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**From:** Bolin, David <DBolin@ocwd.com>  
**Sent:** Friday, October 05, 2018 1:16 PM  
**To:** WB-USTClosuresComments  
**Cc:** Rajagopal, Shyamala (srajagopal@ochca.com); Higgins, Geniece  
**Subject:** Re Tustin Auto Wash (Orange County LOP Case #99UT049 - Opposition to Closure)

Orange County Water District (District) is responding to the State Water Resources Control Board (SWRCB) published a Notice of Opportunity for Public Comment concerning the ***Tustin Auto Wash site at 535 East Main Street in Tustin, California (Underground Storage Tank Case Closure Policy No. 14847; Orange County LOP - Case #: 99UT049)***. The following link provides the Notice of Opportunity for Public Comment:

[http://geotracker.waterboards.ca.gov/view\\_documents?global\\_id=T0605902351&enforcement\\_id=6365793](http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605902351&enforcement_id=6365793).

The District opposes closing the Tustin Auto Wash (site) at this time and is providing this response pursuant to the State Water Resources Control Board's Low-Threat Underground Storage Tank Closure Policy Resolution No. 2012-0016. The SWRCB Notice for Opportunity for Public Comment for the Tustin Auto Wash states a response date of October 5, 2018.

The Low Threat Closure Policy (LTCP) was applied to this site on about August 10, 2018, according to documentation in the Geotracker database. The LTCP checklist states that the site satisfies the policy general criteria and the media-specific criteria; and, therefore, is eligible for closure. However, the first media-specific criterion is whether the contaminant plume that exceeds water quality objectives is stable or decreasing in aerial extent, and meets all of the additional characteristics of one of the five listed classes, including the contaminant plume that exceeds water quality objectives is less than 100 feet in length. Based on data and information generated for this site and contained in the SWRCB's Geotracker database, however, the groundwater contamination that has emanated from the site has not been delineated laterally or vertically. Because the contamination has not been delineated, the contaminant plume cannot be said to be stable or decreasing in aerial extent. Therefore, Tustin Auto Wash does not meet the media-specific criterion for groundwater and is not eligible for closure under the LTCP.

Tustin Auto Wash Site Groundwater Contamination has NOT been Delineated:

One or more releases of petroleum volatile organic compounds (VOCs), namely gasoline, from the petroleum dispensing equipment at the site escaped any potential site containment system, leaked into the soil beneath the site, and migrated into groundwater. Methyl tertiary-butyl ether (MTBE) and Tertiary-butyl alcohol (TBA) were detected at up to 54,900 micrograms per liter (ug/L) (site well MW-2, 12/21/2006) and 78,500 ug/L (well MW-2, 6/17/2008), respectively.

Tustin Auto Wash drilled additional monitoring wells during various phases of environmental investigation. The wells were grouped into several saturated intervals, included the shallow zone – about 40 to 75 feet bgs; a medium zone – 95 to 98 feet bgs; and a deep zone – 115 to 118 feet bgs. Tustin Auto Wash measured groundwater levels and estimated groundwater flow directions for the three zones. The groundwater flow direction has varied some within all three zones. In the shallow zone, the flow direction was reported in 2012 to 2017 to the east-northeast, east-southeast, southeast, and south directions. Groundwater flow direction information was less available for the medium and deep zones. In the medium zone, the flow direction was reported in 2016 to 2017 to the south-southwest and southwest directions. In the deep zone, the flow direction was consistently reported in 2016 to 2017 to the southeast direction.

Site well MW-2, in which the highest contaminant concentrations were detected, is a 4-inch diameter well drilled to 75 feet below ground surface (bgs) and is screened from 45 to 75 feet bgs. Elevated MTBE (greater than 20,000 ug/L) and TBA (greater than 40,000 ug/L) concentrations were detected in additional shallow zone wells that were installed on site (i.e.: MW-3 and MW-10). However, no deeper wells were installed adjacent to these wells to delineate the vertical contamination in these locations.

There are two three-well clusters on site at which the well clusters consist of shallow, medium and deep wells: MW-5 in the upgradient north-center part of the site, and MW-6 in the downgradient direction on the west margin of the site in the southwest corner. MTBE and TBA were detected in well MW-5 at up to 113 ug/L and 97.8 ug/L, respectively; and MTBE was detected in MW-5M at 8.1 ug/L and MW-5D at 8.4 ug/L, respectively. However, the well location for the MW-5 well cluster is not in the core part of the plume and is not considered representative of the vertical delineation of the groundwater contamination.

MTBE and TBA were also detected in the MW-6 well cluster. MTBE was detected in MW-6 at up to 0.6 ug/L, in MW-6M at up to 643 ug/L, and in MW-6D at up to 212 ug/L, indicating a diving plume. TBA was detected at up to 21 ug/L in MW-6M. These detections indicate that MTBE and TBA were not delineated laterally or vertically on site and that MTBE and TBA migrated off site.

Off-site monitoring wells were installed within 150 feet of the site in an attempt to delineate groundwater contamination. Shallow zone monitoring wells were installed to the south and east. Medium and deep zone monitoring wells were installed to the west and southeast. MTBE and/or TBA was detected in several of the off-site wells, but infrequently and mostly at low concentrations, i.e.: MTBE up to 9.0 ug/L in MW-7, 5/6/2002; TBA up to 125 ug/L in MW-8, 12/8/2009. The off-site wells installed at the MW-7 and MW-8 locations, however, were only installed in the shallow zone. Deeper off-site wells were not installed adjacent to MW-7 or MW-8 to vertically delineate the MTBE contamination at these locations.

Wells MW-11M and MW-11D were installed approximately 120 feet west of the site presumably to address the MTBE and TBA contamination detected in the MW-6 cluster of wells. No contaminants were detected in the MW-11 wells. The absence of detections in the MW-11 wells indicates that the wells may not be in the proper location and/or deep enough to intersect the contaminant plume that passed through the MW-6 well cluster location and emanated from the site.

Although off-site groundwater investigation was conducted in an attempt to delineate lateral groundwater contamination from the site, and MTBE and TBA were detected sporadically in off-site wells, the off-site investigation is deemed insufficient to have provided adequate lateral and vertical contaminant delineation information for the off-site contamination. Because the MTBE and TBA have not been adequately delineated, the Tustin Auto Wash site fails to meet the necessary criteria for closure under the LTCP.

#### One or More Nearby Drinking Water Production Well are Vulnerable to Ground Surface Sources of VOCs:

The undelineated groundwater contamination has potentially impacted at least one large scale drinking water production well, Tustin Main Street Well No. 4 (T-MS4), located about 750 feet west of the site (05S/09W-16B07; 50 feet north of Main Street and 200 feet west of Centennial Way in the City of Tustin). MTBE was detected in T-MS4 at 0.04 ug/L on November 17, 2008. Well T-MS4 is an active, single casing well completed in 1999 to a depth of 900 feet bgs. The pump bowl is approximately 330 feet bgs, at the top of the well-screen interval, which is approximately 330 to 880 feet bgs. The production rate is about 300 gallons per minute (gpm). Petroleum VOCs have not been detected in T-MS4 since 2008; however, the 2008 MTBE detection indicates that well T-MS4 is vulnerable to VOCs that originate at nearby ground surface sources. Additional drinking water production wells (e.g.: T-MS3, approximately 1000 feet west of the site) are also at risk of impact from the Tustin Auto Wash groundwater contamination.

#### Conclusion:

One or more releases of petroleum VOCs MTBE and TBA from the Tustin Auto Wash site resulted in impacts to soil and groundwater beneath the site. MTBE and TBA were detected in progressively deeper zones beneath the site, but was not delineated vertically. MTBE and TBA were detected at elevated concentrations at the downgradient west site margin, indicating that the groundwater contaminant plume migrated off-site in at least the west direction. MTBE was detected in a large system production well T-MS4 approximately 750 feet west of the site. Based on this information, the District believes that off-site wells about 120 feet west of the site are not in a sufficient location or not at sufficient depths to detect the off-site contamination and that the contamination has not been adequately delineated off

site. Because MTBE groundwater contamination from the site has not been delineated, it cannot be stated that the site groundwater contamination is stable or decreasing in aerial extent. Therefore, the Tustin Auto Wash site does not meet the necessary requirements for closure under the LTCP.

Please contact me if you have any questions. Thank you.

David Bolin

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Principal Hydrogeologist



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