

## State Water Resources Control Board

### UST CASE CLOSURE SUMMARY

#### Agency Information

Agency Name: Los Angeles Regional Water Quality Control Board (Los Angeles Regional Water Board)	Address: 320 West Fourth Street, Suite 200 Los Angeles, CA 90013
Agency Caseworker: Yi Lu	Case No.: 905010198

#### Case Information

USTCF Claim No.: None Specified	Global ID: T0603715594
Site Name: American Honda	Site Address: 1919 Torrance Boulevard Torrance, CA 90501 (Site)
Petitioner: American Honda Motor Company, Inc.	Address: 1919 Torrance Boulevard Torrance, CA 90501
USTCF Expenditures to Date: None Specified	Number of Years Case Open: 9

URL: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0603715594](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603715594)

#### Summary

The Low-Threat Underground Storage Tank Case Closure Policy (Policy) contains general and media-specific criteria, and cases that meet those criteria are appropriate for closure pursuant to the Low-Threat Policy. This case meets all of the required criteria of the Policy. The Conceptual Site Model upon which the evaluation of the case has been made is described in **Attachment 1: Summary of Basic Site Information**. Highlights of the Conceptual Site Model (CSM) of the case are as follows:

The release at the Site was discovered when two underground storage tanks (UST) were removed in 2004 and replaced. During the 2004 UST removal and excavation, approximately 50 cubic yards of soil were removed from the excavation, and disposed. The Site is operated as an active fueling facility. The petroleum release is limited. The nearest public supply well regulated by the California Department of Public Health is located approximately 6,400 feet south (generally crossgradient) of the Site. The nearest surface water is a drainage canal located approximately 250 feet northeast of the Site.

Public supply wells are usually constructed with competent sanitary seals and intake screens that are in deeper more protected aquifers. Remaining petroleum constituents attributable to Petitioner's UST system release are limited, stable and declining. Remedial actions have been implemented and further remediation would be ineffective and expensive. Additional assessment/monitoring will not likely change the CSM. Any remaining petroleum constituents attributable to Petitioner's UST system release do not pose significant risk to human health, safety, or the environment.

### Rationale for Closure under the Policy

- General Criteria – Site **MEETS ALL EIGHT GENERAL CRITERIA** under The Policy.
- Groundwater Media-Specific Criteria – Site meets the criterion in **CLASS 5**. Based on an analysis of site-specific conditions that under current and reasonably anticipated near-term future scenarios, the contaminant plume (attributable to Petitioner’s UST system release) poses a low-threat to human health, safety, and to the environment.

The MTBE contaminant plume that exceeds water quality objectives is less than 1,000 feet in length. The nearest existing water supply well is greater than 1,000 feet from the MTBE plume boundary. The MTBE plume has been stable or decreasing for a minimum of five years. There is no free product attributable to Petitioner’s UST system release.

- Petroleum Vapor Intrusion to Indoor Air Criteria – Site meets the **EXCEPTION**. Exposure to petroleum vapors associated with historical fuel system releases are comparatively insignificant relative to exposures from small surface spills and fugitive vapor releases that typically occur at active fueling facilities.
- Direct Contact and Outdoor Air Exposure Criteria – Site meets **CRITERIA (3) b**. Maximum concentrations of petroleum constituents in soil are less than levels that a site-specific risk assessment demonstrates will have no significant risk of adversely affecting human health.

During the 2004 UST system removal and replacement, approximately 50 cubic yards of soil were removed from the excavation, and disposed. Maximum concentrations of petroleum constituents in soil five to ten feet below ground surface (bgs) are less than 0.005 mg/kg for benzene, ethylbenzene, and naphthalene, respectively.

### Objections to Closure

Los Angeles Regional Water Board staff objected to UST case closure because:

1. Site assessment data demonstrates that unauthorized releases from the former USTs on-Site have occurred in the past, and have impacted soil and groundwater beneath the Site.  
Response: Site conditions demonstrate that low levels of petroleum constituents remain limited to the soil near and below the former UST system that was removed and replaced. Residual soil contaminations attenuate with depth to low levels near the capillary fringe around 70 feet bgs. (See Attachment 1)
2. Additional site assessment and continuous monitoring are necessary to fully define the extent of the soil and groundwater plume that resulted from the former USTs on-Site, and to determine if it is necessary for American Honda to clean up the soil and/or groundwater plume.  
Response: The available data set is sufficient for a determination that no further action should be required for this case. Soil and groundwater have been defined by several site assessment activities. (See Attachment 1)

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**Recommendation for Closure**

Based on available information, the corrective action performed at this Site ensures the protection of human health, safety, and the environment and is consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations, applicable state policies for water quality control and the applicable water quality control plan, and case closure is recommended.

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8/18/14  
\_\_\_\_\_ Date

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8/18/14  
\_\_\_\_\_ Date

## ATTACHMENT 1: SUMMARY OF BASIC INFORMATION (Conceptual Site Model)

### Site Location/ History

- The Site is located in a heavily industrialized portion of Los Angeles County. The Site is a commercial property that operates two USTs and dispenser system.
- There are numerous warehouses, manufacturing facilities, and oil refineries in the immediate vicinity of the Site. Residential areas are present to the south and west of the American Honda facility.
- Nature of Contaminants of Concern: Petroleum constituents
- Primary Source of Release: Former UST system
- Discovery Date: 2004
- Release Type: Petroleum<sup>1</sup>
- Twelve soil borings have been drilled and sampled.
- One monitoring well has been installed.
- Free Product: None reported

**Table A: USTs**

Tank No.	Size	Contents	Status	Date
1	5,000 gallon	Gasoline	Removed/Replaced	2004
2	10,000 gallon	Gasoline	Removed/Replaced	2004
1	5,000 gallon	Diesel	Active	-
2	10,000 gallon	Gasoline	Active	-

### Receptors

- Groundwater Basin: West Coast
- Groundwater Beneficial Uses: Municipal and domestic water supply (MUN), agricultural supply (AGR), industrial process supply (PROC), and industrial service supply (IND)
- Designated Land Use: Business Park (I-BP)
- Public Water System: Torrance Municipal Water
- Distance to Nearest Surface Water: Drainage Canal ~250 feet northeast
- Distance to Nearest Supply Well: Public supply well ~6,400 feet south

### Geology/ Hydrogeology

- Average Groundwater Depth: ~75 feet
- Minimum Groundwater Depth: ~70 feet
- Groundwater Flow Direction: Generally easterly - Influenced by the pumping of ExxonMobil Refinery groundwater remediation extraction wells
- Geology: Fill materials to approximately 5 to 12 feet below ground surface (bgs), silty sand and silty clay to approximately 15 feet bgs, fine grained soils consisting of clay, silty sand, and sandy silt to approximately 31 feet bgs, poorly graded sands with silty sand and well graded sand to approximately 90 feet bgs
- Hydrogeology: Semi-confined at ~ 75 feet bgs

<sup>1</sup> "Petroleum" means crude oil, or any fraction thereof, which is liquid at standard conditions of temperature and pressure, which means at 60 degrees Fahrenheit and 14.7 pounds per square inch absolute. (Health & Safety Code, § 25299.2)

**Corrective Actions**

- Two USTs were removed in 2004 and replaced.
- During the 2004 UST system removal and replacement, approximately 50 cubic yards of soil were removed from the excavation, and disposed.

**Table B: Concentrations of Petroleum Constituents of Concern in Soil**

Sample	Sample Date	Depth (ft)	TPHg (mg/kg)	TPHd (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)
HT320-5K-B1	1/16/04	20	<0.5	-	<0.02	-	<0.02	-	<b>0.14</b>	-
	1/16/04	25	<b>0.22</b>	-	<0.002	-	<0.002	-	<b>0.29</b>	-
	1/16/04	30	<0.1	-	<0.002	-	<0.002	-	<b>0.019</b>	-
	1/16/04	35	<0.5	-	<0.02	-	<0.02	-	<0.05	-
HT320-5K-B2	1/16/04	20	<0.5	-	<0.02	-	<0.02	-	<b>0.4</b>	-
	1/16/04	25	<b>1</b>	-	<0.01	-	<0.01	-	<b>1.7</b>	-
	1/16/04	30	<0.1	-	<0.002	-	<0.002	-	<b>0.17</b>	-
	1/16/04	35	<b>0.71</b>	-	<0.01	-	<0.01	-	<b>0.91</b>	-
HT320-10K-B1	1/16/04	20	<0.5	-	<0.02	-	<0.02	-	<b>0.17</b>	-
	1/16/04	25	<b>0.12</b>	-	<0.002	-	<0.002	-	<b>0.16</b>	-
	1/16/04	30	<b>0.23</b>	-	<0.002	-	<0.002	-	<b>0.17</b>	-
	1/16/04	35	<0.5	-	<0.02	-	<0.02	-	<0.05	-
HT320-10K-B2	1/16/04	20	<0.5	-	<0.02	-	<0.02	-	<b>0.19</b>	-
	1/16/04	25	<0.1	-	<0.002	-	<0.002	-	<b>0.064</b>	-
	1/16/04	30	<0.1	-	<0.002	-	<0.002	-	<b>0.058</b>	-
	1/16/04	35	<0.5	-	<0.02	-	<0.02	-	<0.05	-
LF5K-B2A	3/1/04	25	<0.5	-	<0.002	-	<0.002	-	<b>7.3</b>	<b>1.3</b>
	3/1/04	30	<0.5	-	<0.002	-	<0.002	-	<b>2.2</b>	<b>0.28</b>
	3/1/04	35	<0.5	-	<0.002	-	<0.002	-	<b>0.42</b>	<b>0.14</b>
	3/1/04	40	<0.5	-	<0.002	-	<0.002	-	<b>0.026</b>	<b>0.022</b>
	3/1/04	45	<0.5	-	<0.002	-	<0.002	-	<b>0.029</b>	<b>0.026</b>
	3/1/04	50	<0.5	-	<0.002	-	<0.002	-	<b>0.0088</b>	<0.02
	3/1/04	55	<0.5	-	<0.002	-	<0.002	-	<b>0.011</b>	<0.02
	3/1/04	60	<0.5	-	<0.002	-	<0.002	-	<b>0.024</b>	<0.02
	3/1/04	65	<0.5	-	<0.002	-	<0.002	-	<0.005	<0.02
	3/1/04	70	<b>1.4</b>	-	<b>0.34</b>	-	<b>0.058</b>	-	<b>0.072</b>	<b>0.035</b>
3/1/04	75	<0.5	-	<b>0.058</b>	-	<b>0.0095</b>	-	<b>0.037</b>	<0.02	
LFSB-1	11/28/07	10	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	15	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	20	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	25	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	30	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.059</b>	<0.05
	11/28/07	35	<b>0.68</b>	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	40	<b>1.4</b>	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	50	<b>1</b>	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	60	<b>0.6</b>	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	70	<b>0.88</b>	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.042</b>	<0.05
11/28/07	75	<b>1.7</b>	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.068</b>	<0.05	

LFSB-2	11/28/07	15	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	20	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	25	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	30	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	35	<b>0.79</b>	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	40	<b>0.73</b>	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	50	<b>1.1</b>	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.045</b>	<0.05
	11/28/07	60	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.025</b>	<0.05
	11/28/07	70	<0.5	<0.005	<b>0.014</b>	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	75	<b>1.3</b>	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.061</b>	<0.05
LFMW-1	11/28/07	15	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<0.02	<0.05
	11/28/07	20	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.25</b>	<b>0.14</b>
	11/28/07	25	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.063</b>	<b>0.051</b>
	11/28/07	30	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.047</b>	<b>0.055</b>
	11/28/07	35	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.038</b>	<0.05
	11/28/07	40	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.03</b>	<0.05
	11/28/07	50	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.026</b>	<0.05
	11/28/07	60	<0.5	<0.005	<0.005	<0.005	<0.005	<0.01	<b>0.095</b>	<0.05
	11/28/07	70	<b>1.8</b>	<0.005	<b>0.35</b>	<b>0.0081</b>	<b>0.032</b>	<b>0.07</b>	<b>0.12</b>	<b>0.082</b>

**bold** indicates that sample result exceeds the detection limit

**Table C: Concentrations of Petroleum Constituents of Concern in Groundwater**

Sample	Sample Date	Depth (ft)	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
LFMW-1	12/12/07	-	<b>86,000</b>	9.2	<b>5,100</b>	<b>23,000</b>	<b>3,300</b>	<b>21,500</b>	<b>470</b>	<b>66</b>
WQOs	-	-	50	50	1	42	3.2	17	5	12

**bold** indicates that sample result exceeds WQOs  
 TPHg - total petroleum hydrocarbons as gasoline  
 TPHd - total petroleum hydrocarbons as diesel  
 MTBE - methyl tert-butyl ether

TBA - tert-butyl alcohol  
 µg/L - micrograms per liter  
 mg/kg - milligram per kilogram  
 WQOs - water quality objectives

**Summary of State Water Board Technical Conclusions**

State Water Board technical staff analyzed the geologic and technical information concerning the Site, as well as the contentions of the Petitioner and the Los Angeles Regional Water Board. Based on that analysis, State Water Board technical staff developed a conceptual model to assist in understanding the high concentrations of petroleum constituents in the Petitioner’s monitoring well LFMW-1. Based on this conceptual site model, State Water Board staff has determined that:

- The source of the majority of elevated concentrations of MTBE and TBA in the Petitioner’s monitoring well LFMW-1 is the unauthorized release that originated from the Petitioner’s UST system;
- The source of the majority of elevated concentrations of petroleum constituents other than MTBE and TBA in the Petitioner’s well is the off-Site unauthorized releases that originate from the ExxonMobil Refinery site located upgradient from the Site at 3700 West 190<sup>th</sup> Street.<sup>2</sup>

<sup>2</sup> Groundwater flow direction is influenced by the pumping of ExxonMobil Refinery groundwater remediation extraction wells.

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- The remaining petroleum constituents that can be attributed to the release from the Petitioner's UST system are limited, stable and declining.
- Petitioner's UST case (the residual petroleum constituents that can be attributed to the release from Petitioner's UST system) would be eligible for case closure.

### Source of Elevated Petroleum Constituents in Petitioner's well

Concentrations of petroleum constituents were detected in the soil samples collected near and under the UST system. The detected petroleum constituents included TPHg,<sup>3</sup> MTBE, TBA, and tert-amyl methyl ether (TAME). The data indicate low levels of petroleum constituents are limited to the soil near and below the USTs that were removed and replaced in 2004. Residual MTBE soil contamination attenuates with depth to low levels near the capillary fringe around 70 feet bgs.

A distinctly larger number of analytes were detected in the groundwater sample collected from monitor well LFMW-1 and included BTEX, MTBE, TBA, TPHg, TPHd, n-butylbenzene, sec-butylbenzene, 1,2 dichloroethane, isopropylbenzene, p-isopropyltoluene, naphthalene, n-propylbenzene, styrene, 1,2,4-trichlorobenzene, 1,3,5-trimethylbenzene, and 1,2,4-trimethylbenzene. These data indicate that because a majority of the analytes detected in monitoring well LFMW-1 were not detected in the above soil, the majority of analytes detected in monitor well LFMW-1 originated from a source other than the Petitioner's UST system; and that the source of analytes detected in the soil near the capillary fringe (around 70 feet bgs) other than MTBE or TBA originated from the affected groundwater.

Multiple reports prepared by California Licensed Professionals, and multiple Cleanup and Abatement Orders, document that a large plume of affected groundwater emanating from the ExxonMobil Refinery property has migrated about 4,500 feet off-Site to the southeast and below the Petitioner's property. Groundwater monitoring has been conducted at the Refinery since 1985. The monitoring well network sampled during the First Semester 2013 consisted of 260 wells. During the First Semester 2013, an approximate total of 862,531 gallons of free-phase hydrocarbon product (FHP) were recovered from the Gage-Gardena Aquifer.<sup>4</sup> To date, approximately 12,605,249 gallons of FHP have been recovered from the Gage-Gardena Aquifer beneath the Refinery.<sup>5</sup>

### Plume Stability

The Site is paved with concrete and asphalt; this in turn puts a control on the quantity of surface water, i.e. precipitation, available for infiltration. The average mean precipitation from 2001 to 2008 over the West Coast Basin was 11.5 inches.<sup>6</sup> The remaining residual soil contamination should continue to attenuate in a controlled fashion over time and allow future mass reduction. No BTEX, TPHd or eleven other analytes reported in the groundwater were reported in soil samples above 70 feet bgs.

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<sup>3</sup> Also referred to as, C6-C12 and gasoline range organics (GRO) throughout the record.

<sup>4</sup> Gage-Gardena Aquifer is a regional water-bearing zone which is first encountered at an approximate depth of 60 to 115 feet.

<sup>5</sup> Environmental Resources Management, *Refinery Subsurface Cleanup Progress Report, First Semester 2013*, July 15, 2013; LFR Inc., *Response to Sheppard, Mullin, Richer & Hampton LLP 6/27/08 Letter Re: Exxon Mobil Oil Corporation's Interested Party Statement Re: American Honda's Petition for Case Closure of Underground Storage Tank Site...*, August 1, 2008; SCS Engineers, *Review and Comments on Mobil/Harding Lawson Associates Report "MW-Series Well Installation, Data Summary and Discussion, Mobil Torrance Refinery"...*, April 30, 1991; Cleanup and Abatement Order (CAO) Nos. 85-17, 88-43, 89-136, and 95-116 and the Addendum to those CAOs, as well as Waste Discharge Requirements specified in Order No. R4-2007-49.

<sup>6</sup> Department of Water Resources, *Watermaster Service in the West Coast Basin Los Angeles County*, July 2001 – 2008.

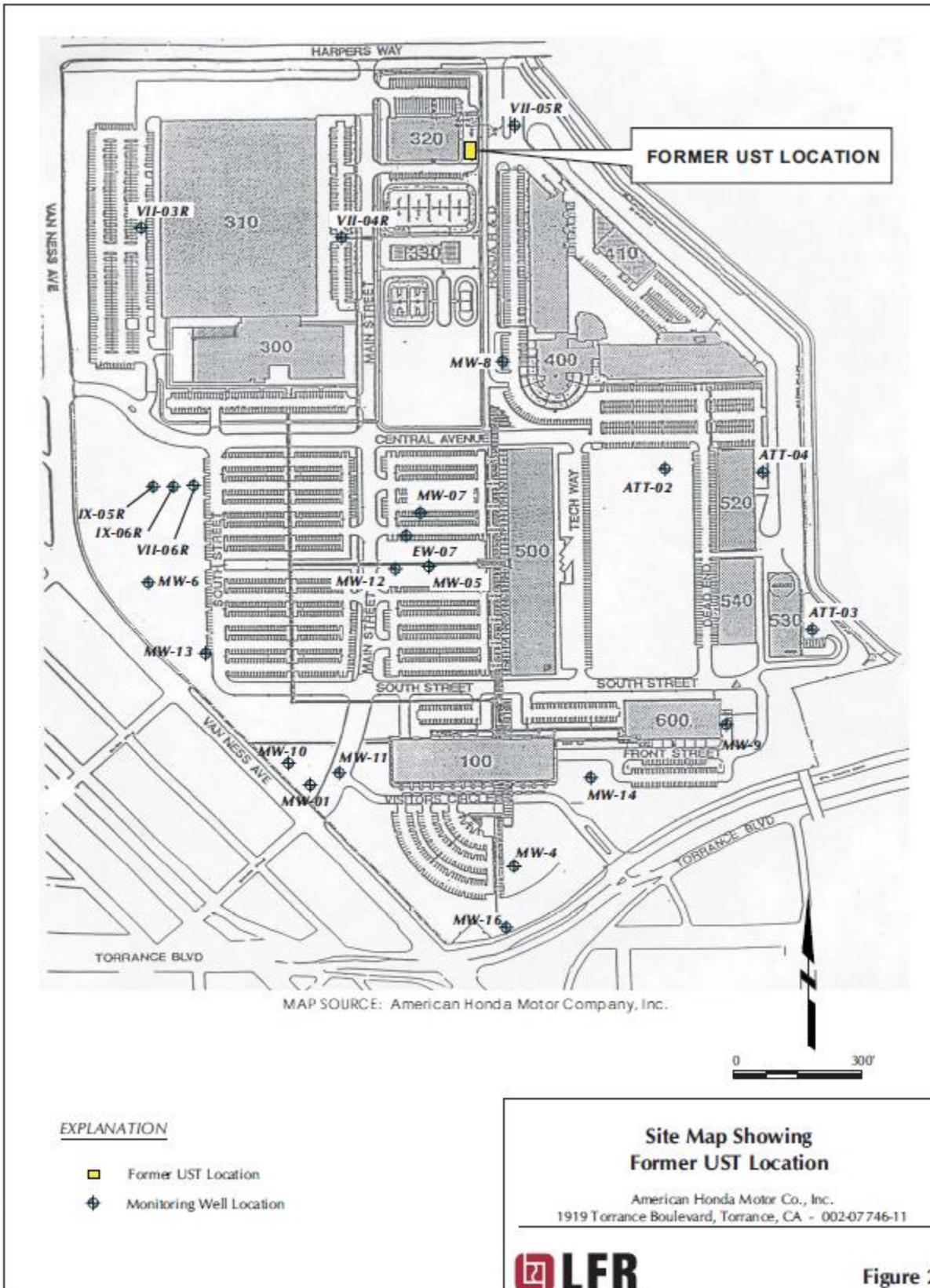
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Because the contaminant of concern is MTBE which has an R value <sup>7</sup> near to 1, the anticipated contaminant velocity should be very close to the groundwater velocity <sup>8</sup> and calculated to be 0.2 to 1.1 feet per day. Therefore, if the Petitioner's contribution of MTBE was the entire 470 µg/L reported in well LFMW-1, then MTBE concentrations should have reached the ExxonMobil Refinery monitor wells that surround the Petitioner's property in as little as 2.5 years. Because nearly all of the ExxonMobil Refinery monitor wells that surround the Petitioner's property have historically reported MTBE concentrations below 1.0 µg/L, it is reasonable to conclude that the MTBE groundwater plume is naturally attenuating to concentrations below 1.0 µg/L prior to reaching the surrounding ExxonMobil Refinery monitor wells. (See Figure 2)

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<sup>7</sup> Retardation (R) value is the velocity of groundwater/velocity of the contaminant.

<sup>8</sup> Groundwater velocity = (hydraulic conductivity × hydraulic gradient)/ porosity.



\*Monitoring Wells are ExxonMobil Monitoring Wells

