

RESPONSE TO COMMENTS FROM LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD FOR THE PROPOSED CLOSURE OF BURGESS TRANSPORTATION

WASTE DISCHARGE SECTION

1. The Los Angeles Regional Water Quality Control Board (Regional Water Board) states that the groundwater wells located outside of the horizontal plume area (120x40) should not be considered boundary wells capable of defining the horizontal plume because they are located outside of the horizontal plume area and are (considered beyond the reach of groundwater) passing through the impacted zone due to potential geologic barriers (the site is in a hilly area.)

RESPONSE: We concur that the wells are located outside the horizontal plume area. Boundary wells are by definition located outside the plume area and the eight boundary wells at the site define the small petroleum hydrocarbon plume extremely well. Additionally USGS topographic maps and Google Street View photography indicates that the area surrounding the site is very flat (approximately 0.64 foot change in elevation) across the site.

2. The Regional Water Board states that the soil concentration identified in soil boring B47 indicates that the plume has migrated further downgradient toward the south and may have passed the property boundary.

RESPONSE: Monitoring wells MW-5 and MW-10 are both located south of boring B47. Only trace concentrations of TPHg were detected in MW-5 and no petroleum hydrocarbons were detected above detection limits in MW-10. Furthermore the soil sample in question does not exceed requirements of the Low-Threat Underground Storage Tank Case Closure Policy (Policy.)

CLOSURE SUMMARY SECTION

3. The Regional Water Board states that Objection to Closure No. 3, "The dissolved hydrocarbon fluctuations are too large to identify stable/decreasing plume", shown on page 2 of the UST Case Closure Summary (Closure Summary) was not included in the Regional Water Board response letter, dated February 17, 2012.

RESPONSE: Closure Summaries do not specifically reference any particular letter or source for objections. The Objections to Closure section of the closure summary may include any unresolved objections to case closure communicated verbally or in writing by the lead agency. Objection to Closure No. 3 was communicated verbally by Regional Water Board staff during the Conceptual Site Model meeting held on June 28, 2012.

4. The Regional Water Board states that the groundwater plume is not stable.

RESPONSE: The Policy defines stable contaminate plume as being stable to decreasing in aerial extent. While the concentrations may fluctuate in one well contained within the plume, the 8 boundary wells adequately define the 18 year old groundwater plume within 100 feet of the source area, which demonstrates that the plume has not migrated or

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increased in areal extent. Therefore, the contaminant mass has expanded to its maximum extent where attenuation exceeds migration, thus, the site conditions meet the Policy definition of a stable plume.

5. The Regional Water Board staff states that free product has not been removed to the maximum extent practicable which continues to be a secondary source.

RESPONSE: Free product, near the source area, has been observed five times in eleven years. During that time, twice has the thickness of the free product been identified greater than a sheen. Demonstrated low-permeable lithology makes the site not conducive to extraction or in-situ injection remedial technologies. Also considering the intermittent nature of the free product observances, further free product removal would not be practicable.

6. The Regional Water Board states that to the extent that active remediation is not practical or too expensive the use of natural attenuation is appropriate.

RESPONSE: Continued monitored natural attenuation would not change the conceptual site model.

PROPOSED ORDER SECTION

7. The Regional Water Board again states that the secondary source has not been removed and groundwater is not stable.

RESPONSE: These comments are addressed above.

8. The Regional Water Board recommends additional assessment south of boring B47.

RESPONSE: As stated above soil samples were collected approximately 15 to 30 feet south of boring B47 during the installation of monitoring wells MW-5 and MW-10. Only trace concentrations were identified in MW-5 and none were detected in MW-10.

9. The Regional Water Board recommends continued and more frequent groundwater monitoring.

RESPONSE: Additional Groundwater monitoring will not change the conceptual site model.

10. The Regional Water Board recommends injecting oxygen releasing compounds or other chemicals into the main plume body (around 120'x40'x10').

RESPONSE: Injection of oxygen releasing compounds or other chemicals would have a very low radius of influence due to low permeability subsurface materials and would be unsuccessful. Additionally, the site does not pose a threat to human health. Therefore injection of oxygen would not be feasible and additional remedial actions are unnecessary to protect human health and the environment.

Los Angeles Regional Water Quality Control Board

June 27, 2013

Ms. Vivian Gomez-Latino
State Water Resources Control Board
1001 I Street, P.O. Box 2231
Sacramento, CA 95812

**COMMENTS ON PROPOSED UNDERGROUND STORAGE TANK CASE CLOSURE
MR. LEE NELSON (PETITIONER)
BURGESS TRANSPORTATION
20825 CURRIER ROAD, LOS ANGELES COUNTY
(FILE NO. R-20497, CLEANUP FUND NO. 15629, GLOBAL ID T0603705309)**

Dear Ms. Gomez-Latino:

On April 26, 2013, the State Water Resources Control Board (State Water Board) gave notice (Notice) that it will accept comments on the proposed request for underground storage tank (UST) case closure for the subject site (Site). The Notice includes a draft Order and a Case Closure Summary (Summary) that contains information that forms the basis for the State Water Board UST Cleanup Unit staff's (State Water Board staff) recommendation to the State Water Board Executive Director for UST case closure. This letter contains the Los Angeles Regional Water Quality Control Board's (Regional Board's) response to the proposed case closure.

Brief History of the Case

The following list summarizes the milestone historical events in a chronological order:

- Three fuel USTs and one waste oil UST in use for about 25 years were pulled from the Site in March 1994.
- Soil and groundwater assessment was initiated in June 2001. Significant soil and groundwater contamination was detected in the capillary zone and beneath the groundwater table (e.g.; soil sample from 26' below ground surface [bgs] at B-3 location: 11 ppm TPHg & 78,600 ppb BTEX; groundwater sample from well MW3: 250,000 µg/Kg TPHg & 72,400 µg/Kg BTEX).
- 1.2" of free product was detected in the groundwater monitoring well MW3 in June 2002.
- A sheen of free product was detected in the groundwater monitoring well MW3 in December 2002.
- Quarterly groundwater monitoring conducted from June 2001 to December 2009 indicated that the groundwater plumes had been stable at significant high levels for a period of about 8 years (e.g., groundwater sample from well MW3: ~200,000 µg/Kg for TPHg & ~70,000 µg/Kg for BTEX).
- Monitoring frequency changed from quarterly to semiannually in 2010. The trend of the plume started moving upward in April 2010, and stabilized in October 2010 at a level

MARIA MEHRANIAN, CHAIR | SAM UNGER, EXECUTIVE OFFICER

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- three times as the level prior to 2009 (e.g., groundwater sample from the groundwater monitoring well MW3: ~600,000 µg/Kg for TPHg & ~200,000 µg/Kg for BTEX).
- 4" of free product was detected in the groundwater monitoring well SVE2 in January 2011.
 - The Petitioner submitted a closure request to the Regional Board in May 2011.
 - The Petitioner submitted a closure petition (Petition) to the State Water Board in September 2011.
 - The Regional Board staff submitted to the State Water Board their objections (Objections) to the Petition on February 17, 2012.
 - One monitoring event was conducted on February 27, 2012, one year after the previous event. A sheen of free product was detected in the groundwater monitoring well MW3.
 - The State Board Low-Threat Underground Storage Tank Closure Policy became effective in August 2012.
 - One monitoring event was conducted on February 27, 2013, one year after the previous event.
 - The State Water Board issued the Notice on April 26, 2013, recommending the Site be closed under the Policy.

A Short Summary of Waste Discharges:

The soil and groundwater assessment conducted at the Site since June 2001 has generated sufficient data to delineate a plume that exist in capillary zone and below the groundwater table which can be summarized as the followings:

- The horizontal shape of the plume at around 25' bgs is of an elongated rectangle—approximately 120 feet in north-south direction and 40 feet in east-west direction.
- Near the source area, the plume has a wider and deeper areal extent such that a second aquifer was impacted (e.g., from 50' bgs at boring location B44: 2,650 ppm TPHg & 516,800 ppb BTEX).
- The horizontal configuration of the plume, rectangular on a north-south axis instead of elliptic on a northeast-southwest axis, indicates the groundwater beneath the Site has a preferential pathway that is from north to south rather than northeast to southwest as calculated from measured groundwater elevation.
- The two groundwater monitoring wells (MW3 & SVE2) that have free product detected in the past are located along the north-south axis of the plume and down-gradient of former UST location.
- The groundwater monitoring wells that are located outside of the horizontal plume area (120'x40') are considered beyond the reach of the groundwater passing through the impacted zone due to potential geological barriers blocking it (the Site is within a hilly area) and thus should not be considered as boundary wells capable of defining the plume.
- The southern-most soil boring (B47) detected significant wastes from 25' to 35' bgs (e.g., at 25' bgs: 3,850 ppm TPHg & 695,400 ppb BTEX). This indicates that the plume has migrated further down-gradient toward the south and may have passed the property boundary.

Regional Board Comments on the State Water Board Summary

On May 1, 2012, the State Water Board adopted Resolution No. 2012-0016: Water Quality Control Policy For Low-Threat Underground Storage Tank Case Closure (Closure Policy). The

Closure Policy became effective August 17, 2012. The Regional Board, on February 2012, provided the State Water Board its Objections to the Petition before the Closure Policy became effective. The Regional Board continues to object to case closure because, as explained below, such action is not consistent with the Closure Policy.

1. On Page 2 of the Summary, State Water Board staff refer to a February 17, 2012 letter that it attributed to the Regional Board third Objection as "The dissolved hydrocarbon fluctuations are too large to identify a stable/decreasing trend."

The Regional Board's letter did not include the comment referenced by the State Water Board staff.

2. On page 5 of the Summary, State Water Board staff indicate that the plume that exceeds water quality objectives (WQOs) is stable or decreasing in areal extent.

The Regional Board disagrees with this conclusion. The 3-fold increase in the concentrations of TPHg and BTEX in groundwater monitoring wells inside the plumes since early 2010, and the recent detection of free product in groundwater monitoring wells SVE2 (4" in January 2011) and MW3 (seen in February 2012) are affirmative indications that the plumes are far from stable. Additionally, on page 2, State Water Board staff recognized the recent increases in concentration, but stipulated such recent increases should be excluded so that the plume appears to be stable/decreasing.

3. On page 2 of the Summary, State Water Board staff indicate that the Site meets all eight general criteria; and that the Site also meets media-specific criteria for groundwater (class 5), for vapor intrusion to indoor air (scenario 4) and for direct contact and outdoor air exposure (Table 1) consistent with the Closure Policy.

The Regional Board disagrees with these conclusions. The Site does not appear to comply with general criteria d and f. It is not clear from the data that free product has been removed to the maximum extent practicable and it does appear that free product continues to be a secondary source of discharges. Presently, the significant increasing trend of groundwater plumes indicates the existence of the secondary source which cannot exclude the contribution from the free product beneath the site. Natural attenuation by favorable geological conditions or other processes should be documented. Further, the Site does not appear to comply with media-specific criteria for groundwater either, due to the fact that the trend of the plume has not yet been stabilized by natural attenuation.

4. On Page 3, State Water Board staff acknowledge that the secondary source has not yet been removed, but object to additional active remediation "due to significant effort and cost and may compromise structures on the Site to remediate the plume."

The Regional Board staff agrees that to the extent that active remediation is not practical or too expensive the use of natural attenuation is appropriate if it is in fact occurring.

Regional Board Staff's Comments on the Proposed Closure Order

When any of the criteria of the Closure Policy is not met, it should be so stated first, and justifications for making an exception to such criteria should be provided in order to properly close an UST case under the Closure Policy. It appears inconsistent with the Closure Policy for

the State Water Board staff to recommend closure where there is the continuing presence of an unmitigated secondary source that is manifested by an increasing trend and where the data indicates an increasing trend showing that the site does not meet the medium-specific groundwater criteria requiring a groundwater plume be stabilized before closure.

Furthermore, the State Water Board and the petitioner justify closure of the site based on the concern of the high cost and intrusive nature of further remediation (as by excavation) for removing the secondary source. Continuing groundwater monitoring to establish the trend would not cause such concerns. Based on the Regional Board staff's experiences, it normally takes years of post-remediation groundwater monitoring, quarterly or semiannually, to establish the stability of a plume to ensure that a secondary source has been removed if it was not remediated to the extent possible by active remedial action previously. The requirement of post-remediation monitoring to establish the trend is required for every UST site, and justification for making an exception is very rare, as its cost is the least expensive and operation least intrusive.


The Regional Board staff recommend that rather than close the site, the Petitioner should be required to: 1) conduct additional assessment directly south of B-47 to define the down-gradient extent of the plume, and 2) continue groundwater monitoring on a more frequent basis (than annually) until it is demonstrated that the plumes are stable and decreasing.

The Regional Board staff also recommend considering injecting oxygen releasing compounds or other chemicals into the main plume body (around 120'x40'x10') to speed up the natural attenuation and thus shorten the required monitoring duration. This approach would not incur the same concerns as other approaches would.

In summary, the Regional Board staff does not concur with the State Water Board staff's recommendation that the Site meets the Closure Policy criteria, and recommend that the Petitioner's request for closure be denied.

If you have any questions, please contact Mr. Noman Chowdhury at (213) 576-6704 or nchowdhury, Mr. Gregg Kwey at (213) 576-6702 or gkwey@waterboards.ca.gov, or Dr. Yue Rong at (213) 576-6710 or yrong@waterboards.ca.gov.

Sincerely,


Samuel Unger, P.E.
Executive Officer

CC List:

Ms. Kathy Jundt, State Water Resources Control Board, UST Cleanup Fund
Mr. Kevin L. Graves, State Water Resources Control Board
Mr. George Lockwood, State Water Resources Control Board
Ms. Jennifer L. Fordyce, State Water Resources Control Board
Ms. Frances McChesney, State Water Resources Control Board
Mr. Samuel Unger, Los Angeles Regional Water Quality Control Board
Ms. Paula Rasmussen, Los Angeles Regional Water Quality Control Board
Dr. Yue Rong, Los Angeles Regional Water Quality Control Board
Mr. Gregg Kwey, Los Angeles Regional Water Quality Control Board
Mr. Noman Chowdhury, Los Angeles Regional Water Quality Control Board
Mr. Tim Smith, LACoDPW, Environmental Programs Division, Underground Tanks
Mr. Michaels Holmes, Walnut Valley Water District
Ms. Phuong Ly, Water Replenishment District of Southern California
Mr. Richard Lavin, Los Angeles County Department of Public Health
Mr. F. Edward Reynolds, The Reynolds Group
Mr. Alexander Fuan, The Reynolds Group
Mr. Lee Nelson
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**California Regional Water Quality Control Board
Los Angeles Region**



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Secretary for
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DIVISION OF WATER QUALITY

February 17, 2012

Mr. Kevin L. Graves
Manager, Underground Storage Tank Program
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

**REGIONAL WATER BOARD RESPONSE TO STATE WATER BOARD CLOSURE
PETITION
BURGESS TRANSPORTATION
20825 CURRIER ROAD, WALNUT
(FILE NO. R-20497, CLEANUP FUND NO. 15629, GLOBAL ID T0603705309)**

Dear Mr. Graves:

On September 12, 2011, the Reynold Group, on behalf of Burgess Transportation (hereinafter the Petitioner), filed a petition with the State Water Resources Control Board (State Water Board) on requesting case closure for the above-referenced site. The California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) received the letter from the State Water Board dated September 29, 2011, regarding the subject petition. The due date for the Regional Water Board's response was extended to February 19, 2012. This letter contains the Regional Water Board's response.

I. Administrative Records for Petition Review

Enclosed please find a compact disc (CD) containing a copy in PDF format of the technical reports and correspondence contained in the case file. Records are also available on Geotracker.

II. List of Interested Parties

As requested, enclosed is a list of persons known to have an interest in the subject matter of the petition.

III. Regional Board Staff Response

(1) Brief History of the Case

The site is located at 20825 Currier Road, Walnut, which is currently leased by Burgess Transportation for truck parking and repair. Four underground storage tanks (USTs) previously used on-site were removed in August 1994.

Several phases of environmental investigations, commencing in 1994, have identified both soil and groundwater impacts:

California Environmental Protection Agency

- In soil, the maximum concentrations of total petroleum hydrocarbons as gasoline (TPH_g), total petroleum hydrocarbons as diesel (TPH_d), benzene, toluene, ethylbenzene, and xylenes were up to 10,300 milligrams per kilogram (mg/kg), 1,240 mg/kg, 99.7 mg/kg, 4,230 mg/kg, 206 mg/kg, and 8,910 mg/kg, respectively.
- Free-product was first identified in MW-3 in June 2002.
- In groundwater, maximum concentrations of TPH_g, benzene, toluene, ethylbenzene, and xylenes detected in January 2011 were 601,294 micrograms per liter (µg/L), 42,565 µg/L, 49,650.1 µg/L, 10,238.9 µg/L, and 54,238.1 µg/L, respectively.

Remediation at the site consisted of pilot tests for soil vapor extraction and air sparging, and a dual phase high vacuum extraction, resulting in the removal of approximately 733 pounds of petroleum hydrocarbons and 7,795 gallons of water from June 28 to July 2, 2004.

The Petitioner's September 12, 2011 request for case closure was based on the following justification:

- The source has been removed;
- Soils collected in 2010 are clean;
- Vapor samples collected in 2010 were determined not to be a health risk;
- Gasoline concentrations in groundwater are stable; and
- Free-product is no longer present in groundwater.

(2) Regional Water Board's Position

We have reviewed the information contained in our case file and find the Petitioner's justification cannot be supported for the following reasons:

- An amount of 0.29 foot free-product was detected in well SVE2 on January 14, 2011.
- Groundwater monitoring data clearly indicate that the dissolved hydrocarbons in wells MW3, MW4 and SVE1 have all shown an increasing trend.
- The above-mentioned facts of free product in well SVE2 and the increasing trends in wells MW3, MW4 and SVE1 indicate the potential source contributing to the identified groundwater contamination has not been successfully removed.

As a result, the Regional Water Board cannot grant the low-risk case closure to the site at this time.


Mr. Kevin L. Graves

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February 17, 2012

If you have any questions, please contact Mr. Noman Chowdhury at (213) 576-6704 or nchowdhury, Mr. Gregg Kwey at (213) 576-6702 or gkwey@waterboards.ca.gov, or Dr. Yue Rong at (213) 576-6710 or yrong@waterboards.ca.gov.

Sincerely,


Samuel Unger, P.E.
Executive Officer

Enclosure: 1. PDF copy of Administrative Records
2. Revised List of Interested Parties

Cc List (w/o enclosure):

Ms. Kathy Jundt, State Water Resources Control Board, UST Cleanup Fund
Mr. George Lockwood, State Water Resources Control Board
Ms. Jennifer L. Fordyce, State Water Resources Control Board
Ms. Frances McChesney, State Water Resources Control Board
Ms. Sarah Olinger, State Water Resources Control Board
Ms. Paula Rasmussen, Los Angeles Regional Water Quality Control Board
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