

**The Goodyear Tire & Rubber
Company
Akron, Ohio 44316-0001**

Global EHS Sustainability

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By Alameda County Environmental Health at 10:27 am, Jul 30, 2014

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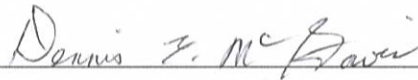
July 28, 2014

Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Reference:

**Groundwater Investigation Tech Memo
Goodyear Tire Store
1485 1st Street, Livermore, CA
July 28, 2014**

The Goodyear Tire & Rubber Company (Goodyear) retained AECOM Technical Services (AECOM) to complete the above referenced Tech Memo dated July 28, 2014. 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.



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



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July 28, 2014

Mr. Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bat Parkway
Alameda, CA 94502

**Subject: Groundwater Investigation Report
The Goodyear Tire & Rubber Company
Rynck Tire and Auto Center
DEX #5389
1485 First Street
Livermore, CA 94550
SLIC Case RO0003088; GeoTracker ID T10000003453**

Dear Mr. Wickham:

AECOM Technical Services, Inc. (AECOM) appreciates the opportunity to provide The Goodyear Tire & Rubber Company (Goodyear) and the Alameda County Environmental Health (ACEH) with this technical memorandum (Tech Memo) summarizing environmental investigation activities performed at the above referenced address (the Site) (Figure 1). This Tech Memo is in response to requests from the ACEH for additional groundwater investigations at the site. AECOM and Goodyear would like to make the case for Low-Treat Closure based on existing Site data.

BACKGROUND

Site Description

The Site is situated in an area of mixed commercial/residential use. The property has been occupied by a Goodyear tenant since 1974 (when the current building was constructed). From 1950 until 1974 it was occupied by an automobile service station. Prior to that, the property was used for agricultural purposes from 1906 until sometime after 1950.

Geologic and Hydrogeologic Setting

Local Geology

The Site is located approximately 474 feet above mean sea level. The Site is underlain by Tertiary, Cretaceous and Jurassic-age rocks. The soil beneath the Site consists primarily of silt from ground surface to 5 feet (ft) bgs transitioning to silty gravel from 5 ft to 12 ft bgs.

Site Hydrogeology

According to nearby wells identified in the Phase I Environmental Site Assessment (ESA), shallow groundwater reportedly flows towards the west-northwest direction following the surface topography. The regional aquifer is located approximately 45-50 ft bgs. Shallow groundwater has been detected at adjacent site at depths between 28 and 40 ft bgs. No groundwater was encountered at the Site during the Phase II Subsurface Investigation (SI), groundwater investigation or lift removal activities.

Previous Site Investigations

SEMCO Environmental Contractors and General Engineering (SEMCO) – A 500 gallon used oil underground storage tank (UST) was removed from the property in November 1993. Confirmation samples collected from the bottom of the excavation (at 9.5 ft bgs) and from the soil stockpile. Samples were analyzed for total petroleum hydrocarbons (TPH) all ranges, benzene, toluene, ethylbenzene, and xylenes (BTEX), select metals, semi-volatile organic compounds (SVOCs), total oil and grease, and/or volatile organic compounds (VOCs). Sample results showed detectable concentrations of contaminants and a recommendation was made for excavating the soils (SEMCO, 1994a). Based on the results, 68.91 tons of soils were removed from the UST excavation. Three confirmation samples were collected; one from the bottom of the excavation and one each from the south and west sidewalls. Samples were analyzed for TPH, BTEX, select metals, SVOCs (bottom sample only), and total oil and grease. All sample results were below laboratory detection limits (SEMCO, 1994b). A no further action (NFA) and case closure letter was issued by the ACEH on December 30, 1996.

Touchstone Developments (Touchstone) – Based on a previous VOC detection in soil, the ACEHD requested the installation of a groundwater monitoring well on the property to assess the impact to a potential beneficial use water-bearing zone. The monitoring well was installed to a depth of 38 ft bgs. During the well installation activities, a soil sample was collected at 21 ft bgs and analyzed for TPH, BTEX, total oil and grease, VOCs, SVOCs, and CAM 17 metals. Total oil and gas was detected at 72 parts per million (ppm). Chromium, nickel and zinc were also detected. All other compounds were below laboratory reporting limits. In groundwater, chromium, nickel, zinc, chromium and 1,1,1-trichloroethane were detected above the laboratory reporting limits but below their respective Maximum Contaminant Levels (MCLs) or regulatory concentrations for drinking water (Touchstone, 1995).

SEMCO – An additional three quarters of groundwater sampling were conducted at this well. No TPH-gasoline and diesel, BTEX, total oil and grease or 1,1,1-trichloroethane were detected in groundwater samples. Metal concentrations were below drinking water limits. One VOC (1,1,2,2-tetrachloroethane) was detected at a concentration of 0.9 micrograms per liter ($\mu\text{g/L}$). A NFA closure letter was issued on July 15, 1996 (SEMCO, 1996). The groundwater monitoring well was decommissioned.

URS Corporation (URS) - In February 2010, URS performed a Phase I Environmental Site Assessment (ESA) and Phase II Limited Subsurface Investigation (LSI) at the Property. A total of seven soil borings were advanced adjacent to the current and former in-ground hydraulic lifts as well as the oil/water separator (OWS). Samples were analyzed for TPH and Volatile Organic Compounds (VOCs). Groundwater was not encountered during the investigation. Boring SB03, which was located at the adjacent in-ground lift in bay 5, had detections of TPH-diesel range (DRO) and -motor oil range (ORO) of 1,600 milligrams per kilogram (mg/kg) and 2,200 mg/kg at the terminal depth (11 to 12 feet), respectively. The DRO levels were above the California Regional Water Quality Control Board (RWQCB) commercial/industrial Environmental Screening Level (ESL) of 83 mg/kg for deep soils (greater than 3 meters below ground surface [bgs] where groundwater is a current or potential source of drinking water). One other boring had TPH levels reported at 2.1 mg/kg and the rest were all non-detect (ND). No VOC detections were reported (URS, 2010a).

In June 2010 URS performed a Further Site Investigation (FSI) at the Property. A total of five borings were advanced near the in-ground hydraulic lift in bay 5. Samples were analyzed for TPH and VOCs. Groundwater was not encountered during the FSI. TPH-DRO was detected at 1.2 mg/kg in one location. All other samples were reported as ND for VOCs and TPH. The report concluded that the contamination was limited to the area immediately adjacent to the in-ground lift (URS 2010b).

AECOM Technical Services (AECOM) - In September 2011, AECOM removed the in-ground lift and any visibly impacted soil associated with the lift. Four sidewall confirmation samples and one bottom confirmation sample were collected and analyzed for VOCs and TPH. No TPH-GRO, ORO or VOCs detections were reported. All five samples had TPH-DRO detections between 1 mg/kg and 4 mg/kg,

which are below the RWQCB ESL of 83 mg/kg. A summary report was submitted to the ACEH on March 14, 2012 (AECOM, 2012a).

On May 14, 2012, the ACEH issued a directive requiring a groundwater investigation be performed at the Site. AECOM submitted a groundwater investigation work plan to the ACEH on July 24, 2012 (AECOM, 2012b). In October 2012, AECOM installed three soil borings and attempted to collect groundwater hydro-punch samples at each location. Groundwater was not encountered during this investigation (total depth of investigation 44 ft bgs). Zones of moist soil were observed at 24 to 33 ft bgs, but no groundwater entered the boreholes in any of the hydro-punch locations. In lieu of a groundwater sample, a soil sample was collected from the moist interval at each location and submitted for analysis of VOCs, TPH and/or polychlorinated biphenyls (PCBs). All samples were below laboratory detection limits (AECOM 2012c). Since VOCs were not detected in soil samples associated with the removed lift it can be inferred that lift operations did not impact the water bearing zone.

CASE FOR SITE CLOSURE

The Low Threat Closure Criteria include eight general criteria that must be satisfied for site closure. The site meets all of the general criteria listed below:

General Criteria

- **The unauthorized release is located within the service area of a public water system.** The site is located at 1485 First Street in Livermore, California. The city of Livermore provides water to businesses and residents through a municipal water-supply system.
- **The unauthorized release consists only of petroleum.** The unauthorized release is presumed to have come from a 500-gallon waste oil UST pipeline that was removed in 1993. Other contaminants encountered at the site consist of very low levels of VOCs in groundwater samples and are not associated with onsite operations. The trace levels of VOCs are likely part of regional impact. An in-ground lift was removed and replaced in 2011. Visibly impacted soil was excavated during lift replacement. All confirmation samples were non-detect for TPH-GRO, ORO and for VOCs. Low TPH-DRO detections were below regulatory screening levels.
- **The unauthorized release has been stopped.** The 500-gallon waste oil UST was removed in November 1993. Impacted soil from the UST excavation was removed in 1994.
- **Free Product has been removed to the maximum extent practicable.** Free product has never been reported to be present in the groundwater monitoring well on site.
- **A conceptual site model (CSM) that assesses the nature, extent, and mobility of the release has been developed.** A CSM does not seem necessary since the potential impact to groundwater has been mitigated; and a previous groundwater monitoring well showed no VOC impact to the water bearing zone.
- **Secondary source removal has been addressed.** All TPH-impacted soil has been removed from the site.
- **Soil and groundwater have been tested for Methyl tert-butyl ether (MTBE) and results reported in accordance with the Health and Safety Code section 25296.15.** TPH-Gasoline and BTEX were not detected in samples collected at the site therefore additional samples were not analyzed for MTBE (a fuel additive).
- **Nuisance as defined by Water Code section 13050 does not exist at the site.** Conditions at the site do not pose any potential injury to human health, and do not impact the surrounding community.

- **There are no unique site attributes or site-specific conditions that demonstrate an increased risk associated with residual petroleum constituents.** The site does not demonstrate any unique conditions associated with this criterion.

Media Criteria

The Low Threat Closure Criteria include three media-specific criteria that must be satisfied for site closure. The site meets all of the general criteria listed below:

Groundwater

- **The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent.** The low levels of VOCs (1,1,2,2-tetrachloroethane was detected at a concentration of 0.9 µg/L in 1996) does not constitute a plume or a groundwater issue. Although groundwater was not encountered during the 2012 investigation (total depth of investigation 44 ft bgs), moist soils encountered at depth (24 to 33 ft bgs) were sampled and all samples were below laboratory detection limits for VOCs, TPH and PCBs. The 2012 soil data does not indicate that groundwater contamination is a concern in the investigation area.
- **The contaminant plume that exceeds water quality objectives meets all of the additional characteristics of a Class 1 site.** The detection in groundwater does not exceed water quality objectives.

Petroleum Intrusion to Indoor Air

- **The site is not an active commercial petroleum fueling facility.** All petroleum fueling activities on the site ceased in 1974 when the current building was constructed.
- a) **Site specific conditions satisfy all of the applicable characteristics and criteria of scenario 1.**
- b) **No site-specific risk assessment for the vapor intrusion pathway has been conducted at the site.** VOCs were not detected in soil and groundwater at levels that would pose a vapor intrusion health risk.
- c) **No vapors migrating from soil or groundwater are expected to have a significant risk of adversely affecting human health, so no mitigation measures, and/or institutional and engineering controls were used.**

Direct Contact and Outdoor Air Exposure

- a) **The maximum concentrations of petroleum constituents in soil are less than or equal to those listed in RWQCB Low-Threat UST Case Closure Policy Table 1 (CRWQCB 2012) for the specified depth bgs.** All petroleum-impacted soil has been removed from the site.

CONCLUSIONS AND RECOMMENDATIONS

The primary sources, UST and in-ground lift, and the secondary source, TPH contaminated soil, have been removed. VOCs (very low levels) have been detected in groundwater at one well at the Site. The detections were not determined to be a threat to the groundwater. All of the Low Threat Closure Criteria have been met.

AECOM recommends no further investigation or remedial action, and requests site closure be granted.

REFERENCES

AECOM Technical Services (AECOM), 2012a. *In-Ground Lift Removal and Soil Excavation*, Rynck Tire and Auto Center, Livermore, CA. March

AECOM, 2012b. *Groundwater Investigation Work Plan*, Rynck Tire and Auto Center, Livermore, CA. July

AECOM, 2012c. *Groundwater Investigation Report*, Rynck Tire and Auto Center, Livermore, CA. November.

SEMCO Environmental Contractors and General Engineering (SEMCO), 1994a. Tank Removal Report, 1485 West 1st Street, Livermore, CA. September.

SEMCO, 1994b. Letter Report; Overexcavation Report, RyNck Tire, 1485 1st Street, Livermore, CA. June

SEMCO, 1996. *Third Quarter 1996 Groundwater Monitoring Report*, RyNck Tire, 1485 1st Street, Livermore, CA September

Touchstone Developments, 1995. *Well Installation Report*, Goodyear Services centers, 1485 and 1682 West First Street, Livermore, CA. April.

URS Corporation (URS), 2010a. *Phase I Environmental Site Assessment and Phase II Limited Subsurface Investigation*, Rynck Tire and Auto Center, 1485 First Street, Livermore, CA. May

URS, 2010b. *Further Site Investigation*, Rynck Tire and Auto Center, 1485 First Street, Livermore, CA November

If you have any questions, please contact Vanessa Diep at (714) 689-7192

Sincerely,

AECOM Environment



Vanessa Diep, PG #8992
Project Geologist

