped wash oil.
7-29	110 bbl. wash oil.
7-30	44 B/O in 18 hours -- wash oil considered pumped out.
7-31	62 " 21.4° gravity, 46 B/W -- first well production.
8-1	55 " " " 41 "
8-2	63 " " " 33 "
8-3	96 bbls. gross.
8-30	60 bbls. net - 21.4° gravity - 40.2% cut.

CASING RECORD

11-3/4" C.P. cmtd. at 63'.
5-1/2", 17#, csg. ldd. 4805'. C.P. 4227' and 808'.
Perfd: 4236-4303'; 4346-4446'; 4511-4641';
4706-4805'.
W.S.O. at 4190'.
Note casing shoe is drilled out. Therefore, open hole from 4805 to 4830'.

4830' Total Depth

DIVISION OF OIL AND GAS
RECEIVED
OCT 5 - 1953
LOS ANGELES, CALIFORNIA

INCLINATION SHEET

FIELD #27 LONG BEACH

DEPTH	DRIFT
150'	1/2
350'	1/2
565'	1/2
765'	1/2
1082'	1/2
1292'	1/4
1503'	1/4
1750'	1/2
1950'	3/4
2167'	1/2
2350'	1/4
2769'	1
3000'	1
3200'	1-1/2
3409'	1-1/4

FORM 109-A (10-48)

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

Report on Test of Water Shut-off
(FORMATION TESTER)

No. T 153-912

Los Angeles 15, Calif. July 30, 1953

Mr R L Jackson
~~Mrx~~ P O Box 320
Long Beach 1 Calif.
Agent for THE TEXAS CO

DEAR SIR:

Your well No. "Field" 27, Sec. 19, T. 4 S, R. 12 W, S B B & M.
Long Beach Field, in Los Angeles County, was tested for water shut-off on July 23, 1953. Mr. G. C. Hazenbush, Inspector, designated by the supervisor, was present as prescribed in Secs. 3222 and 3223, Ch. 93, Stat. 1939; there were also present T. Carraway, Foreman; W. Spanks, Driller.

Shut-off data: 5½ in. 17 lb. casing was cemented through perforations at 4227 ft. on July 21, 1953 in 8-1/2 in. hole with 128 sacks of cement (plus 28 sacks Perlite and 4% gel.) of which 11 sacks was left in casing.

Casing record of well: 11-3/4" cem. 70'; 5-3/4" ld. 4805', c.p. 808', c.p. 4227', perf. 4236'-4303', 4346'-4446', 4511'-4641', 4706'-4805', four 1/2" holes 4190', W.S.O.

Present depth 4830 ft. Bridged with cement from 4227 ft. to 4200 ft. Cleaned out to 4200 ft. for test. A pressure of 800 lb. was applied to the inside of casing for 15 min. without loss after cleaning out to 4200 ft. A Johnston gun and tester was run into the hole on 2-7/8 in. drill pipe-~~tubing~~ with ~~xxxx~~ ft. of water-mud cushion, and packer set at 4141 ft. with tailpiece to 4163 ft. Tester valve, with 3/8 in. bean, was opened at 5:20 a.m. and remained open for 1 hr. and ~~xxxx~~ min. During this interval there was a light blow for 2 min., and no blow thereafter.

THE INSPECTOR ARRIVED AT THE WELL AT 8:00 A.M. AND MR. CARRAWAY REPORTED:

1. A 10-5/8" rotary hole was drilled from 70' to 1607'; a 9-7/8" rotary hole, 1607'-2529'; an 8-1/2" rotary hole, 2529'-4830'.
2. On July 21, 1953, 5-1/2", 17 lb. casing including perforations from 4236'-4303', 4346'-4446', 4511'-4641', 4706'-4805' was landed at 4805', and was cemented through perforations at 808' and 4227' with 180 sacks of cement plus 11% gel. and 128 sacks of cement plus 28 sacks perlite and 4% gel., respectively.
3. Cement was drilled out of the 5-1/2" casing from 4131' to 4200' (equivalent to 8 sacks), and the hole was cleaned out to 4200'.
4. The 5-1/2" casing was shot-perforated with four 1/2" holes at 4190'.

THE INSPECTOR NOTED:

1. When the drill pipe was removed, 5' of oil-base drilling fluid was found in the drill pipe above the tester, equivalent to .025 bbl.
2. The recording pressure bomb chart showed that the tester valve was open 1 hr.

The test was completed at 9:00 a.m.

THE 5-1/2" SHUT-OFF AT 4190' IS APPROVED.

GCH:OH

cc Long Beach

The Texas Co (Attention Mr T W Bell)
929 South Broadway
LOS ANGELES 15

R. D. BUSH, State Oil and Gas Supervisor

By E. H. Musser, Deputy

FORM 111 (1-49)

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

D

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS

No. P 153-798

Los Angeles 15 Calif. June 24 1953

Mr. R L Jackson
P O Box 320
Long Beach 1 Calif.

Agent for THE TEXAS CO

Dear Sir:

Your proposal to drill Well No. "Field" 27,

Section 19, T. 4 S, R. 12W, S B B. & M., Long Beach Field, Los Angeles County,

dated June 19 1953, received June 22 1953, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:
"Location of Well: 500 ft. S'ly. and 300 ft. W'ly from the center line of 33rd St. and California Ave., Signal Hill, California
Elevation of ground above sea level 92 feet.
All depth measurements taken from top of Kelly Bushing which is 12± feet above ground."

PROPOSAL:
"Proposed Casing Program

Size of Casing	Weight	Grade and Type	Top	Bottom	Cementing Depths
5-1/2	17	J-55	0	4850±	4600'± and 800'±

Combination casing string perfs approx. 4600 to 4850.
Intended zone or zones of completion:

Name	Perforated Interval
Brown	4600 to 4850'± slotted and gun perfs at intervals from about 4200 to 4400 feet. Conduct W.S.O. @ 4160±. Division to witness.

It is understood that if changes in this plan become necessary we are to notify you before running casing."

DECISION:
THE PROPOSAL IS APPROVED PROVIDED THAT THIS DIVISION SHALL BE NOTIFIED TO WITNESS a test of the effectiveness of the 5-1/2" shut-off at 4160'±.

cc T W Bell
Long Beach

JLW:ES

100 ✓
101 ✓ 10-5-53 JLW
103 ✓
E. Log ✓

Blanket bond.

G/A

R. D. BUSH
State Oil and Gas Supervisor

By H. Mussen ma Deputy

FORM 105

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
JUN 22 1953
LOS ANGELES, CALIFORNIA

D

Notice of Intention to Drill New Well

This notice and surety bond must be filed before drilling begins

TEXACO Inc.

037-11552

Long Beach, Calif. June 19, 1953

DIVISION OF OIL AND GAS

A19

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of drilling well No. "Field" #27, Sec. 19, T. 4-S, JFM

R. 12-W, S.B. B. & M., Long Beach Field, Los Angeles County.

Legal description of lease - -

(Attach map or plat to scale)

Location of Well: 500 ft. S'ly. and 300 ft. W'ly from the center line of 33rd St. and California Ave., Signal Hill, California

(Give exact footage from section corners or other legal subdivision or streets)

Elevation of ground above sea level 92 feet.

All depth measurements taken from top of Kelly Bushing which is 12± feet above ground.

(Derrick Floor, Rotary Table or Kelly Bushing)

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES A.P.I.	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS
5-1/2	17	J-55	0	4850±	4600'± and 800'±
Combination casing string perfs approx. 4600 to 4850.					

Intended zone or zones of completion:

NAME	PERFORATED INTERVAL
Brown	4600 to 4850'± slotted and gun perfs at intervals from about 4200 to 4400 feet. Conduct W.S.O. @ 4160±. Division to witness.

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
20 JFM	JFM	Ed Blanket	EB	EB	

It is understood that if changes in this plan become necessary we are to notify you before running casing.

Address P.O. Box 320, Long Beach, Calif. THE TEXAS COMPANY

(Name of Operator)

Telephone Number L.B. 41-623 By F. V. Maloney

DISTRICT ENGINEER

SEND ONE COPY OF NOTICE TO DIVISION OFFICE IN DISTRICT WHERE WELL IS LOCATED

Photographs



API 037-00338, AW-1, casing OD 7", 200 ppmv methane



API 037-00338, AW-1, casing ID 6", 200 ppmv methane



API 037-00338, AW-1, casing ID 10 1/8"



API 037-00338, AW-1, OD 10 ¾"

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



API 037-00338, AW-1, 400 ppmv methane



API 037-00338, AW-1, 400 ppmv methane exterior casing



API 037-00338, AW-1, depth from surface elevation to top of casing 16' 3"



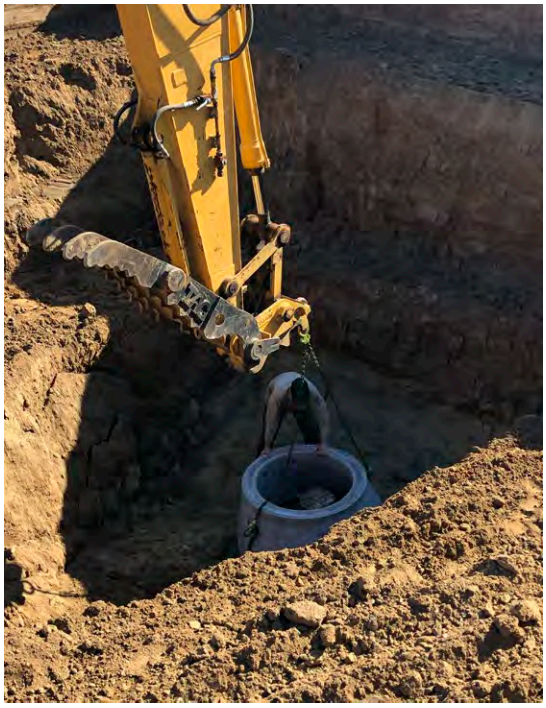
API 037-00338, AW-1, depth from surface elevation to top of casing 16' 3"

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

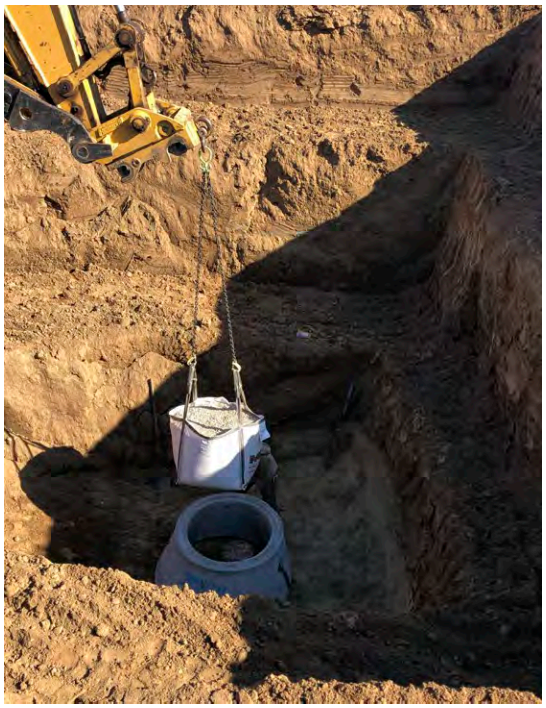
Mearns Consulting LLC



API 037-00338, AW-1, tack welding Well ID Plate to casing OD 10 ¾"



API 037-00338, AW-1, placing concrete vent cone over casing string



API 037-00338, AW-1, placing pea gravel inside concrete vent cone



API 037-00338, AW-1, placing pea gravel inside concrete vent cone

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



API 037-00410, “Field” 36, casing OD 14", note concrete exterior of casing



API 037-00410, “Field” 36, casing ID 12 ¼"



API 037-00410, “Field” 36, 300 ppmv methane



API 037-00410, “Field” 36, casing ID 15 3/8" and OD 16", 300 ppmv methane

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



API 037-00410, “Field” 36, 300 ppmv methane exterior of casing string



API 037-00410, “Field” 36, casing OD 16"



API 037-00410, “Field” 36, 300 ppmv methane exterior concrete



API 037-00410, “Field” 36, depth from surface elevation to top of casing 14' 2"

950 E 33rd Street and
3177 California Avenue
Signal Hill, CA

Mearns Consulting LLC



API 037-00410, “Field” 36, depth from surface elevation to top of casing 14' 2"



API 037-00410, “Field” 36, tack welding well ID plate to top of casing



API 037-00410, “Field” 36, placing concrete vent cone over casing string



API 037-00410, “Field” 36, placing pea gravel inside concrete vent cone

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API 037-11552, A-19, casing OD 11 ¾"



API 037-11552, A-19, casing ID 11"



API 037-11552, A-19, casing OD 5 7/8"



API 037-11552, A-19, casing ID 4 7/8"

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API 037-11552, A-19, 200 ppmv methane interior casing OD 5 7/8"



API 037-00410, A-19, 200 ppmv methane, exterior casing OD 5 7/8", interior casing OD 11 ¾"



API 037-11552, A-19, 300 ppmv methane exterior casing OD 11 ¾", note seamed pipe used for casing string



API 037-11552, A-19, depth from surface elevation to top of casing 14' 5"

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API 037-11552, A-19, tack welding well ID plate to casing



API 037-11552, A-19, placing concrete vent cone over casing



API 037-11552, A-19, placing pea gravel inside concrete vent cone

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Signal Hill, CA

Mearns Consulting LLC

Record of Calibration

Certificate of Calibration

The described test equipment has been calibrated and is traceable to the National Institute of Standards and Technology. The indicated work has been performed and the data obtained using traceable test equipment. This certificate may not be reproduced without written approval from LIFECOM, Inc.

CUSTOMER:	REPAIR #:	DATE:
MEARNS CONSULTING	51448	03-10-20
UNIT MODEL:	**UNIT SERIAL #:**	**CUSTOMER #:**
GX-2012	489020162	

SENSOR	SENSOR DATE CODE	SENSOR EXP. DATE	ALARM LEVEL	READING BEFORE CAL		CAL DATE	READING AFTER CAL	
				WITHOUT GAS	WITH GAS		WITHOUT GAS	WITH GAS
OXYGEN (O2)	85	10-20	H 23.5 / 19.5 L	20.9 %	12 %	3/10/20	20.9 %	12 %
COMBUST. (% LEL)	1-15	1-17	H 50 / 10 L	-1 % LEL	50 % LEL		0 % LEL	50 % LEL
TOXIC (CO)	98	10-20	H 50 / 25 L	0 PPM	51 PPM		0 PPM	50 PPM
TOXIC (H2S)	V	V	H 30 / 10 L	0 PPM	26 PPM		0 PPM	25 PPM
			H / L	PPM	PPM		PPM	PPM

CALIBRATION GAS	MFG	LOT #	VALUE
OXYGEN (O2)	NLB	LCF 107-1	12 %
METHANE (CH4)			50 %
CARBON MONOXIDE (CO)			50 PPM
HYDROGEN SULFIDE (H2S)			25 PPM
			PPM
			PPM

TEMPERATURE: 67.6F

HUMIDITY: 63%

PUMP FLOW RATE: 1 SCFH 28788

BATTERY VOLTAGE: OK

NEXT CALIBRATION DUE ON: 06-10-20

This is to certify this gas detector has passed the QA Test.
Certification is void if the manufacturer's instructions for use, care and maintenance are not followed. Alterations or misuse will also void all certification and warranty.

CALIBRATION & TEST BY: HIEU TRAN

LIFECOM

5355 Industrial Drive
Huntington Beach, CA 92649
800-824-5178