

March 16, 2017



Rita and Tony Sullins
Don Sul Inc.
187 North L Street
Livermore, CA 94550

Re: Transmittal Letter
Site Location: Arrow Rentals
187 North L Street, Livermore, CA 94550

Dear Ms Soo:

On behalf of Rita and Tony Sullins, Don Sul Inc., Ground Zero Analysis, Inc. (GZA) prepared the following letter that was sent to your office via electronic delivery per Alameda County's guidelines and uploaded into the CA State Water Resources Control Board's Geotracker database.

I declare under penalty of law that the information and/or recommendations contained in the above referenced document or report is true and correct to the best of my knowledge.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Rita Sullins". The signature is fluid and cursive.

Rita / Tony Sullins
Property Owner
Don Sul Inc.
187 North L Street
Livermore, CA 94550



1172 Kansas Avenue, Suite A
Modesto, CA 95351
209.522.4119 - PH
209.522.4227 - FAX
groundzeroanalysis.com

March 16, 2017

Ms. Kit Soo
Alameda County Dept. of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

RE: Report: Response to the ACDEH Letter dated December 14, 2016
Location: 187 North L Street, Livermore, CA 94550
(ACDEH Fuel Leak Case No. RO0000394)

Dear Ms. Soo:

Ground Zero Analysis, Inc. (Ground Zero) has prepared the following responses to the specific technical comments contained in your letter dated December 14, 2016.

ACDEH Technical Comment No. 1: Groundwater Monitoring, System Evaluation and Optimization Strategy

Technical Comment No. 1 requested evaluation of a number of items related to the plume of groundwater contamination. We have attempted to break our responses down to address the specific items mentioned in Technical Comment No. 1.

Evaluation of the Adequacy of the Groundwater Monitoring Network for Plume Definition

Ground Zero considers that the existing groundwater monitoring network adequately defines the plume. Each groundwater zone is discussed below:

Shallow Zone

Groundwater flow in the shallow zone has historically been predominantly toward the west-northwest. We consider plume definition to consist of non-detect or near non-detect concentrations of the SWRCB *LTCP* groundwater contaminants of concern ("COCs", benzene, MTBE). The limits of the shallow zone plume are defined by MW-106 to the northeast, which is cross-gradient of the release areas and is non-detect for the COCs. Monitoring well W-3s defines the down-gradient edge of the plume, which most recently was non-detect for the COCs and has reported a positive oxidation-reduction potential (ORP) indicative of an environment conducive to aerobic bacterial activity. The plume is further defined by W-Bs to the north, which is

down/cross-gradient and near non-detect for groundwater COCs. Former well W-2 (southwestern corner) reported non-detect concentrations of the COCs during the last sampling event in 1995. Additionally, a decreasing trend of contaminant concentrations with time on the leading edge of the plume is indicated by historical data from wells W-3 and W-3s. Former monitoring well W-C was located upgradient of the release location and was non-detect for benzene when sampled in 1990. We see no need to establish a replacement upgradient well.

The predominant west-northwest groundwater gradient and decreasing groundwater contaminant trend on the edge of the plume suggest no further definition of the shallow plume is needed.

Intermediate Zone

Groundwater flow in the intermediate zone has also been predominantly to the west-northwest. The down-gradient limit of the intermediate zone plume is defined by monitoring wells MW-9 and MW-10. Both wells are currently either non-detect (MW-10) or near non-detect (MW-9) for concentrations of the contaminants of concern. Ground Zero concludes that the recent increase in benzene levels in MW-9 is due to groundwater level fluctuations, as discussed in the *Second Semi-Annual 2016 Groundwater Monitoring & Remediation Effectiveness* report. Further sampling of MW-9 will better determine the contaminant concentration trend near the limits of the intermediate zone plume. Cross-gradient well MW-206 has contained only trace concentrations of the COCs since 2014 which indicates that the lateral configuration of the plume is essentially consistent with the configuration of the shallow zone plume.

Ground Zero concludes it is reasonable to extrapolate the edge of the intermediate zone plume downgradient of well MW-9 based on knowledge of plume behavior and the fact that groundwater chemistry in MW-9 and MW-10 is oxidizing (positive ORP). In any event there is no potential on-site location for an additional well down-gradient of MW-9. Further down-gradient is Union Pacific Railroad property and experience at other sites indicates that gaining access to UPRR property for drilling is a practical impossibility.

Deep & Deepest Zones

In the deep zones we rely on normal plume configuration and behavior which predicts both decreasing concentrations and decreasing lateral extent with depth. This is verified by the vertical concentration profiles shown in the CMT wells. So, as a practical matter we can use our professional judgment to predict that the lateral extent of the plume at these depths does not exceed the extent in the shallower zones and therefore additional monitoring points are not necessary.

A well construction table with screen intervals, depth-to-water measurements and comments regarding the condition of each well were included in the *Second Semi-Annual 2016 Groundwater Monitoring & Remediation Effectiveness* report.

Monitoring Well Access & Rehabilitation

We will attempt to remove the obstruction in CMT well MW-404 and again attempt to gain access to monitoring well W-3. We have previously attempted to have Signature Properties (owner of the property to the south and west) sign an access agreement to allow sampling of W-3 but were denied.

Plume Length with Respect to Distance from Water Supply Wells

In our August 29, 2016 *Well Receptor* Report we indicated that the Zone 7 Water Agency listed a supply well approximately 600 feet to the north of the site (3S/2E 8J4) and another well with no listed address and unknown use (3S/2E 8K1). We since expanded our search radius and the latest information from the Zone 7 Water Agency and DWR indicates that well 3S/2E 8J4 (located northeast of the Site) was destroyed in 1988. The nearest existing water supply well is 3S/2E 8J3 at 394 N. Livermore Avenue. This location is approximately 1,200 feet northeast (cross-gradient) of the edge of the plume of contamination. Zone 7 also lists the well with unknown use, status or construction at the latitude and longitude of D&M Auto Parts, 1815 Chestnut Street, which is approximately 570 feet northwest (down-gradient) of the plume. However, D&M Auto Parts informs us that no well exists on the property and water is provided by the City of Livermore. A Google Earth drive-by did not show any structures that might indicate a well is present.

There are no surface water bodies within 1,000 feet or more of the contaminant plume.

Verification Sampling near Dry Shallow Zone CMT Wells Screened at 27 and 30 Feet

Soil sampling during the drilling of these wells showed that contamination of significance only occurred at depths below the screened intervals of these wells. Verification soil sampling is unnecessary and in any event, in the absence of free product, the *LTCP* does not consider or address contaminant concentrations in soil beneath the depth of 10 feet.

If groundwater levels rise sufficiently, Ground Zero will collect samples from MW-4 through MW-8.

System Evaluation and Optimization Strategy

Operation of the remediation system to date has resulted in significant decreases in contaminant concentrations in the core of the plume. Importantly, no appreciable rebound in concentrations was observed during the December 2016 groundwater sampling event which followed over 4 months of system shutdown. We recommend a resumption of operation and are in the process of evaluating the potential benefit and feasibility of installing an additional dual phase extraction well in the vicinity of CMT well MW-7.

ACDEH Technical Comment No. 2: Consideration to the Low Threat Closure Policy (LTCP) Requirements

As requested, residential and commercial screening levels have been added to the appropriate data tables.


ACDEH Technical Comment No. 3: Response to Previous Comments Outlined in the Email Directive, dated July 29, 2016

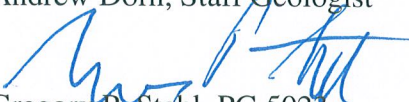
Respecting onsite vapor intrusion potential, this will be evaluated in accordance with the *LTCP* criteria at such time as we believe appropriate based on overall site conditions. Please note that

the SWRCB in their *Review Summary Report – Additional Work, Fifth Review – September 2016* concluded that the site meets *LTCP vapor intrusion Criterion 2a by Scenario 1*.

We appreciate your comments and look forward to working with you to move this case to closure. If you have any questions, please do not hesitate to call me at (209) 522-4119.

Respectfully,
Ground Zero Analysis, Inc.


Andrew Dorn, Staff Geologist


Gregory P. Stahl, PG 5023
CA Certified Hydrogeologist No. 264



cc: Tony and Rita Sullins