The Goodyear Tire & Rubber Company

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By Alameda County Environmental Health at 3:10 pm, Mar 21, 2014

March 19, 2014

Ms. Karel Detterman Alameda County Health Care Services Agency Environmental Health Services 1131 Harbor Parkway, Suite 250 Alameda, CA 94502-6577

Dear Ms. Detterman:

Attached is the *Site Conceptual Model* for the Goodyear DEX #9578, 3430 Castro Valley Boulevard, Castro Valley, California. This report was prepared for The Goodyear Tire & Rubber Company by Stantec Consulting Services, Inc. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct, to the best of my knowledge.

If you have any questions, please don't hesitate to contact me or Stantec Project Manager Gary Messerotes at 408-827-3533.

Very Truly Yours,

Dennis 3. Mc Davis

Dennis E. McGavis Director, Global EHS Sustainability The Goodyear Tire & Rubber Company

Attachment

cc: Ms. Karen Burlingame (via electronic mail)

Site Conceptual Model

Former Goodyear DEX #9578 3430 Castro Valley Boulevard Castro Valley, California



Prepared for: The Goodyear Tire & Rubber Company 200 Innovation Way Akron, Ohio 44316

Prepared by: Stantec Consulting Services Inc. 15575 Los Gatos Boulevard, Building C Los Gatos, California

March 19, 2014

Sign-off Sheet

This document entitled Site Conceptual Model was prepared by Stantec Consulting Services Inc. for the account of The Goodyear Tire & Rubber Company. The material in it reflects Stantec's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Stantec Consulting Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Prepared by

(signature)

Alicia Jansen, Associate Scientist

Reviewed by

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Jack Hardin, Managing Principal

Approved by (signature)

Gary P. Messerotes, P.G., Senior Project Manager

All information, conclusions, and recommendations provided by Stantec in this document regarding the Site have been prepared under the supervision of and reviewed by the Licensed Professional whose signature appears below:

Licensed Approver:

Name: Gary P. Messerotes, P.G.

Date: March 19, 2014

Signature: SELESSIONAL GEO Stamp: GARY P. MESSEROTES í No. 5650



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SITE CONCEPTUAL MODEL FORMER GOODYEAR DEX #9578 CASTRO VALLEY, CALIFORNIA

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1.0 Introduction

Stantec Consulting Services Inc. (Stantec) was retained by The Goodyear Tire & Rubber Company (Goodyear) to prepare a Site Conceptual Model (SCM) for the former Goodyear DEX # 9578, located at 3430 Castro Valley Boulevard, Castro Valley, California (Site). In order to review the Site for closure under the San Francisco Regional Quality Control Board's (Water Board) *Low-Threat Case Closure Policy*, the Alameda County Department of Environmental Health (ACDEH) requires that general and media-specific criteria be presented in a technical report that is prepared, signed, and stamped by a California Professional Geologist or Engineer. The following SCM is one of the general criteria required for that evaluation for site closure.

Information presented herein is based on data collected by Stantec and other environmental consultants, as noted, and is organized as follows:

Section 1	Introduction
Section 2	Summary of Previous Work
Section 3	Sensitive Receptor Survey and Preferential Pathway Study
Section 4	Evaluation of the Extent (Lateral and Vertical) of the Plume and Stability of Contamination
Section 5	Assessment of Impact of Residual Contamination on Public Health and the Environment
Section 6	Recommended Clean-up Concentrations

1.1 SITE AND SURROUNDING AREA DESCRIPTION

The Site (Assessor's Parcel Number is 84A-80-19-3) is located at 3430 Castro Valley Boulevard, approximately 500 feet south of the intersection of Castro Valley Boulevard and Redwood Road (**Figure 1**). The City of Castro Valley is an unincorporated area of the County of Alameda. The Site is along Castro Valley Boulevard with an area of 0.72 acres and was developed in 1974 with one single-story building with an approximate floor area of 8,400 square feet (**Figure 2**).

The Site is zoned by Alameda County as Castro Valley Business District, Subarea 7 (Intensive Retail Core, Castro Valley Central Business District Specific Plan), which allows for commercial uses.

Stantec reviewed the Hayward, California, United States Geological Survey (USGS) 7.5-minute Topographic Map, dated 1993, and determined that topography in the vicinity of the Site slopes in a south-southwesterly direction and the Site is located approximately 179 feet above mean sea level (MSL).



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1.1.1 Existing/Former/Surrounding Land Use

The Site is leased and operated by Certified Tire & Service Centers, and consists of a service area with eight bays, a tire sales/showroom, office, rest rooms, parts and tire storage. A ninth bay is located on the northernmost section of the building and is used as a storage area for hazardous materials and equipment. There are seven underground hydraulic lifts and one alignment rack in the service bay area. The showroom construction includes cement walls, tiled floor, and drop ceiling with acoustic tiles.

Stantec previously reviewed documents from the County of Alameda Building and Planning Departments (CABD and CAPD, respectively), Goodyear, and data provided by Environmental Data Resources, Inc. (EDR) regarding historical use of the Site. Aerial photographs from 1939 indicate the Site was vacant land. A structure appears on Site in the 1946 aerial photograph. In the 1965 aerial photograph, two structures appear on Site. One of the structures appears similar to the current Site building. The Site was developed for Goodyear in 1973 and was subleased to Merritt Tire and Brake (Merritt) from 1977 to 1993. Rynck Tire / Certified Tire & Service Centers have leased the Site since 1993. Goodyear operated a tire sales and service center from 1974 thru 1977.

The adjoining properties are as follows:

- North Castro Valley Bowl;
- South Castro Valley Boulevard beyond which lies Albertson's Supermarket and Washington Mutual Bank;
- East Safeway Supermarket; and
- West Nail Trap and Edward Jones Investments (a property management firm).

No obvious signs of recognized environmental conditions (RECs) were observed on the adjoining and surrounding properties during the Site reconnaissance. Observations were restricted to those areas readily observable from the public right-of-way. A Site Plan is included as **Figure 2**.

1.1.2 Former/Existing Contaminant Storage/Dispensing Facilities and Use/Release History

The following information regarding current and former contaminant storage and use was presented in SECOR's (now Stantec) *Phase I Environmental Site Assessment (Phase I ESA),* dated December 1, 2004:

• Mr. Sammy Sanjay, store manager, reported to SECOR that a 550-gallon used oil underground storage tank (UST) was formerly located at the north section of the Site, west of Bays 7 and 8. He further explained that he has no information regarding the



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installation, removal, or abandonment of the UST. SECOR observed a newer concrete patch on the concrete apron west of Bays 7 and 8.

- Four above ground storage tanks (ASTs) were observed during the Site reconnaissance: one 240-gallon metal double-walled AST containing new oil; one 110-gallon metal double-walled AST containing used oil; and two approximately 110-gallon ASTs containing used/new antifreeze. None of the ASTs are registered with the County of Alameda Fire Department (CAFD). The County only requires permits for tanks with a capacity greater than 660 gallons or if the total capacity for the facility is greater than 1,320 gallons. Heavy staining was observed adjacent to the new and the used oil ASTs. There was no visible cracking observed within the concrete at either location.
- A battery storage area was observed beneath the flight of stairs across from the air compressors. New batteries were previously stored on the west wall near the entrance door to Bay 1. SECOR observed moderate staining on the floor at the battery storage location. The used batteries are collected by Exide every two to three weeks.
- Two air compressor units were observed at the southern end of the tire storage area. SECOR observed heavy staining on the concrete floor near the air compressor locations. Cracks were observed on the concrete surface under and adjacent to the air compressors.
- A parts washer unit consisting of a 55-gallon drum was located on the east wall of Bay 8. Heavy staining was observed on the intact concrete floor beneath the parts washer unit. Solvent disposal is performed by Romic Environmental once a month.
- A new automatic transmission fluid (ATF) storage unit, consisting of four 16-gallon metal drums, was located in the store room. No additional new ATF storage units were observed. No staining was observed on the floor at the ATF location.
- A Pacific Gas and Electric transformer with identification numbers T-7300, SW-3067, and SW-3086, was observed adjacent and east of the Site. SECOR observed heavy stains on the concrete pad where the transformer was installed.
- Used tires were observed in the northern exterior storage area. According to facility personnel, the used tires are collected and recycled by Lakin Tire of California, Inc.
- SECOR observed 13 floor drains during the Site reconnaissance. Drains are located in the rest rooms; between the two air compressors; and in each service bay adjacent to the hydraulic lifts and alignment rack.
- Seven underground hydraulic lifts and one alignment rack were observed in the service bay area. Mr. Sanjay informed SECOR that Walker Hydraulics of Concord, CA maintains the hydraulic lifts on Site. Based on the circa 1973 installation date of the hydraulic lifts,



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there is a potential that the hydraulic lift fluids contain PCBs. According to Ms. Karen Menard, a former store manager for the Site, repairs have been made to the hydraulic lifts. However, she does not have details on what kind of repairs were made.

• An oil/water separator (OWS) is located adjacent to the sales room along the western exterior. According to conceptual drawings provided by Goodyear, the OWS is 385-gallons.

1.2 GEOLOGIC SETTING

Soils beneath the Site consist of clay and silty clay to approximately 10 to 14 feet below ground surface (bgs), underlain by sand, silty sand and gravelly sand to approximately 20 feet bgs. During installation of monitoring wells MW-1 and MW-3 in 1994, MW-4 in 1996, and MW-5 in 2012, groundwater was encountered in these relatively coarse-grained sediments present between 10 and 20 feet bgs. At MW-2, the water-bearing zone occurred at a shallower depth, where saturated sediments (silty clay with minor sand) were encountered at approximately 10 feet bgs. During installation of wells MW-1, MW-2, and MW-3, and in borings SB-1, SB-4, SB-5, and SB-8, the field geologists observed a stiff, dry silty clay underlying the saturated zone, at approximately 20 feet bgs.

A geologic cross section (A-A') presents the Site lithology, as well as historical soil and groundwater analytical results. The geologic cross section location is shown on **Figure 2**; with cross section A-A' on **Figure 3**.

1.3 HYDROGEOLOGIC CONDITIONS

San Lorenzo Creek is located approximately 4,500 feet west of the Site. A tributary to San Lorenzo Creek is located approximately 1,000 feet east of the Site. Other water bodies near the Site include the South Reservoir located beyond another tributary to the San Lorenzo Creek approximately 3,500 feet west of the Site and Don Castro Reservoir approximately 6,000 feet east of the Site beyond the San Lorenzo Creek. San Lorenzo Creek flows from the western slope of the Coast Ranges westward across the East Bay Plain and into the San Francisco and San Pablo bays.

According to the California's Groundwater Bulletin 118, the Site belongs to the East Bay Plain Subbasin, which consists of unconsolidated sediments of Quaternary age. The cumulative thickness of the unconsolidated sediments is about 1,000 feet. According to the U.S Department of Agriculture's (USDA) Soil Conservation Service (SCS) soil map, the Site belongs to a Class D hydrologic group, which is defined by very slow infiltration rates due to clayey soils, have a high water table, or are shallow to an impervious layer.

Since the groundwater monitoring wells were first installed in 1994, the depth to groundwater has ranged between 3.03 ft bgs (MW-2, March 2005) to 11.25 ft bgs (MW-3, August 2002). Based on information collected by Stantec during the last and most recent groundwater sampling event



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on August 21, 2013, groundwater flow direction was to the south with a gradient of 0.015 feet per feet (**Figure 4**). Flow direction and gradient has been consistent since monitoring was initiated.

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2.0 Summary of Previous Work

Confirmation soil samples, soil borings, and monitoring well locations at the Site are shown on **Figure 2**; historical soil analytical results from previous investigations are summarized in **Table 1**; historical grab groundwater analytical results from previous investigations are summarized in **Table 2**; monitoring well construction details and historical groundwater well elevations are summarized in **Table 3**; and historical groundwater monitoring well analytical results are summarized in **Table 4**.

2.1 INITIAL SUBSURFACE INVESTIGATION WASTE OIL UST, NOVEMBER 1, 1994

Touchstone Developments Environmental Management (Touchstone) prepared an Initial Subsurface Investigation Waste Oil UST report for the Site, dated November 1, 1994. According to Touchstone, prior to 1993, a 550-gallon used oil UST was removed from the Site. Touchstone reviewed Alameda County files which indicated the removal of the UST was conducted without a permit and details regarding the UST removal, including a date, condition of the UST, or disposal of the UST was unavailable. It was suspected that the former tenant, Merritt Tire & Brake, had the UST removed without any knowledge of Goodyear.

In September 1993, SEMCO advanced two soil borings (No.1-South and No.2-North) via hand auger to 8 feet bgs in proximity to the former UST. Soil samples from each borehole were submitted to Superior Analytical Laboratory (Superior Analytical) in Martinez, California for laboratory analysis of total petroleum hydrocarbons (TPH) as gasoline range organics (GRO); TPH as diesel range organics (DRO); TPH as oil & grease (O&G); and benzene, toluene, ethylbenzene, and xylenes (BTEX). Based on the results of the initial sampling, ACDEH requested a preliminary investigation be conducted to determine the extent of potential contamination.

In September 1994, Touchstone installed three groundwater monitoring wells (MW-1, MW-2, and MW-3) to approximately 20 feet bgs to further assess subsurface soil and groundwater conditions. No visible indications or odors of petroleum hydrocarbons were present in soils collected from the boreholes for MW-1 and MW-2; however, petroleum hydrocarbon odors were noted in soils collected from soil boring MW-3. Two soil samples were collected from each borehole at 6 and 10 feet bgs and submitted to Superior Analytical for analysis of TPH-GRO/DRO; O&G; BTEX; halogenated volatile organic compounds (HVOCs); semi-volatile organic compounds (SVOCs); and selected metals (cadmium, chromium, lead, zinc, and nickel).

TPH-GRO, TPH-DRO, O&G, BTEX, HVOCs, and SVOCs were not detected (ND) in the soil samples submitted from the MW-1 and MW-2 boreholes; all 5 metals analyzed were detected at various concentrations in only the 6 foot bgs soil sample from MW-1, all other soil samples were ND.

Soil samples from the MW-3 borehole (6 and 10 feet bgs) contained TPH-GRO, TPH-DRO, O&G, BTEX, HVOCs, and SVOCs at various concentrations.



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No TPH-GRO, TPH-DRO, O&G, BTEX, HVOCs, or SVOCs were detected in the groundwater samples collected from groundwater monitoring wells MW-1 and MW-2, with the exception of bis (2-ethylhexyl) phthalate (DEHP) detected in the sample from MW-1. The groundwater sample from MW-3 contained concentrations of TPH-GRO, TPH-DRO, BTEX, HVOCs, SVOCs, and metals.

Touchstone concluded that based on the analytical results of the investigation, a release had occurred from the UST and the adjacent soils and shallow saturated zone was impacted and recommended additional investigation and remedial action for the Site.

Historical soil analytical results are presented in **Table 1**; monitoring well construction details and historical groundwater well elevations are summarized in **Table 3**; historical groundwater analytical results are included in **Table 4**.

2.2 EXPANDED ASSESSMENT AND RISK-BASED CORRECTIVE ACTION EVALUATION, MARCH 4, 1997

EMCON prepared an Expanded Assessment and Risk-Based Corrective Action Evaluation report for the Site, dated March 4, 1997. In December 1996, four soil borings (PB-1 through PB-4) were advanced to approximately 10 to 16 feet bgs; and PB-4 was subsequently converted to monitoring well MW-4. Field screening showed no indications of chemical impact in soil from borings PB-2, PB-3, and PB-4. For this reason, soil samples from PB-2 and PB-3 were not submitted for chemical analysis; however, the soil sample from PB-4 was submitted for chemical analysis to confirm the limits of on-Site impact. Soil samples collected from PB-1 and PB-4 at approximately 3 feet bgs were submitted to Columbia Analytical Services of San Jose, California for analysis of TPH-GRO; BTEX; total recoverable petroleum hydrocarbons (TRPH); and total organic carbon (TOC).

Analytical results from the soil sample collected from PB-1 contained TRPH (also reported as O&G), TPH-GRO, BTEX, and TOC. There were no detectable concentrations of TPH-GRO, BTEX, or TRPH in the soil sample collected from PB-4. Analytical results for these soil samples are presented in **Table 1**.

There were no detectable concentrations of TPH-GRO, TPH-DRO, TRPH, BTEX, SVOCs, or HVOCs in the groundwater sample collected from the newly installed groundwater monitoring well MW-4.

EMCON performed a Tier 1 evaluation to evaluate the potential risk posed by a release at the Site and to determine if corrective action was necessary. The evaluation was conducted using the 1995 guidelines contained in the *Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites* (American Society of Testing Materials [ASTM] E-1739-95, November 1995). The ASTM risk-based corrective action (RBCA) evaluation showed that concentrations of chemicals detected in soil and groundwater at the Site do not exceed levels that correspond to an acceptable level of risk. EMCON stated the evaluation was considered conservative due to the conservative nature of the modeling assumptions and the models used, and because the portion of the Site selected to represent the entire property was a relatively small portion of the



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Site. Therefore, even though floating product was present at the Site, the results indicate that no additional remedial measures or additional evaluation are necessary to protect the health of the current or future on-Site receptors.

Based on the results of the evaluation, and the occasional presence of limited amounts of floating product, EMCON recommended limited groundwater monitoring to verify that impacted groundwater continues to pose no significant risk and that a "no further action letter" be issued for the Site following the next groundwater monitoring event.

2.3 PHASE I ESA AND LIMITED SUBSURFACE INVESTIGATION, DECEMBER 1, 2004

SECOR prepared a Phase I/II Environmental Site Assessment Report dated December 1, 2004. The following RECs were identified during the performance of the Phase I ESA:

- Based on the circa 1973 installation date of the hydraulic lifts, there is a potential that the hydraulic lift fluids contain polychlorinated biphenyls (PCBs). Additionally, Ms. Karen Menard of Rynck Tire and Auto Center reported that the hydraulic lifts had repairs in the past, but she was unable to provide SECOR with additional information. Because the hydraulic lifts and alignment rack were more than 20 years old and had evidence of subsurface repair, and in accordance with Goodyear's Combined Phase I and Phase II Environmental Site Assessment Specification, dated September 28, 2001, the hydraulic lifts and alignment rack were considered a REC.
- According to the conceptual drawings provided by Goodyear to SECOR, and records reviewed at the ACDEH office, a 385-gallon sand and grease interceptor was installed beneath the concrete apron west of Bays 1 and 2. During Site reconnaissance, asphalt trench patches were observed in the vicinity of the suspected location of the sand and grease interceptor. Given that the sand and grease interceptor was more than 10 years old, and in accordance with Goodyear's Combined Phase I and Phase II Environmental Site Assessment Specification, the sand and grease interceptor was considered a REC.
- No records were located referencing the abandonment/destruction of a 550-gallon used oil UST or a 385-gallon sand and grease interceptor located on Site.
- The Site is currently an open case with the Water Board and the ACDEH.
- An area of heavy staining was observed at the air compressor location, and the affected concrete floor area was cracked.
- The Unocal property located at 20405 Redwood Road is located hydrologically upgradient and within a 1/4 mile of the Site, is listed on several databases (State LUST, LUST Region 2, LUST Alameda County, FID, Cortese, HAZNET and UST HIST), is currently a Water Board Region 2 open case and a Local Oversight Program (LOP) open case, and



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groundwater samples collected from the property revealed that methyl tert-butyl ether (MTBE) was detected at 1,400 parts per billion (ppb).

Given that the hydraulic lifts and the OWS were greater than 20 and 10 years old, respectively, a limited Phase II subsurface investigation was performed to address the potential impacts to the environment from operation of the hydraulic lifts and OWS in accordance with Goodyear's *Combined Phase I and Phase II Environmental Site Assessment Specification*. The limited Phase II subsurface investigation also assessed the former used oil UST, the western Site property boundary, and the area of heavy staining in the air compressor area.

No analytes were detected in soil samples from SA-1, SB-1, or OWS-1 (except for carbon disulfide in OWS-1). TPH-DRO and O&G were detected in soil samples from both UST-1 and HL-1; with O&G the only analyte detected in soil samples from HL-2, HL-3, and HL-4. No analytes were detected in the groundwater sample from SB-1. Analytical results for the soil and grab groundwater samples collected during this subsurface investigation are included in **Table 1** and **Table 2**, respectively.

2.4 GROUNDWATER MONITORING, 1994 – 2013

Groundwater monitoring and sampling of wells MW-1, MW-2, and MW-3 began in 1994, with well MW-4 added in 1996 and well MW-5 added in 2012. Groundwater levels were monitored to assess groundwater flow directions and hydraulic gradients. These wells were also monitored for the presence of free-phase product (free-product). Since 1994, the depth to groundwater has generally varied from 3.03 feet to 8.51 feet below top of casing in the wells. Groundwater flow has consistently been from north to south across the Site. Monitoring well construction details and historical groundwater well elevations are summarized in **Table 3**.

Concentrations of petroleum hydrocarbons, HVOCs, and SVOCs, have generally been below laboratory reporting limits (LRLs) in groundwater samples from Site wells, with sporadic detections of TPH-GRO, TPH-DRO, O&G, BTEX, fuel oxygenates, VOCs, and metals. Analytical results for groundwater monitoring well samples are summarized in **Table 4**. Groundwater contours, flow direction, and analytical data from the last groundwater monitoring event (August 2013) are presented on **Figure 4**.

With the third quarter 2013 monitoring event, Stantec has demonstrated that non-detect or low level concentration analytical results from the prior four consecutive quarterly sampling events provides sufficient data to satisfy the water quality protection objectives of the Basin Plan.

2.5 PRE-CORRECTIVE REMEDIAL ACTION ASSESSMENT, JANUARY 2010

In an effort to determine the limits of the excavation for the approved corrective remedial action at the Site, Stantec completed four direct-push soil borings (SB-1, SB-4, SB-5, and SB-8) along a transect extending approximately 14 feet north (up-gradient) and 45 feet south (down-gradient) of the former UST excavation (**Figure 2**) on September 10, 2009. The soil borings were



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advanced to approximately 20 feet bgs for collection of soil and grab groundwater samples. Soil and grab groundwater samples collected were analyzed for TPH-DRO, O&G, TPH-GRO, BTEX, and MTBE.

Soil analytical results indicate that TPH-GRO, TPH-DRO, and O&G concentrations were detected in soil samples from all nine of the borings, with ethylbenzene in SB-1 at 5 feet bgs, the only BTEX constituent detected. Groundwater analytical results indicate that TPH-DRO and O&G were detected in the grab groundwater samples collected from SB-1 and SB-4. Analytical results for the soil and groundwater samples collected during this subsurface investigation are included in **Tables 1** and **2**, respectively.

Additionally, Stantec abandoned groundwater monitoring well MW-3 via pressure grouting in accordance with State and the County well standards. Following the completion of field activities, Stantec submitted a Department of Water Resources (DWR) Well Completion Report (Form 188) for the destroyed well to the DWR.

2.6 CORRECTIVE REMEDIAL ACTION, AUGUST 2012

In August 2012, Stantec completed remedial activities described in the Revised Work Plan for Implementation of Corrective Action Work Plan, Replacement of a Groundwater Monitoring Well, and Continuation of Semi-Annual Groundwater Monitoring, dated July 25, 2012. As indicated on **Figure 2**, the overall excavation covered the area in front of service bay numbers 5 through 8 and the storage area. Based on the results of previous investigations, the area of the former UST to be excavated was determined to be 15-feet wide (limited by the presence of a high pressure natural gas line to the west and a water line along the Site building to the east), by 60-feet long (the extent of known petroleum impacted soils), and by approximately 8-feet deep (the depth of first-encountered groundwater).

Excavated soil was stockpiled on visqueen in a pre-designated lay down area, and covered daily. Soil proximate to the former UST was stored and characterized separately from the rest of the excavated soil, due to the presence of a strong odor and visible sheen on the soil. This investigation-derived waste was subsequently sampled by Stantec, and profiled as non-hazardous waste. It was transported by Intrinsic Trucking Company of Santa Rosa, California for disposal at the Republic Services – Vasco Road Landfill in Livermore, California. A total of 330.1 tons of non-hazardous soil was disposed of off-site.

2.6.1 Confirmation Soil Sampling

Confirmation soil samples were collected from the base of the excavation and approximately 5 to 6 feet bgs (sidewall samples) within each trench to determine whether residual source material was removed by the excavation activities or if it remains at the Site. One soil confirmation sample was collected for approximately every 10 linear feet of excavation; a total of 20 confirmation soil samples (EX-1 through EX-20) were collected. Confirmation soil samples were transported to Test America Laboratories, Inc. in Pleasanton, California (Test America), a



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state certified laboratory, for analysis under chain-of-custody protocol. Samples were analyzed for TPH-GRO by 8260B; TPH-DRO by 8015B; O&G by 9071B; BTEX by 8260B; MTBE by 8260B; SVOCs by 8270C; lead (Pb) by 6010B; and lead scavengers (ethylene dichloride [EDC] and ethylene dibromide [EDB]) by 8260B.

Soil sample results indicate TPH-DRO, benzene, xylenes, and 2-methylnaphthalene were detected in various confirmation samples. However, as agreed to with the ACDEH, excavation would be limited by the underground utilities to the west, the facility building to the east, and not go deeper than the capillary fringe as to not encounter significant groundwater.

2.6.2 Application of Oxygen Releasing Compound (ORC) Amendment

Stantec applied approximately 40 pounds of ORC to each trench excavation (i.e., the portion in communication with the first encountered water-bearing zone) prior to placement of backfill. Addition of the ORC was designed to stimulate and enhance bioremediation of petroleum hydrocarbons present in groundwater. The ORC selected for use was a Regenesis product, which is a combination of calcium and oxyhydroxide [CaO(OH)2] and calcium hydroxide [Ca(OH)2]. Approximately 400 pounds of ORC was applied to the overall excavation.

2.6.3 Backfilling, Compaction, and Site Restoration

Once the soil was excavated, confirmation samples collected, and ORC placed, each of the 10 trenches were filled with a sand-and-cement slurry and compacted. Trenches were excavated in leap-frog fashion to allow time for the slurry to establish its full bearing strength before the plate was removed. After the last trench was completed, the concrete apron over all trenches was replaced to match the surrounding surface.

2.6.4 Groundwater Monitoring Well Installation

On August 14, 2012, Stantec installed monitoring well MW-5 (shown on **Figure 2**) down-gradient of the excavation, to monitor post-remediation groundwater conditions. The two-inch diameter well was installed to a total depth of 20-feet bgs, with a screened interval of 7 to 20 feet bgs, slotted at 0.02-inches. Groundwater was first encountered at 14 feet bgs, but stabilized at 7 feet bgs.



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3.0 Sensitive Receptor Survey and Preferential Pathway Study

3.1 SENSITIVE RECEPTOR SURVEY

Stantec conducted a sensitive receptor survey consisting of an evaluation of well completion reports for wells located within a 2,000-foot radius of the Site that were available from the DWR and the Alameda County Public Works Agency (ACPWA). Stantec also reviewed available groundwater monitoring reports on the Water Board's Geotracker database for additional wells within the 2,000-foot radius of the Site.

The reports reviewed from the DWR did not identify any municipal or water supply wells within a ¹/₄-mile radius of the Site. According to Geotracker, three properties within a ¹/₄-mile radius of the Site have open cases on Geotracker with related petroleum releases. The nearest sensitive receptor (various medical offices) is located approximately 680 feet northeast of the Site.

A sensitive receptor map showing the locations of the wells and sensitive receptors within a 2,000-foot radius are presented on **Figure 5**.

Based on the distance of the closest sensitive receptor (various medical offices) and the mixeduse neighborhood of the Site, there is a low likelihood of a material threat or release to sensitive receptors within a ¹/₄-mile radius of the Site.

3.2 PREFERENTIAL PATHWAY STUDY

Stantec conducted a preferential pathway study of the Site vicinity to assess the potential for subsurface utility trenches to act as potential conduits for groundwater and petroleum hydrocarbon migration. To identify utilities in the Site vicinity, Stantec contacted the following agencies:

- Pacific Gas & Electric Company (PG&E);
- East Bay Municipal Utility District (EBMUD);
- Castro Valley Sanitation District;
- AT&T North Bay/Pacific Bell; and
- The County of Alameda Building Department.

Additionally, Stantec contacted Underground Services Alert (USA) for identification of other utilities in the Site vicinity.

The City of Castro Valley is an unincorporated area of Alameda County; therefore the County of Alameda maintains records of significance for the Site. On January 6, 2009, Stantec visited the



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County of Alameda Building Department to review building permits and conceptual drawings for the Site. Files available were on microfiche only and consisted of copies of permits for sign installation and did not include conceptual drawings or information regarding utilities.

Water, sanitary sewer, and underground gas and electric utilities were identified south and east of the Site, as well as within the Site boundaries. Technical aspects of the underground utilities, including flow direction and pipe diameter are shown on **Figure 6**. Locations and depths of the utilities were based on the following:

- Maps and permits provided by Castro Valley Sanitation District dated 1944, 1959, and 1974;
- Maps provided by EBMUD dated 1931 and 1960; and
- Goodyear conceptual design drawings dated 1973.

Summaries of the findings are presented in the following sections.

3.2.1.1 Water Lines

An 8-inch diameter water line, traversing east to west and sloping to the west, is located within a utility trench beneath Castro Valley Boulevard at 3 feet bgs. A 4-inch diameter water line, set approximately 3 feet bgs, enters the Site from the south and supplies water to the Site.

3.2.1.2 Sanitary Sewer Lines

A 6-inch diameter vitrified clay pipe (VCP) sewer line, set at a minimum 2% slope, is located within a utility trench beneath Castro Valley Boulevard and lies approximately 5.5 to 6 feet bgs. Floor drains in the Site service bays and tire wash area are connected to a 4-inch diameter VCP sanitary sewer line set at a minimum 2% slope that slopes southward discharging into an OWS on the Site. Historically, floor wash water (consisting of either tap water or tap water and commercial soap) was discharged into the floor drains. According to the current store manager, the floor drains adjacent to the hydraulic lifts are sealed and only the tire wash drain currently discharges into the OWS. The OWS collects sediments and oil and discharges the water into the sanitary sewer.

Floor drains located within the restrooms flow south and connect with the discharged water from the OWS and discharge into the sanitary sewer line beneath Castro Valley Boulevard.

3.2.1.3 Storm Drains

A 21-inch diameter storm sewer drain line is located along the north side of Castro Valley Boulevard. The depth of the utility trench containing the storm drain line is approximately 6 feet bgs.



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3.2.1.4 Gas and Electric Lines

Two to 4-inch diameter gas and electric lines lay in utility trenches located north, south, and west of the Site building. Typically, PG&E trenches are approximately 1 to 2 feet wide and 2 to 4 feet bgs. Two underground transformers are located on the northwest corner of the asphalt driveway and the southeast corner of the front parking area.

3.2.1.5 Communication Lines

AT&T telephone and cable lines are located in the Site vicinity; however, at the time of this report preparation, no information regarding pipe diameter, location, or depth was available.

3.2.1.6 Abandoned Sewer Line

According to records reviewed at the Castro Valley Sanitation District, an abandoned 6-inch VCP sewer line traverses the Site from north to south. The line previously serviced the Castro Valley Bowl located immediately north of the Site, and connected to the main sewer line on the north side of Castro Valley Boulevard at a depth of approximately 6 feet bgs. Historical records did not contain information regarding trench specifications such as depth of placement. Assuming a minimum slope of 2% to the main sewer line located at approximately 6 feet bgs, the approximate depth of the abandoned sewer line between the former UST and the OWS would be approximately 2 to 4 feet bgs.

Historical groundwater monitoring indicates the presence of free-phase petroleum hydrocarbons within well MW-3, located approximately 25 feet down-gradient of the former used oil UST, from August 2002 until the well was decommissioned in September 2009. Groundwater in well MW-4, located approximately 70 feet further down-gradient, has historically been 'non-detect' for constituents of concern, indicating that the boundary of free product and dissolved-phase hydrocarbons in groundwater was between wells MW-3 and MW-4. Groundwater in well MW-2 historically, had no free product present, and until the last sampling event in August 2013, had no detected concentrations of petroleum hydrocarbon constituents since September 2004. Therefore, the area of interest relating to the potential interception of free product or impacted groundwater by utility trenches is the area bounded by the former UST to the north, MW-4 to the south, the existing building to the east, and MW-2 to the west. Utility lines identified in this area are the gas and electrical service lines (approximately 2 to 4 feet bgs), the abandoned sewer lateral from Castro Valley Bowl (approximately 2 to 4 feet bgs in the area of interest), and the floor drain line (sanitary sewer line) beneath the building (maximum depth of approximately 4 feet bgs at the OWS).

Based on the depth of identified utilities in the area of interest (up to approximately 4 feet bgs) and the depth to first-encountered groundwater (averaging between 5 and 8 feet bgs), Stantec concludes that utility lines at the Site have a low potential to intercept free-phase product or impacted groundwater associated with the former used oil UST.



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4.0 Evaluation of the Extent (Lateral and Vertical) of the Plume and Stability of Contamination

4.1 NON-AQUEOUS PHASE LIQUID (NAPL)

Since groundwater monitoring was initiated at the Site in 1994, NAPL was detected in one groundwater monitoring well MW-3, irregularly between August 2002 and March 2005 and from June 2007 until the well was decommissioned in 2009. NAPL was not present during the corrective action excavation activities.

4.2 UNSATURATED ZONE SOIL

Based on boring logs and excavations at the Site, the unsaturated zone soil appears to be approximately 6 feet deep. When monitoring wells MW-1 through MW-4 were first installed in the 1990's, first encountered groundwater was approximately 10 feet bgs. However, when MW-5 was installed in 2012, first encountered groundwater was approximately 14 feet bgs. After stabilization and over the past couple of years, water levels were measured to be approximately 6 to 8 feet bgs. Therefore, the discussion of unsaturated zone soil focuses on soil results from the surface to approximately 6 feet bgs.

Concentrations of TPH-GRO, TPH-DRO, O&G, BTEX, and sporadic HVOCs, SVOCs, and metals are present in the unsaturated soil zone across the Site, with the elevated concentrations primarily localized in the vicinity of the corrective remedial excavation for the former UST and in front of the service bays. Historical soil analytical results are presented in **Table 1** with unsaturated soil zone results on **Figure 7**.

4.3 SMEAR AND SATURATED ZONE SOIL

The smear zone is interpreted to be the vertical zone between the highest and lowest water table elevations for the time period during which the apparent subsurface impacts occurred, and horizontally to encompass the area containing or having contained measureable amounts of NAPL. NAPL was present at only one location (MW-3) down-gradient from the former used oil UST. Based on Site information, the smear zone is interpreted to be the zone between first encountered water and static water in borings or groundwater monitoring wells and is located approximately 6 to 8 feet bgs.

Similarly to the unsaturated zone soils, concentrations of TPH-GRO, TPH-DRO, O&G, BTEX, and HVOCs, SVOCs, and metals are present in the smear and saturated soil zone across the Site, with the elevated concentrations primarily localized in the vicinity of the corrective remedial excavation for the former UST and the service bays. Analytical results from the 2004 Site investigation indicate that, in general, all chemicals of concern (COCs) in soil are below the laboratory detection limits, or below the Water Board 2013 Environmental Screening Levels



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(ESLs), except for soil samples from UST-1 and HL-1; the 2009 Site investigation identified ESL exceedances for soil samples from SB-1, SB-4, and SB-8, with each of these locations being excavated during the remedial corrective action; and samples collected during the remedial corrective action in 2012 indicating ESL exceedances in soil samples from EX-5 through EX-12, EX-15, EX-18, and EX-20.

Historical soil analytical results are presented in **Table 1** with smear and saturated soil zone results on **Figure 8**.

4.4 GROUNDWATER

When initially installed in 1994, groundwater samples from MW-1 and MW-2 had no detections of petroleum hydrocarbon constituents, VOCs, or metals, with the exception of bis (2-ethylhexyl) phthalate (DEHP) and zinc in MW-1 and chloroform in MW-2. However, MW-3 installed less than 20 feet down-gradient of the former used oil UST, had detections of numerous COCs.

Initial sampling at the Site in 1994 and 1995 reported TPH-GRO at concentrations up to 290 micrograms per liter (μ g/L), TPH-DRO at concentrations up to 960 μ g/L, and BTEX concentrations (benzene and total xylenes) up to 29 μ g/L. Benzene was detected in well MW-3 at a concentration of 95 μ g/L in 1996, along with total xylenes of up to 53 μ g/L. The following HVOCs were detected in MW-3: 8.3 μ g/L of vinyl chloride; 1.6 μ g/L of 1,1-dichloroethene; 17 μ g/L of 1,1-dichloroethene; 8.4 μ g/L of cis-1,2-dichloroethene; 12 μ g/L of 1,1,1-trichloroethene; 1.9 μ g/L of trichloroethene (TCE); and, 12 μ g/L of tetrachloroethene (PCE). Chromium, nickel, zinc, and especially total lead, have been sporadically detected in all Site wells, with lead at concentrations ranging from 5.6 to 28 μ g/L. The presence of lead at similar concentrations in all Site wells is likely indicative of a background condition unrelated to the historical release of petroleum hydrocarbons from the former used oil UST.

Passive free product removal, using adsorbent socks, was implemented between August 2002 and December 2007. During this time, MW-3 was sampled only once, in March 2005, at which time TPH-GRO, TPH-DRO, benzene, and MTBE were detected above ESLs. Free product removal was discontinued in 2007 at the direction of ACEH, who requested evaluation of more aggressive remediation techniques.

On August 14, 2012, Stantec installed monitoring well MW-5 (**Figure 2**) down-gradient of the remedial corrective excavation, to monitor post-remediation groundwater conditions. Analytical results from four consecutive sampling events of the four remaining Site wells since installing MW-5, indicated O&G [identified by hexane extractable materials (HEM) in the analytical reports] was detected in all four monitoring wells, with concentrations ranging from 910 µg/L in MW-1 to 1,800 µg/L in MW-4. All detections of O&G were "J" qualified, meaning the results are an approximate value less than the reporting limit but greater than or equal to the method detection limit. MTBE was detected in only MW-5, with a concentration of 0.091 µg/L, with the result being "J" qualified. Analytical results indicate no other detections of contaminants, or contaminants above ESLs for commercial property uses where groundwater is



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a potential drinking water source, in any of the wells except for lead. Lead was detected in one groundwater sample collected from MW-5 at 4.3 μ g/L, with the result being "J" qualified, which is above the ESL of 2.5 μ g/L. Historical groundwater analytical results are presented on **Figure 3**.

With this data, Stantec has demonstrated that non-detect or low level concentration analytical results from the last four consecutive quarterly sampling events provides sufficient data to satisfy the water quality protection objectives of the Basin Plan.



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5.0 Assessment of Impact of Residual Contamination on Public Health and the Environment

As a first step in assessing the impact of residual contamination on public health and the environment, Stantec has compared results of previous investigations to the ESLs for chemicals commonly found in soil and groundwater at sites where releases of hazardous chemicals have occurred. The ESLs are used to evaluate the laboratory analytical data for soil and groundwater samples and were developed to address environmental protection goals for different pathways. ESLs are conservative concentrations developed for use in screening analytical data. The criteria are based upon one in a million excess lifetime cancer risk and a hazard quotient of 1.0 for non-cancer health effects. An exceedance of an ESL may indicate that additional investigation, or evaluation is warranted; however, an exceedance of an ESL does not necessarily represent a long-term (chronic) threat to human health or the environment, or indicate that remediation of a site is necessary. The Tier 1 (lowest, most conservative) commercial or industrial land use screening criteria (with groundwater considered a drinking water resource) was used for soil and groundwater data collected at the Site. Screening criteria values are included in **Tables 1, 2, and 4**.

As previously indicated, a significant portion of the impacted soil exceeding commercial and industrial ESLs has been excavated and removed from the Site as part of the remedial corrective action. The areas of remaining residual soil impact that exceed ESLs are:

- 1) Along the eastern and western sidewalls of the remedial excavation. However, due to utilities to the west and the facility structure to the east, no further excavation is possible in these directions;
- 2) Along the bottom of the excavation, ORC was applied to stimulate and enhance bioremediation of petroleum hydrocarbons in the soil and groundwater; and
- 3) In the vicinity of boring HL-1 in the service bay inside the building.

Since the entire surface of the Site is either asphalt or concrete-paved, and the fact that TPH-DRO and O&G are of low volatility, the receptor exposure pathway is incomplete and a significant risk to human health or the environment is unlikely.



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6.0 Recommended Clean-up Concentrations

As presented in the previous sections, Stantec believes that soil and groundwater impacts have either been locally remediated through over excavation, addition of ORC to stimulate and enhance bioremediation of petroleum hydrocarbons, or are of such low to non-detectable concentrations that they pose no significant risk to human health or the environment. Therefore, Stantec is recommending that no additional investigation or remedial action is warranted at the Site and is requesting concurrence for regulatory closure.

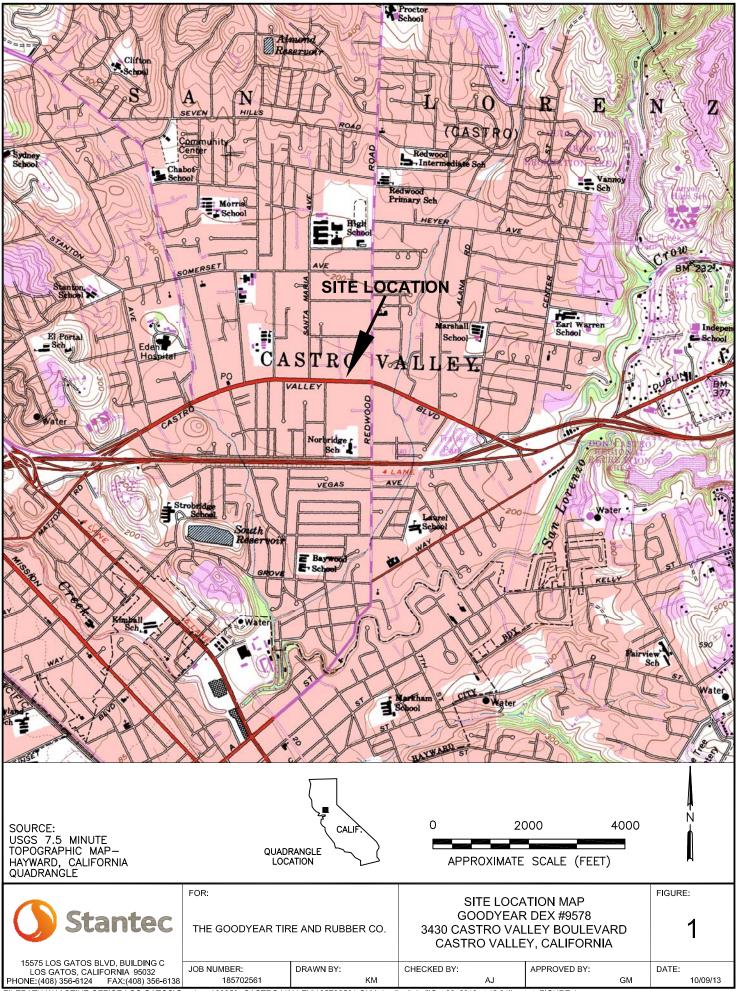




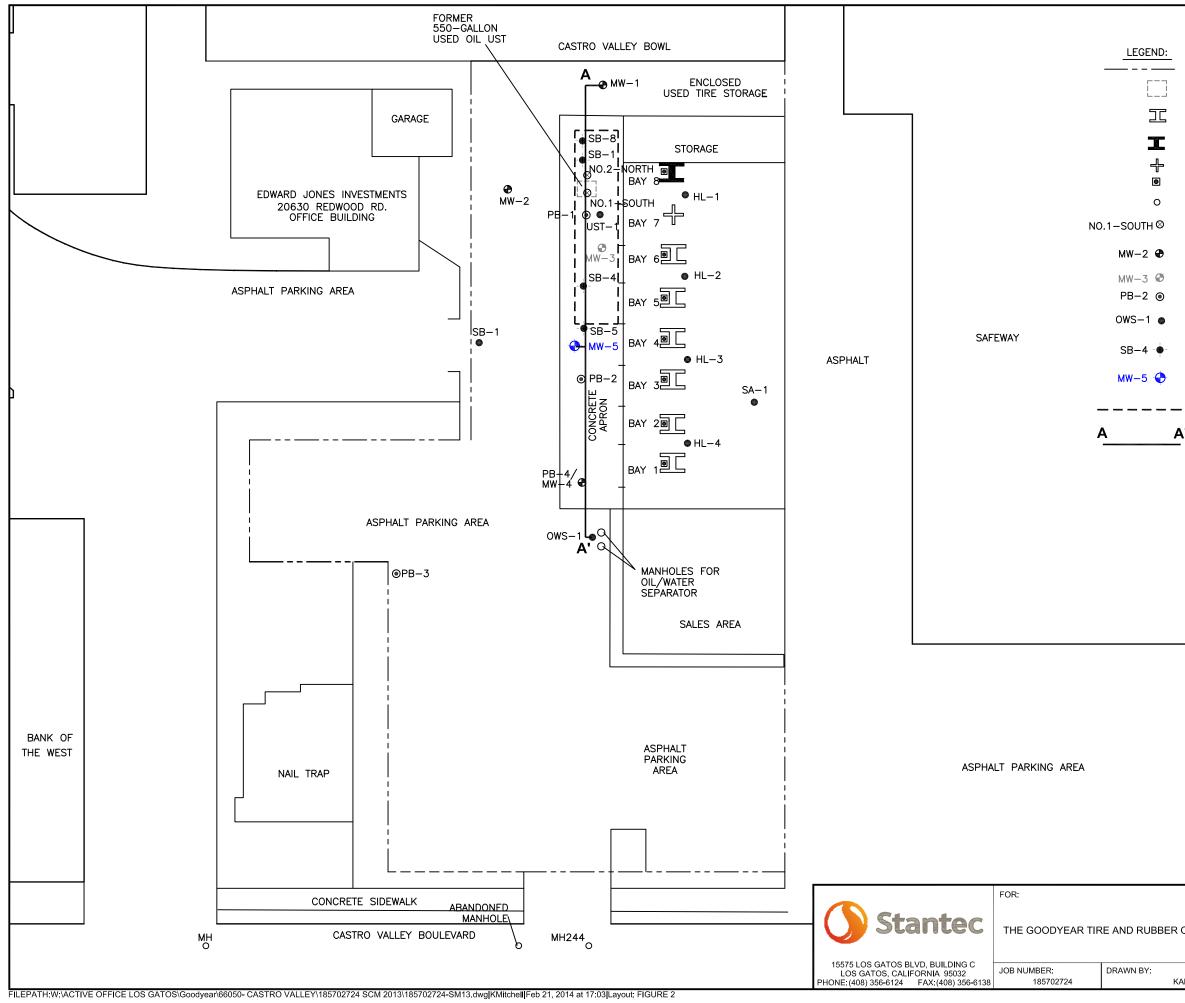
FIGURES



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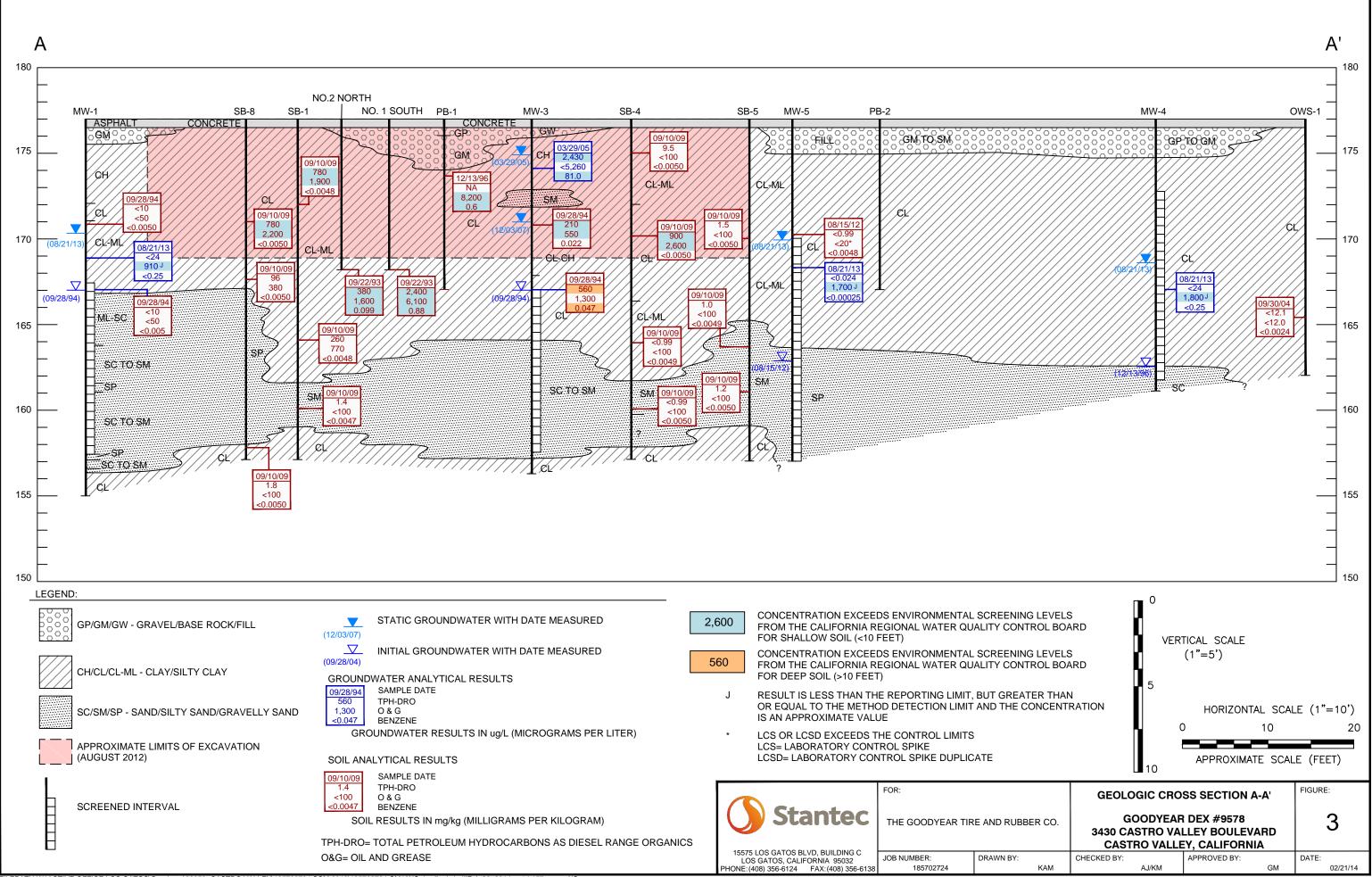


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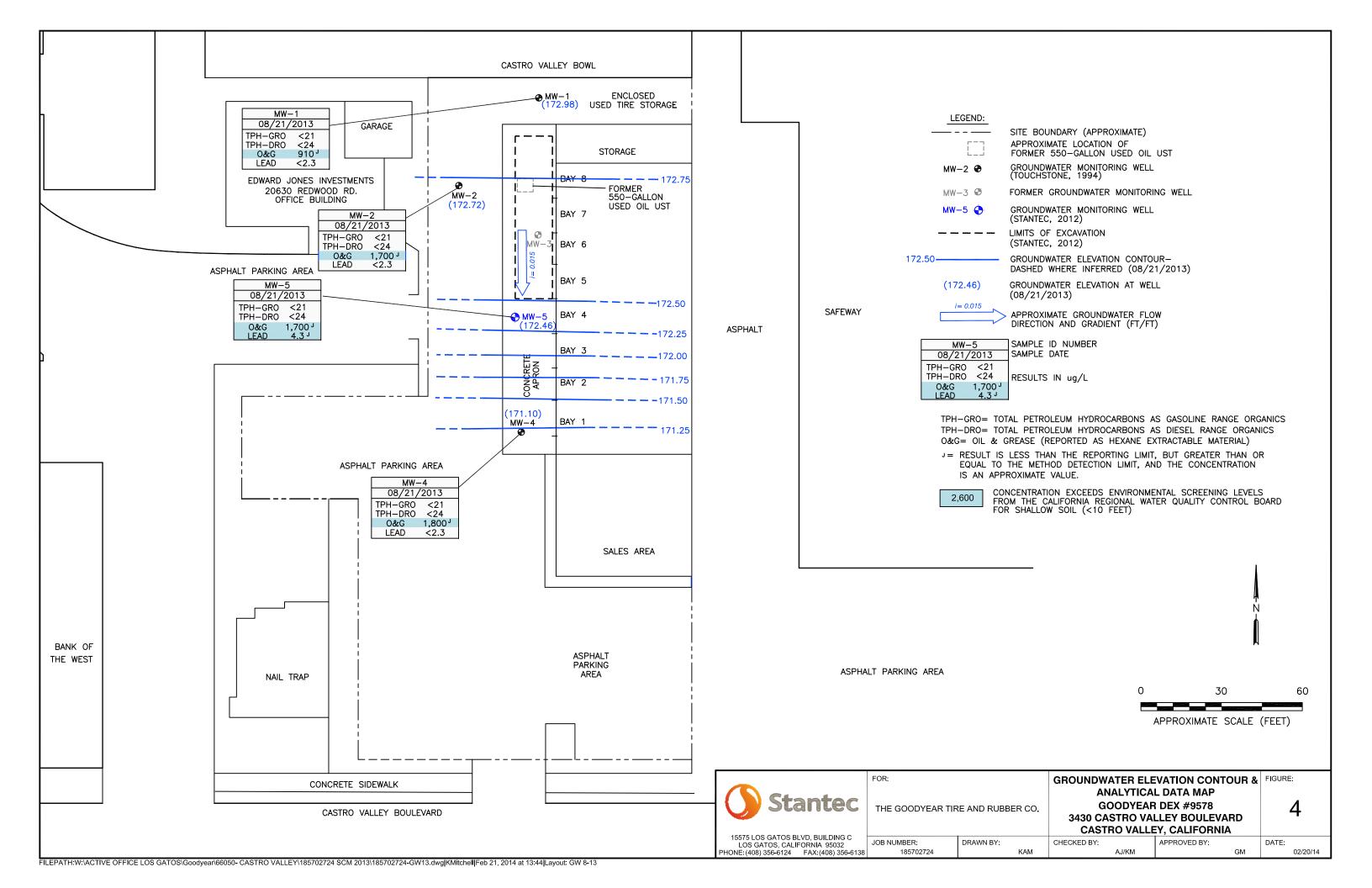


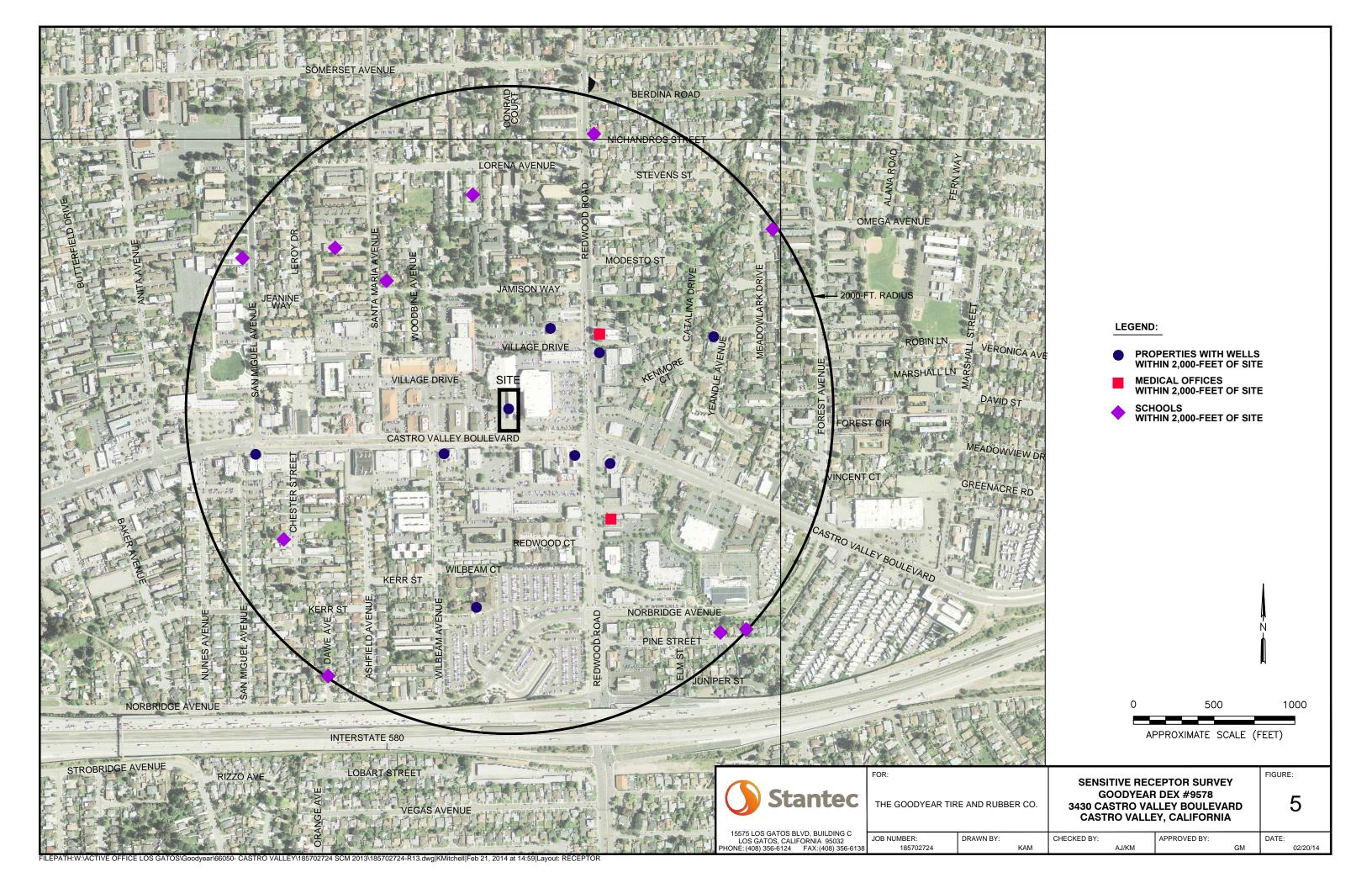
SITE BOUNDARY (APPROXIMATE) APPROXIMATE LOCATION OF FORMER 550-GALLON USED OIL UST HYDRAULIC LIFT WITH SINGLE POST HYDRAULIC LIFT WITH DOUBLE POST ALIGNMENT RACK FLOOR DRAIN MANHOLE HAND AUGER SAMPLE LOCATION (SEMCO, 1993) GROUNDWATER MONITORING WELL (TOUCHSTONE, 1994) FORMER GROUNDWATER MONITORING WELL FORMER SOIL BORING LOCATION (EMCON, 1997) FORMER SOIL BORING LOCATION (SECOR, 2004) FORMER SOIL BORING LOCATION (STANTEC, 2009) GROUNDWATER MONITORING WELL (STANTEC, 2012) LIMITS OF EXCAVATION Α' GEOLOGIC CROSS SECTION LOCATION

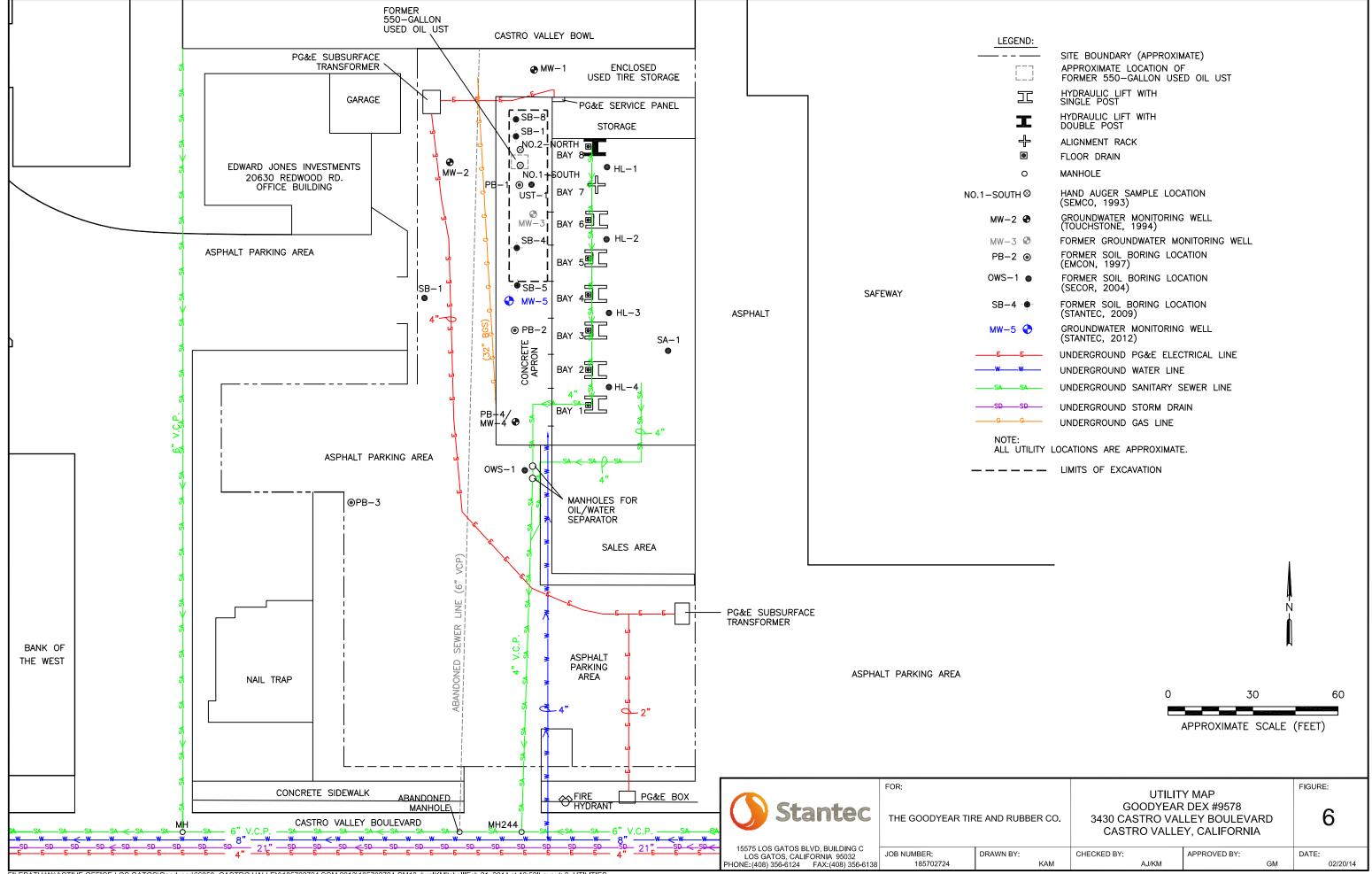
	0	30	60
	,	APPROXIMATE SCALE	(FEET)
ER CO.	CROSS SECTI GOODYEAR 3430 CASTRO VA	AN WITH ON LOCATION DEX #9578 LLEY BOULEVARD Y, CALIFORNIA	FIGURE:
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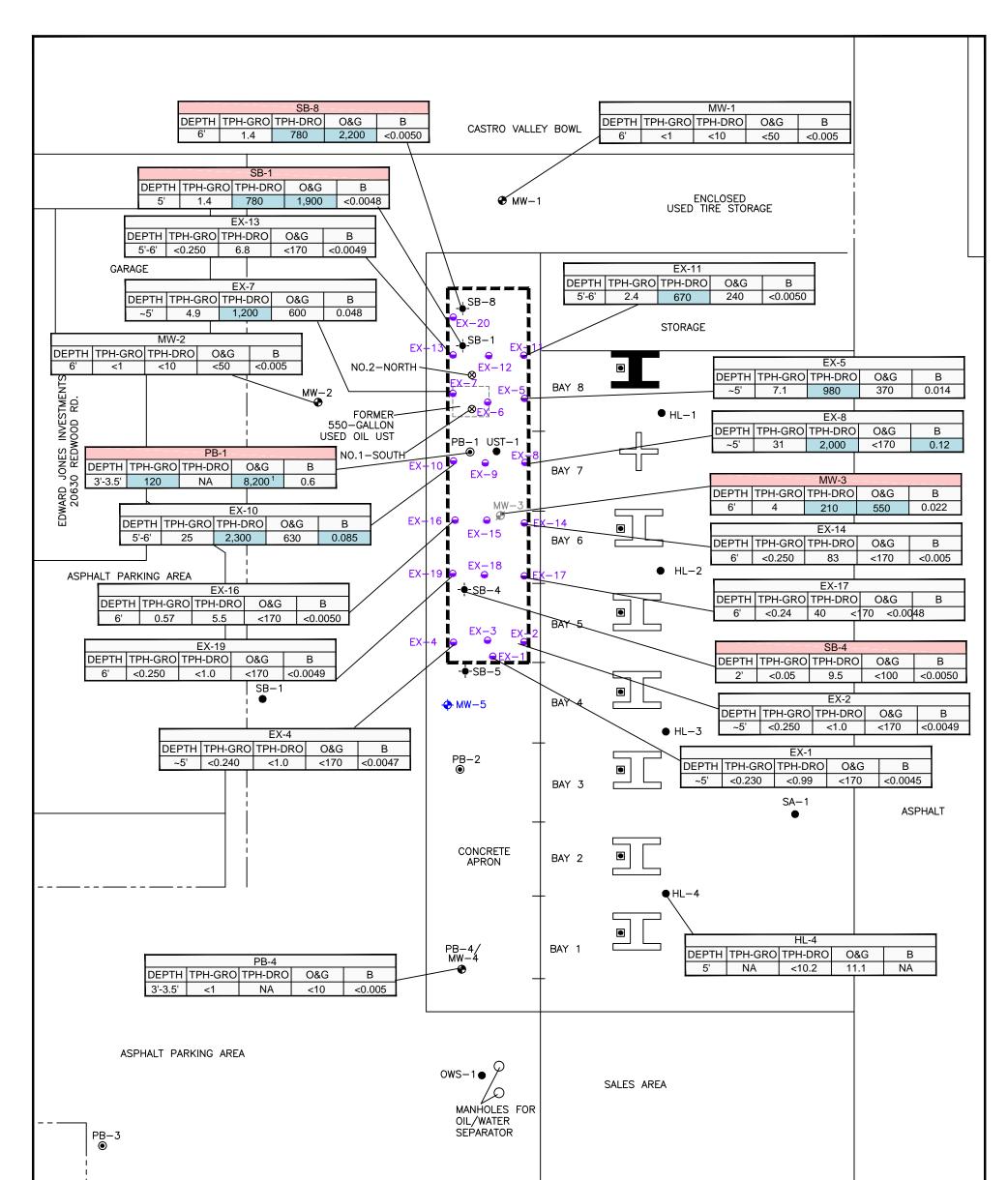
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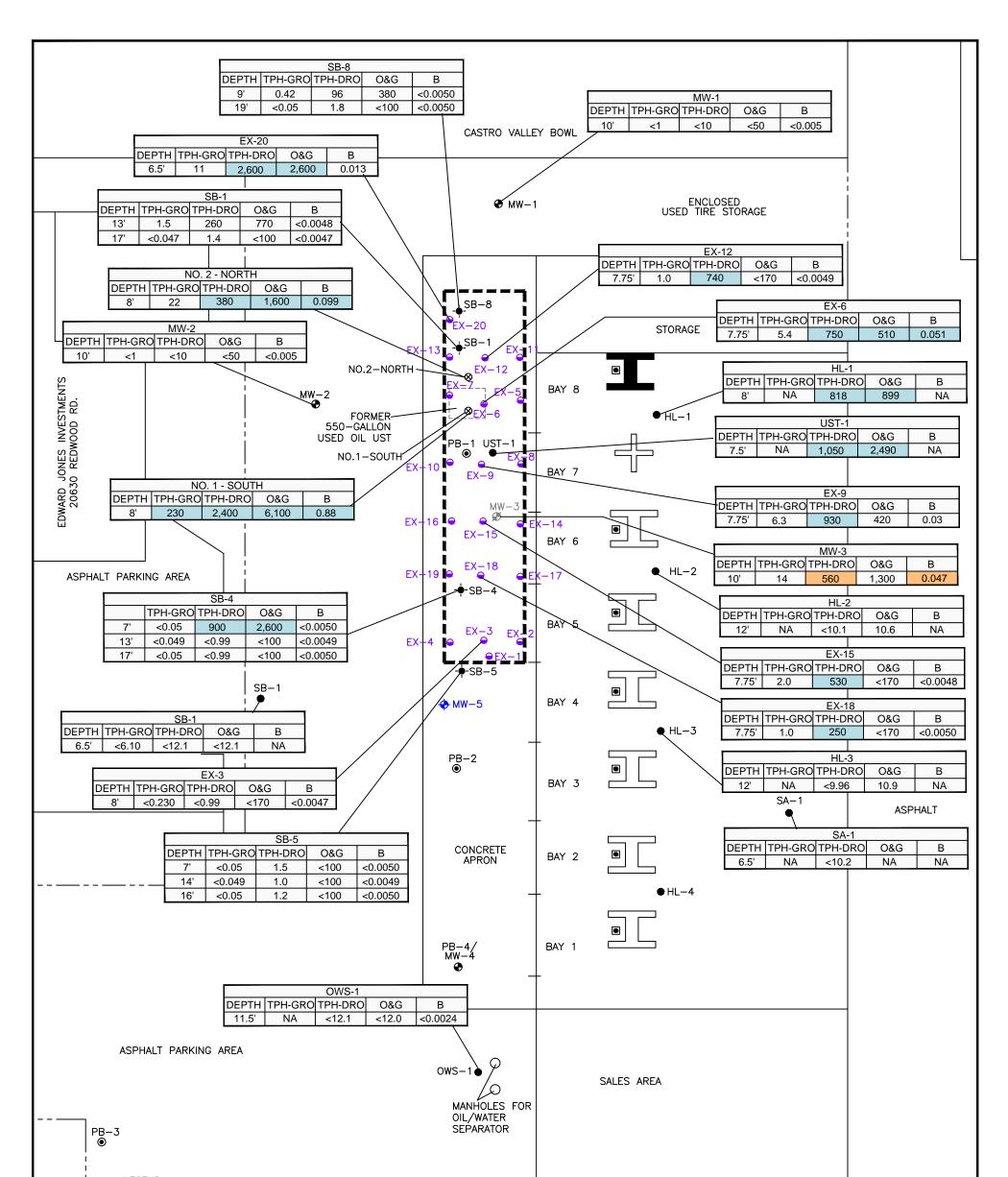
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HAND AUGER SAMPLE LOCATION (SEMCO, 1993) NO.1−SOUTH ⊗ GROUNDWATER MONITORING WELL (TOUCHSTONE, 1994) MW−2 € FORMER GROUNDWATER MONITORING WELL MW-3 ₽ FORMER SOIL BORING LOCATION (EMCON, 1997) PB−2 ⊙ FORMER SOIL BORING LOCATION OWS−1 ● (SECOR, 2004) FORMER SOIL BORING LOCATION (STANTEC, 2009) SB-4 -• GROUNDWATER MONITORING WELL MW-5 🔶 (STANTEC, 2012) SOIL SAMPLE LOCATION EX-1 👄 (STANTEC, 2012)

	SECOR GROUNDWATER MONITORING REPORT	I DATED 4/26/03.	APPR	OXIMATE SCALE	(FEET) Gure:
1	ANALYTICAL RESULTS IN MILLIGRAMS PE	RENCED IN	0	15	30
NA=	BENZENE NOT ANALYZED		、		
TPH- O&G	-GRO= TOTAL PETROLEUM HYDROCARBONS -DRO= TOTAL PETROLEUM HYDROCARBONS = OIL AND GREASE			l N	
SI	3-4 SAMPLE LOCATION REMOVED DURIN REMEDIAL CORRECTIVE ACTION	IG SUBSEQUENT			
2,	600 CONCENTRATION EXCEEDS ENVIRON FROM THE CALIFORNIA REGIONAL W FOR SHALLOW SOIL (<10 FEET)				

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LOS GATOS, CALIFORNIA 95032	JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	
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HAND AUGER SAMPLE LOCATION (SEMCO, 1993) NO.1−SOUTH ⊗ GROUNDWATER MONITORING WELL (TOUCHSTONE, 1994) MW−2 € FORMER GROUNDWATER MONITORING WELL MW−3 Ø FORMER SOIL BORING LOCATION (EMCON, 1997) PB−2 ⊙ OWS−1 ● FORMER SOIL BORING LOCATION (SECOR, 2004) FORMER SOIL BORING LOCATION (STANTEC, 2009) SB-4 -• GROUNDWATER MONITORING WELL MW-5 🔶 (STANTEC, 2012) EX-1 👄 SOIL SAMPLE LOCATION (STANTEC, 2012)

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LOS GATOS, CALIFORNIA 95032	JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	
PHONE: (408) 356-6124 FAX: (408) 356-6138	185702724	KAM	AJ/KM	GM	02/20/1	14

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TABLES



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TABLE 1Historical Soil Analytical ResultsFormer Merritt Tire Sales / Goodyear DEX #95783430 Castro Valley BoulevardCastro Valley, California

	Casiro valley, California																							
Confirmation Sample ID	Sample Depth (feet)	Sample Date	TPH-GRO	TPH-DRO	0 & G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	EDC	EDB	PCE	Carbon disulfide	Fluoranthene	2- Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Cadmium	Chromium	Lead	Nickle	Zinc
Shallow Soil ESL (mg/kg)			100	100	500	0.044	2.9	3.3	2.3	0.023	0.0045	NE	0.55	NE	40	0.25	2.8	11	85	12	0.0	80	150	600
Deep Soil ESL (mg/kg)			580	530	5,000	0.044	2.9	3.3	2.3	0.023	0.0045	NE	0.70	NE	60	0.25	1.2	11	85	110	2,500	320	2,500	2,500
No. 1-South	8	09/21/93	230	2,400	6,100	0.88	7.6	3.6	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	31	Illegible	32	140
No. 2-North MW 1-1-3	8	09/21/93 09/28/94	22	380 <10	1,600 <50	0.099 <0.005	0.88 <0.005	0.34 <0.005	2.4 <0.005	NA NA	NA <0.005	NA NA	NA <0.005	NA NA	NA <0.3	NA <0.3	NA <0.3	NA NA	NA <0.3	<0.5 0.3	45 28	14 7	33 26	44 30
MW 1-2-2	10	09/28/94	<]	<10	<50	< 0.005	< 0.005	< 0.005	<0.005	NA	< 0.005	NA	<0.005	NA	<0.3	<0.3	<0.3	NA	<0.3	NA	NA	NA	NA	NA
MW 2-1-1	6	09/28/94	<1	<10	<50	<0.005	<0.005	<0.005	<0.005	NA	<0.005	NA	<0.005	NA	<0.3	<0.3	<0.3	NA	<0.3	NA	NA	NA	NA	NA
MW 2-2-1	10	09/28/94	<1	<10	<50	<0.005	<0.005	<0.005	<0.005	NA	<0.005	NA	<0.005	NA	<0.3	<0.3	<0.3	NA	<0.3	NA	NA	NA	NA	NA
MW 3-1-1	6	09/28/94	4	210	550	0.022	0.072	0.067	0.28	NA	<0.005	NA	<0.005	NA	<0.3	<0.3	<0.3	NA	<0.3	NA	NA	NA	NA	NA
MW 3-2-2	10	09/28/94	14	560	1,300	0.047	0.016	0.068	0.58	NA	< 0.005	NA	0.031	NA	<0.3	0.7	0.6	NA	<0.3	NA	NA	NA	NA	NA
PB-1 PB-4	3-3.5 3-3.5	12/13/96 12/13/96	120	NA NA	8200 ' <10	0.6 <0.005	3.8 <0.005	1.6 <0.005	10 <0.005	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
OWS-1	11.5	09/30/04	NA	<12.1	<12.0	< 0.0024	< 0.0024	<0.0024	<0.0024	<0.0024	< 0.0024	NA	NA	0.00731	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UST-1	7.5	09/30/04	NA	1,050	2,490	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HL-1	8	09/30/04	NA	818	899	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HL-2	12	09/30/04	NA	<10.1	10.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HL-3	12	09/30/04	NA	< 9.96	10.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HL-4 SA-1	5 6.5	09/30/04 09/30/04	NA NA	<10.2 <10.2	11.1 NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
SB-1	6.5	09/30/04	<6.10	<12.1	<12.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1-5'	5	09/10/09	1.4	780	1,900	<0.0048	<0.0048	0.027	<0.0097	<0.0048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1-13'	13	09/10/09	1.5	260	770	<0.0048	<0.0048	<0.0048	<0.0096	<0.0048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1-17'	17	09/10/09	<0.047	1.4	<100	<0.0047	<0.0047	<0.0047	<0.0094	<0.0047	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-4-2'	2	09/10/09	< 0.05	9.5	<100	< 0.0050	< 0.0050	< 0.0050	< 0.01	< 0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-4-7' SB-4-13'	7 13	09/10/09 09/10/09	<0.05 <0.049	900 <0.99	2,600	<0.0050	<0.0050 <0.0049	<0.0050 <0.0049	<0.01	<0.0050	NA	NA NA	NA NA	NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA
SB-4-17'	13	09/10/09	< 0.047	<0.99	<100 <100	<0.0049 <0.0050	< 0.0047	<0.0049	<0.0098 <0.0099	<0.0049 <0.0050	NA NA	NA	NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
SB-5-7'	7	09/10/09	< 0.05	1.5	<100	< 0.0050	< 0.0050	< 0.0050	<0.01	< 0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-5-14'	14	09/10/09	<0.049	1.0	<100	<0.0049	<0.0049	<0.0049	<0.0098	<0.0049	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-5-16'	16	09/10/09	<0.05	1.2	<100	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-8-6'	6	09/10/09	1.4	780	2,200	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-8-9' SB-8-19'	9 19	09/10/09	0.42	96	380	<0.0050	<0.0050 <0.0050	<0.0050	<0.01	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EX-1	~5	09/10/09 08/13/12	<0.05 <0.230	1.8 <0.99	<100 <170	<0.0050 <0.0045		<0.0050 <0.0045	<0.01 <0.0091	<0.0050 <0.0045	NA <0.0045	NA <0.0045	NA NA	NA NA	NA <0.066	NA <0.066	NA <0.066	NA <0.066	NA <0.066	NA NA	NA NA	NA 8.8	NA NA	NA NA
EX-2	~5	08/13/12	<0.250	<1.0	<170	< 0.0049	< 0.0049	< 0.0049	< 0.0098	< 0.0049	< 0.0049	< 0.0049		NA	<0.066	< 0.066	<0.066	< 0.066	< 0.066	NA	NA	12	NA	NA
EX-3	8	08/13/12	<0.230	<0.99	<170	<0.0047	<0.0047	<0.0047	<0.0094	<0.0047	<0.0047	<0.0047		NA	<0.067	<0.067	<0.067	<0.067	<0.067	NA	NA	10	NA	NA
EX-4	~5	08/13/12	<0.240	<1.0	<170	<0.0047	<0.0047	<0.0047	<0.0095	<0.0047	<0.0047	<0.0047	NA	NA	<0.067	<0.067	<0.067	<0.067	<0.067	NA	NA	7.6	NA	NA
EX-5	~5	08/14/12	7.1	980	370	0.014	0.022	0.046	0.3	< 0.0047	< 0.0047	< 0.0047	NA	NA	<3.3	<3.3	<3.3	<3.3	<3.3	NA	NA	16	NA	NA
EX-6 EX-7	7.75 ~5	08/14/12	5.4	750	510 600	0.051	0.092 0.0063	0.19	0.71	<0.0047	<0.0047	< 0.0047		NA	<1.3 <0.67	<1.3	<1.3 1.1	<1.3 <0.67	<1.3	NA	NA	13	NA	NA NA
EX-7 MW-5@6.5-7	~5 6.5-7	08/14/12 08/15/12	4.9	1,200	600 <20 *	0.048 <0.0048	<0.0048	0.16 <0.0048	0.037	<0.0049 <0.0048	<0.0049 <0.0048	<0.0049 <0.0048	NA NA	NA NA	<0.067	1.7 <0.066	<0.066	<0.67 <0.066	<0.67 <0.066	NA NA	NA NA	11 8.0	NA NA	NA NA
EX-8	~5	08/16/12	31	2,000	<170	0.12	0.11	0.27	3.9	0.0057	<0.0048	<0.0048		NA	<0.33	2.4	1.6	0.37	0.38	NA	NA	26	NA	NA
EX-9	7.75	08/16/12	6.3	930	420	0.03	0.053	0.14	0.075	<0.0047	<0.0047	<0.0047		NA	<0.33	0.89	0.71	<0.33	< 0.33	NA	NA	15	NA	NA
EX-10	5-6	08/16/12	25	2,300	630	0.085	0.41	0.32	3.3	<0.0049	<0.0049	<0.0049	NA	NA	0.35	3.5	2.3	0.47	0.56	NA	NA	0.31	NA	NA
EX-11	5-6	08/17/12	2.4	670	240	< 0.0050	< 0.0050	<0.0050	< 0.0099	< 0.0050	< 0.0050	< 0.0050	NA	NA	< 0.33	<0.33	< 0.33	< 0.33	< 0.33	NA	NA	17	NA	NA
EX-12	7.75	08/17/12	1.0	740	<170	<0.0049	<0.0049	0.019	<0.0099	<0.0049	<0.0049	< 0.0049		NA	< 0.33	<0.33	< 0.33	< 0.33	<0.33	NA	NA	9.3	NA	NA
EX-13 EX-14	5-6 6	08/17/12 08/17/12	<0.25 <0.25	6.8 83	<170 <170	<0.0049 <0.0050	<0.0049 <0.0050	<0.0049 <0.0050	<0.0099 <0.0099	<0.0049 <0.0050	<0.0049 <0.0050	<0.0049 <0.0050	NA NA	NA NA	<0.33 <0.067	<0.33 <0.067	<0.33 <0.067	<0.33 <0.067	<0.33 <0.067	NA NA	NA NA	12 13	NA NA	NA NA
EX-14 EX-15	7.75	08/17/12	<0.23 2.0	530	<170	<0.0030	<0.0030	<0.0030 0.024	<0.0077 0.014	<0.0030	<0.0030	< 0.0030	NA	NA	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	NA	NA	13	NA	NA
EX-16	6	08/17/12	0.57	5.5	<170	<0.0050	< 0.0050	<0.0050	0.055	<0.0050	<0.0050	< 0.0050	NA	NA	<0.066	<0.066	<0.066	<0.066	<0.066	NA	NA	9.1	NA	NA
EX-17	6	08/18/12	<0.24	40	<170	<0.0048	<0.0048	<0.0048	<0.0096	<0.0048	<0.0048	<0.0048	NA	NA	<0.066	<0.066	<0.066	<0.066	<0.066	NA	NA	9.5	NA	NA
EX-18	7.75	08/18/12	1.0	250	<170	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	<0.0050	< 0.0050		NA	<0.33	<0.33	<0.33	<0.33	<0.33	NA	NA	9.6	NA	NA
EX-19	6	08/18/12	<0.25	<1.0	<170	<0.0049	<0.0049	<0.0049	<0.0099	<0.0049	<0.0049	< 0.0049		NA	<0.067	< 0.067	<0.067	<0.067	<0.067	NA	NA	8.5	NA	NA
EX-20	6.5	08/20/12	11	2,600	2,600	0.013	0.013	0.069	0.048	<0.0047	<0.0047	<0.0047	NA	NA	<0.067	<0.067	<0.067	<0.067	<0.067	NA	NA	7.5 [₿]	NA	NA

Castro Valley, California

Notes:

- All soil concentrations measured in milligrams per kilogram (mg/kg)
- 500 Concentration exceeds Shallow Soil ESL
- 500 Concentration exceeds Deep Soil ESL
- 230 Concentration was detected but did not exceed applicable standard

ESL = Environmental Screening Levels from California Regional Water Quality Control Board San Francisco Bay Region - Shallow Soils (<3 meters bgs) and Deep soils (>3 meters bgs) where Groundwater is a Current or Potential Source of Drinking Water for Commercial and Industrial Areas - May 2013

TPH-GRO = Total petroleum hydrocarbons as gasoline range organics; historically analyzed by EPA Method 8015B; beginning December 3, 2007 TPHg analyzed by LUFT GC/MS 8260B

TPH-DRO = Total petroleum hydrocarbons as diesel range organics; analyzed by EPA Method 8015B/3510; beginning August 21, 2012 analyzed by 8015B with silica gel cleanup

HEM = Hexane extractable materials

- O & G = Oil and Grease 1 Reported as Total Recoverable Petroleum Hydrocarbons (TRPH) by EPA Method 418.1 and also reported as HEM with silica gel cleanup (SGT-HEM) analyzed by EPA 1664A.
- BTEX = Benzene, Toulene, Ethyl-benzene, and Total Xylenes; historically analyzed by EPA Method 8021B; beginning September 30, 2003 VOCs analyzed by EPA Method 8260B

MTBE = Methyl tert-butyl ether; historically analyzed by EPA Method 8021B; beginning September 30, 2003 volatile organic compounds analyzed by EPA Method 8260B

EDC and EDB = 1,2-Dicholorethane and Ethylene Dibromide respectively, analyzed by EPA Method 8260B

- PCE = Tetrachloroethene
- NE = No established ESL values
- NA = Not analyzed
- < = concentration is below laboratory reporting limit (RL) (see analytical reports for details)
- * = LCS or LCSD exceeds the control limits

Stantec Consulting Services Inc.

TABLE 2Historical Grab Groundwater Analytical ResultsFormer Merritt Tire Sales/Goodyear DEX #95783430 Castro Valley Boulevard

Castro Valley, California

Groundwater Monitoring Well ID	Sample Date	TPH-GRO	TPH-DRO	Oil & Grease / HEM	Benzene	Toluene	Ethyl- benzene	Total Xylenes	МТВЕ	Lead	1,2-Dichloroethane (EDC)	Ethylene Dibromide (EDB)
ESL (µg/L)		100	100	100	1.0	40	30	20	5.0	2.5	0.5	NE
SB-1W	09/30/04	<50	<50	<100	NA	NA	NA	NA	NA	NA	NA	NA
SB-1-GW	09/10/09	<50	125	4,400	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA
SB-4-GW	09/10/09	<50	106	<16,000	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA
SB-5-GW	09/10/09	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA

Notes:

All groundwater concentrations measured in micrograms per liter (µg/L)

500 Concentration exceeds Shallow Soil ESL

230 Concentration was detected but did not exceed applicable standard

ESL = Environmental Screening Levels from California Regional Water Quality Control Board San Francisco Bay Region - Shallow Soils (<3 meters bgs) where Groundwater is a Current or Potential Source of Drinking Water for Commercial and Industrial Areas - May 2013

TPH-GRO = Total petroleum hydrocarbons as gasoline range organics; historically analyzed by EPA Method 8015B; beginning December 3, 2007 TPHg analyzed by LUFT GC/MS 8260B

TPH-DRO = Total petroleum hydrocarbons as diesel range organics; analyzed by EPA Method 8015B/3510; beginning August 21, 2012 analyzed by 8015B with silica gel cleanup HEM = Hexane extractable materials

Oil & Grease = Also reported as HEM with silica gel cleanup (SGT-HEM) analyzed by EPA 1664A.

BTEX = Benzene, Toulene, Ethyl-benzene, and Total Xylenes; historically analyzed by EPA Method 8021B; beginning September 30, 2003 VOCs analyzed by EPA Method 8260B

- MTBE = Methyl tert-butyl ether; historically analyzed by EPA Method 8021B; beginning September 30, 2003 volatile organic compounds analyzed by EPA Method 8260B
- EDC and EDB = analyzed by EPA Method 8260B

NE = No established ESL values

NA = Not Analyzed

<= concentration is below method detection limit (MDL) or laboratory reporting limit (RL) when MDL is not presented (see analytical reports for details)</p>
Bold numbers denote concentration levels at or above San Francisco Bay Regional Water Quality Control Board ESLs

TABLE 3

Groundwater Monitoring Well Construction Details and Historical Groundwater Elevation Data

Former Merritt Tire Sales/Goodyear DEX #9578 3430 Castro Valley Boulevard Castro Valley, CA

Well ID	Screen	Date	TOC	DTW	DTP	Groundwater
	Interval		Elevation	<i>a</i> 15	<i>(</i> 1))	Elevation
	(feet, bgs)		(feet, msl)	(feet)	(feet)	(feet, msl)
MW-1	10-20	09/30/94	177.17	4.43		172.74
		04/24/95		4.43		172.74
		08/28/02		6.04		171.13
		09/30/03		5.76*		171.41
		09/30/04		6.23		170.94
		03/29/05		3.44		173.73
		05/30/06		4.93		172.24
		06/15/06		5.05		172.12
		12/14/06		4.55		172.62
		06/27/07		5.59		171.58
		12/03/07		5.82		171.35
		06/30/08		5.68		171.49
		12/04/08		6.02		171.15
		06/05/09		5.72		171.45
		08/21/12	179.80	6.26		173.54
		01/29/13	179.80	5.75		174.05
		05/01/13	179.80	6.20		173.60
		08/21/13	179.80	6.82		172.98
MW-2	9-19.5	09/30/94	176.55	4.38		172.17
		04/24/95		4.38		172.17
		08/28/02		5.66		170.89
		09/30/03		5.40*		171.15
		09/30/04		5.86		170.69
		03/29/05		3.03		173.52
		05/30/06		4.59		171.96
		06/15/06		4.71		171.84
		12/14/06		4.20		172.35
		06/27/07		5.19		171.36
		12/03/07		5.46		171.09
		06/30/08		5.33		171.22
		12/04/08		5.65		170.90
		06/05/09		5.35		171.20
		08/21/12	179.19	5.88		173.31
		01/29/13	179.19	5.41		173.78
		05/01/13	179.19	5.84		173.35
		08/21/13	179.19	6.47		172.72
MW-3*	10.5-19.5	09/30/94	176.97			
		04/24/95		4.91		172.06
		02/09/96				
		12/31/96				
		08/28/02		11.25	5.56	165.72
		09/30/03		6.19	5.92	170.78
		09/30/04		6.35	6.30	170.62

TABLE 3 Groundwater Monitoring Well Construction Details and

Historical Groundwater Elevation Data

Former Merritt Tire Sales/Goodyear DEX #9578 3430 Castro Valley Boulevard Castro Valley, CA

Well ID	Screen Interval	Date	TOC Elevation	DTW	DTP	Groundwater Elevation
	(feet, bgs)		(feet, msl)	(feet)	(feet)	(feet, msl)
MW-3*		03/29/05		3.77	3.77	173.20
Continued		05/30/06				
		12/14/06		4.75		172.22
		06/27/07		6.89	5.10	170.08
		12/03/07		5.97	4.15	171.00
		06/30/08			5.80	
		12/04/08			5.75	
		06/05/09			5.75	
MW-4	5-14.5	12/31/96	176.98			
		08/28/02		7.40		169.58
		09/30/03		7.21*		169.77
		09/30/04		7.56		169.42
		03/29/05		5.23		171.75
		05/30/06		6.67		170.31
		12/14/06		6.15		170.83
		06/27/07		7.16		169.82
		12/03/07		7.32		169.66
		06/30/08		7.31		169.67
		12/04/08		7.45		169.53
		06/05/09		7.30		169.68
		08/21/12	179.61	7.67		171.94
		01/29/13	179.61	7.65		171.96
		05/01/13	179.61	7.98		171.63
		08/21/13	179.61	8.51		171.10
MW-5	7-20	08/21/12	179.42	6.35		173.07
		01/29/13	179.42	5.95		173.47
		05/01/13	179.42	6.35		173.07
		08/21/13	179.42	6.96		172.46

Notes:

TOC = top of casing

- DTW = depth to groundwater
- DTP = depth to product
- msl = mean sea level
- bgs = below ground surface
 - -- = not measured / not calculated
 - * = MW-3 was decommissioned on September 10, 2009.

TABLE 4Historical Groundwater Analytical ResultsFormer Merritt Tire Sales/Goodyear DEX #95783430 Castro Valley BoulevardCastro Valley, California

Groundwater Monitoring Well ID	Sample Date	TPH-GRO	TPH-DRO	0 & G / HEM	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDC	EDB	DEHP	Vinyl Chloride	1,1 -DCE	1,1 -DCA	cis 1,2- DCE	Chloroform	1,1,1 - TCE	TCE	PCE	Napthalene	n- Butylbenzene	Chloroethane	Isopropylbenzene	n- Propylbenzene	1,2,4-TMBZ	Chromium	Lead	Nickel	Zinc
ESL (µg/L)		100	100	100	1.0	40	30	20	5.0	0.50	NE	4.0	0.50	6.0	5.0	6.0	70	62	5.0	5.0	6.2	NE	16	NE	NE	NE	50	2.5	8.2	81
	09/30/94 04/24/95	<50 <50	<50 <50	<5,000 <5,000	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	NA NA	<0.5 NA	NA NA	10 NA	<0.5 NA	<0.5 NA	<0.5 NA	<0.5 NA	1.0 NA	<0.5 NA	<0.5 NA	<0.5 NA	<10 NA	NA NA	NA NA	NA NA	NA NA	NA NA	<10 52 ⁽¹⁾	<50 5.6	<20 60 ⁽¹⁾	30 130 ⁽¹⁾
	08/28/02	<50.0 (1)	<50	207	<0.5	< 0.5	<0.5	<0.5	<0.5	NA 10.50	NA	NA	NA 10.50	NA 10.50	NA	NA	NA 10.50	NA 10.50	NA 10.50	NA 10.50	NA	NA 10.50	NA 10.50	NA 10.50	NA 10.50	NA 10.50	92.0 ⁽¹⁾	20.0 ⁽¹⁾	98.0 ⁽¹⁾	135 ⁽¹⁾
	09/30/03 09/30/04	<50.0 <100	<50 87	<5,000 <5,000	<0.50 <1.0	<0.50 <1.0	<0.50 <1.0	<0.50 <1.0	<0.50 <1.0	<0.50 <1.00	NA NA	NA NA	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<2.50 <5.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.0	NA NA	<5.0 <5.0	NA NA	NA NA
	03/29/05	<100	<100	<5,210	<1.0	<1.0	<1.0	<1.0	<1.0	<1.00	NA 10.50	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		<5.00	<1.00	<1.00	<1.00	<1.00	<1.0	NA	<5.0	NA	NA
	05/30/06 06/15/06	<50 NA	<50 NA	<2,500 NA	<0.50* <0.50	<0.50* <0.50	<0.50* <0.50	<0.50* <0.50	NA NA	<0.50 <0.50	<0.50 <0.50	NA NA	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50		<5.0 <5.0	<0.50 <0.50	<1.0 <1.0	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	NA NA	<100 NA	NA NA	NA NA
MW-1	12/14/06	<50	<70	<2,600	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<1.0	<0.50	<0.50	<0.50	NA	<100	NA	NA
	06/27/07 12/03/07	<50 <100	<490 <50	<4,700 <5,000	<2.0 <0.28	<2.0 <0.36	<2.0 <0.25	<4.0 <0.60	<5.0 <0.32	NA NA	<2.0 <0.40	NA NA	<5.0 <0.30	<5.0 <0.42	<2.0 <0.27	<2.0 <0.32	<2.0 <0.33	<2.0 <0.30	<2.0 <0.26	<2.0 <0.32	<5.0 <0.41	<5.0 <0.37	<5.0 <0.40	<2.0 <0.25	<2.0 <0.27	<2.0 <0.23	NA NA	25 6.2	NA NA	NA NA
	06/30/08	<50.0	<49.0	<5,260	<0.500	<0.500	<0.500	<0.500	<0.500	NA	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500			<5.00	<0.500	<0.500 L	<1.00	<0.500	<0.500	NA	<5.00	NA	NA
	12/04/08 06/05/09	<50 <50	<50 <50	<2,500 <5,000	<0.50 0.52	<0.50 <0.50	<0.50 <0.50	<1.0 <1.0	<0.50 <5.0	<0.50 <0.50	<0.50 <0.50	<11 <10	NA <0.50	NA <0.50	NA <0.50	NA <0.50	NA NA	NA <0.50	NA <0.50	NA <0.50	<2.1 <2.1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	<5.0 <6.0	NA NA	NA NA
	08/21/12	<21	<24	<1,400	<0.25	<0.17	<0.070	<0.49	<0.069	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.24	NA	NA	NA	NA	NA	NA	<2.3	NA	NA
	01/29/13 05/01/13	<21 <50	<24 <51	<1,400 <1,500	<0.25 <0.50	<0.17 <0.50	<0.13 <0.50	<0.49 <1.0	<0.069 <0.50	<0.077 <0.50	<0.075 <0.50	<1.5 <10	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	<0.24 <2.0	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	4.7^J <5.0	NA NA	NA NA
	08/21/13	<30 <21	<24	910 ^J	<0.25	<0.17	<0.13	<0.49	<0.069	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA NA	NA	NA	<1.0	NA	NA	NA	NA	NA	NA	<2.3	NA	NA
	09/30/94	<50	<50	<5,000	<0.5	<0.5	<0.5	<0.5	NA	<0.5	NA	<10	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5	<10	NA	NA	NA	NA	NA	<10 54 ⁽¹⁾	<50	<20	<20
	04/24/95 08/28/02	<50 <50	<50 <50	<5,000 162	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	NA <0.5	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	43.0 ⁽¹⁾	7.5 10.0 ⁽¹⁾	67 ⁽¹⁾ 52.0 ⁽¹⁾	120 ⁽¹⁾ 59.0 ⁽¹⁾
	09/30/03	<50.0	<50	<5,000	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	< 0.50	<0.50	< 0.50	<0.50	<0.50	<0.50	< 0.50	<0.50	<2.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA
	09/30/04 03/29/05	<100 <100	78 <100	<5,000 <5,490	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.00 <1.00	NA NA	NA NA	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<5.00 <5.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.0 <1.0	NA NA	<5.0 <5.0	NA NA	NA NA
	05/30/06	<50	<50	<2,400	<0.50*	<0.50*	<0.50*	<0.50*	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<1.0	<0.50	<0.50	<0.50	NA	<100	NA	NA
	06/15/06 12/14/06	NA <50	NA <70	NA <2,700	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	NA NA	<0.50 <0.50	<0.50 <0.50	NA NA	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<5.0 <5.0	<0.50 <0.50	<1.0 <1.0	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	NA NA	NA <100	NA NA	NA NA
MW-2	06/27/07	<50	<480	<4,700	<2.0	<2.0	<2.0	<4.0	<5.0	NA	<2.0	NA	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	NA	17	NA	NA
	12/03/07 06/30/08	<100 <50.0	<50 <47.6	<5,000 <5,210	<0.28 <0.500	<0.36 <0.500	<0.25 <0.500	<0.60 <0.500	<0.32 <0.500	NA NA	<0.40 <0.500	NA NA	<0.30 <0.500	<0.42 <0.500	<0.27 <0.500	<0.32 <0.500	<0.33 <0.500	<0.30 <0.500	<0.26 <0.500	<0.32 <0.500	<0.41 <5.00	<0.37 <0.500	<0.40 <0.500 L	<0.25 <1.00	<0.27 <0.500	<0.23 <0.500	NA NA	<5.0 <5.00	NA NA	NA NA
	12/04/08	<50	<50	<2,500	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<10	NA	NA	NA	NA	NA	NA	NA	NA	<2.1	NA	NA	NA	NA	NA	NA	<5.0	NA	NA
	06/05/09 08/21/12	<50 <21	<50 <24	<5,000 <1,400	<0.50 <0.25	<0.50 <0.17	<0.50 <0.49	<1.0 <0.49	<5.0 <0.069	<0.50 <0.077	<0.50 <0.075	<10 <1.5	<0.50 NA	<0.50 NA	<0.50 NA	<0.50 NA	NA NA	<0.50 NA	<0.50 NA	<0.50 NA	<2.1 <0.24	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	<6.0 <2.3	NA NA	NA NA
	01/29/13	<21	<24	<1,400	<0.25	<0.17	<0.13	<0.49	<0.069	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<0.25	NA	NA	NA	NA	NA	NA	4.1 ^J	NA	NA
	05/01/13 08/21/13	<50 <21	<51 <24	<1,400	<0.50 <0.25	<0.50 <0.17	<0.50 <0.13	<1.0 <0.49	<0.50 <0.069	<0.50 <0.077	<0.50 <0.075	<11 <1.5	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	<2.1 <1.0	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	<5.0 <2.3	NA NA	NA NA
	09/30/94	290	72	1,700^J <5,000	29	3.2	3.3	29	NA	1.2	NA	<10	8.3	1.6	17	8.4	<0.5	12	1.9	12	<10	NA	NA	NA	NA	NA	10	<50	20	<20
	04/24/95	53	960	<5,000	12	0.84	0.69	2.4 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29 ⁽¹⁾	7.1	75 ⁽¹⁾	84 ⁽¹⁾
	02/09/96 12/31/96	NA NA	NA NA	NA NA	9.6 95	1.4 7	1.2 19	53	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	08/28/02	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP FP	FP	FP	FP	FP	FP	FP	FP FP
	09/30/03 09/30/04	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP
MW-3**	03/29/05	274	2,430	<5,260	81.0	7.8	8.0	11.5	23.6	<1.00	NA	NA	73.0	<1.00	21.2	<1.00	<1.00	<1.00	<1.00		9.50	1.40	12.6	1.50	2.90	5.2	NA	<5.0	NA	NA
	05/30/06 12/14/06	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS	NS NS
	06/27/07	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
	12/03/07 06/30/08	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP	FP FP
	12/04/08	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP	FP
	06/05/09 12/31/96	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP ND	FP NA	FP NA	FP NA	FP NA
	08/28/02	<50	<50	<100	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.0 ⁽¹⁾	11.0 (1)	77.0 ⁽¹⁾	78.0 ⁽¹⁾
	09/30/03 09/30/04	<50.0 <50	<50 103	<5,000 <5,000	<0.50 <1.0	<0.50 <1.0	<0.50 <1.0	<0.50 <1.0	<0.50 <1.0	<0.50 <1.00	NA NA	NA NA	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00		<0.50 <1.00	<2.50 <5.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.00	<0.50 <1.0	NA	<5.0 11.0	NA NA	NA NA
	03/29/05	<100	<100	<5,320	<1.0	<1.0	<1.0	<1.0	<1.0	<1.00	NA	NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.0	NA	<5.0	NA	NA
	05/30/06	NS	NS 97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS NA	NS
hasar a	12/14/06 06/27/07	<50 <50	87 <470	<3,500 <4,800	<0.50 <2.0	<0.50 <2.0	<0.50 <2.0	<0.50 <4.0	NA <5.0	<0.50 NA	<0.50 <2.0	NA NA	<0.50 <5.0	<0.50 <5.0	<0.50 <2.0	<0.50 <2.0	<0.50 <2.0	<0.50 <2.0	<0.50 <2.0	<0.50 <2.0	<5.0 <5.0	<0.50 <5.0	<1.0 <5.0	<0.50 <2.0	<0.50 <2.0	<0.50 <2.0	NA NA	<400 28	NA NA	NA NA
MW-4	12/03/07	<100	<50	<4,700	<0.28	< 0.36	<0.25	<0.60	< 0.32	NA	<0.40	NA	<0.30	<0.42	<0.27	< 0.32	<0.33	<0.30	<0.26		< 0.41	< 0.37	<0.40	<0.25	<0.27	<0.23	NA	<5.0	NA	NA
	06/30/08 12/04/08	<50 <50	<58.8 <50	<5,210 <2,500	<0.500 <0.50	<0.500 <0.50	<0.500 <0.50	<0.500 <1.0	<0.500 <0.50	NA <0.50	<0.500 <0.50	NA <11	<0.500 NA	<0.500 NA	<0.500 NA	<0.500 NA	<0.500 NA	<0.500 NA	<0.500 NA	<0.500 NA	<5.00 <2.1	<0.500 NA	<0.500 L NA	<1.00 NA	<0.500 NA	<0.500 NA	NA NA	15.8 <5.0	NA NA	NA NA
	06/05/09	<50	<50	<5,000	<0.50	<0.50	<0.50	<1.0	<5.0	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50		<2.1	NA	NA	NA	NA	NA	NA	<6.0	NA	NA
	08/21/12 01/29/13	<21 <21	<24 <24	<1,400 <1,400	<0.25 <0.25	<0.17 <0.17	<0.070 <0.13	<0.49 <0.49	<0.069 <0.069	<0.077 <0.077	<0.075 <0.075	<1.5 <1.5	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	<0.24 <0.24	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	<2.3 6.9	NA NA	NA NA
	05/01/13	<50	<53	1,900 ^J	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<11	NA	NA	NA	NA	NA	NA	NA	NA	<2.2	NA	NA	NA	NA	NA	NA	6.3	NA	NA
	08/21/13	<21	<24	1 <i>,</i> 800 ^J	<0.25	<0.17	<0.13	<0.49	<0.069	<0.077	< 0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NA	NA	NA	NA	NA	NA	<2.3	NA	NA

TABLE 4Historical Groundwater Analytical ResultsFormer Merritt Tire Sales/Goodyear DEX #95783430 Castro Valley BoulevardCastro Valley, California

Groundwate Monitoring Wo ID	r Ell Sample Date	TPH-GRO	TPH-DRO	O & G / HEM	Benzene	Toluene	Ethyl- benzene	Total Xylenes	МТВЕ	EDC	EDB	DEHP	Vinyl Chloride	1,1 -DCE	1,1 -DCA	cis 1,2- DCE	Chloroform	1,1,1 - TCE	TCE	PCE	Napthalene	n- Butylbenzene	Chloroethane	lsopropylbenzene	n- Propylbenzene	1,2,4-TMBZ	Chromium	Lead	Nickel	Zinc
ESL (µg/L)		100	100	100	1.0	40	30	20	5.0	0.50	NE	4.0	0.50	6.0	5.0	6.0	70	62	5.0	5.0	6.2	NE	16	NE	NE	NE	50	2.5	8.2	81
MW-5	08/21/12	<21	<24	1,700 ^J	<0.25	<0.17	<0.070	<0.49	0.17 ^J	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.1	NA	NA
	01/29/13	<21	<24	1,800 ^J	<0.25	<0.17	<0.13	<0.49	0.44 ^J	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.6	NA	NA
	05/01/13	<50	<53	<1,500	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<10	NA	NA	NA	NA	NA	NA	NA	NA	<2.1	NA	NA	NA	NA	NA	NA	<5.0	NA	NA
	08/21/13	<21	<24	1,700 ^J	<0.25	<0.17	<0.13	<0.49	0.091 ^J	<0.077	<0.075	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NA	NA	NA	NA	NA	NA	4.3 ^J	NA	NA

Notes:

All groundwater concentrations measured in micrograms per liter (µg/L)

500 Concentration exceeds Shallow Soil ESL

230 Concentration was detected but did not exceed applicable standard

ESL = Environmental Screening Levels from California Regional Water Quality Control Board San Francisco Bay Region - Shallow Soils (<3 meters bgs) where Groundwater is a Current or Potential Source of Drinking Water for Commercial and Industrial Areas - May 2013

TPH-GRO = Total petroleum hydrocarbons as gasoline range organics; historically analyzed by EPA Method 80158; beginning December 3, 2007 TPHg analyzed by LUFT GC/MS 82608

- TPH-DRO = Total petroleum hydrocarbons as diesel range organics; analyzed by EPA Method 8015B/3510; beginning August 21, 2012 analyzed by 8015B with silica gel cleanup
- HEM = Hexane extractable materials

Oil & Grease = also reported as HEM with silica gel cleanup (SGT-HEM) analyzed by EPA 1664A.

BTEX = benzene, toulene, ethyl-benzene, and total xylenes; historically analyzed by EPA Method 8021B; beginning September 30, 2003 VOCs analyzed by EPA Method 8260B

MTBE = Methyl tert-butyl ether; historically analyzed by EPA Method 8021B; beginning September 30, 2003 volatile organic compounds analyzed by EPA Method 8260B

DEHP = Bis (2-ethylhexyl) phthalate

EDC = 1,2-Dichloroethane analyzed by EPA Method 8260B

- EDB = Ethylene Dibromide analyzed by EPA Method 8260B
- 1,1-DCE = 1,1-Dichloroethene
- 1,1-DCA = 1,1 Dicholorethane
- cis 1,2-DCE = cis 1, 2-Dichloroethene
 - TCE = Trichloroethene

PCE = Tetrachloroethene

- 1,1,1 TCE = 1,1,1 Trichloroethane
- 1,2,4 TMBZ = 1,2,4 Trimethylbenzene

⁽¹⁾ = Historical groundwater data as referenced in Secor groundwater monitoring report dated 4/26/05.

- NA = Not Analyzed
- NE = No established ESL values

NS = Not Sampled

ND = Not Detected - as reported in EMCON's Expanded Assessment, and Risk-Based Corrective Action Evaluation report, dated March 4, 1997

FP = Free product, well not sampled

- L = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptable limits. Analyte not detected, data not impacted.
- * = Due to the laboratory exceeding the hold time for 8260B analysis, MW-1 and MW-2 were resampled on 6/15/06.
- ** = Groundwater Monitoring Well MW-3 was destroyed September 10, 2009.

¹ = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

< = Concentration is below method detection limit (MDL) or laboratory reporting limit (RL) when MDL is not presented (see analytical reports for details).</p>

Bold numbers denote concentration levels at or above San Francisco Bay Regional Water Quality Control Board ESLs.