



43885 SOUTH GRIMMER BOULEVARD • P.O. BOX 5110, FREMONT, CALIFORNIA 94537-5110
(510) 668-4200 • FAX (510) 770-1793 • www.acwd.org

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September 9, 2013

Mr. Pete Mizera
State Water Resources Control Board
1001 I Street, 16th Floor
Sacramento, CA 95814

Dear Mr. Mizera:

Subject: Comment Letter - Guthmiller Trucking, Inc. Case Closure Summary

The Alameda County Water District (ACWD) thanks you for the opportunity to comment on the State Water Resources Control Board's (State Board) Underground Storage Tank Cleanup Fund's (Fund) case closure recommendation for Guthmiller Trucking, Inc. (Duncan & Sons), 30700 Dyer Street, Union City. ACWD has reviewed the Fund's "UST Case Closure Review Summary Report" (Summary Report) for the site (Claim No. 1251) and does not agree with the Fund Manager's determination that this case is ready for closure at this time.

ACWD has reviewed the site pursuant to the State Board's "Low-Threat Underground Storage Tank Case Closure Policy (Policy)," and has determined that this site does not meet the general or media-specific criteria for groundwater, petroleum vapor intrusion to indoor air, and direct contact and outdoor air exposure. Specifically, as summarized in Attachment 1, the secondary source has not been removed to the extent practicable; a conceptual site model that assesses the nature, extent, and mobility of the release has not been fully developed; and the contaminant plume that exceeds water quality objectives is not stable or decreasing in areal extent.

ACWD has also reviewed the Fund's Summary Report and ACWD has identified numerous errors, omissions, and incorrect statements (see Attachment 2) regarding the investigation and cleanup activities conducted at the site to date, which is critical since the Fund states that the Summary Report "forms the basis for the UST Cleanup Fund Manager's determination that case closure is appropriate." These inaccuracies may have partially resulted from the Fund's reliance on data and reports in Geotracker, which only includes data and reports generated since 2005. However, it should be noted that ACWD provided electronic copies of all reports and correspondence for the subject site to Fund staff in February 2013.

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In summary, ACWD recommends that the State Board revise the Summary Report to state that case closure is not appropriate at this time and require the responsible parties to perform additional investigation and cleanup, as appropriate, to meet the Low-Threat Closure Policy criteria.

If you have any questions or wish to discuss the site further, please contact Thomas Berkins, the Groundwater Protection Program Coordinator, at (510) 668-4442.

Sincerely,



Steven D. Inn
Groundwater Resources Manager

tb/tf

Attachment 1: ACWD's Low-Threat Closure Policy Review

Attachment 2: Case Closure Review Summary Report Comments

By e-mail

cc: Thomas Berkins, ACWD

Cherie McCaulou, Regional Water Quality Control Board

ATTACHMENT 1
ACWD'S LOW-THREAT CLOSURE POLICY REVIEW
Guthmiller Trucking, Inc. (Duncan & Sons)
30700 Dyer Street, Union City (Claim No. 1251)

ACWD has reviewed the subject site pursuant to the State Board's "Low-Threat Underground Storage Tank Case Closure Policy (Policy)," and has determined that this site does not meet the general or media-specific criteria for groundwater, petroleum vapor intrusion to indoor air, and direct contact and outdoor air exposure. Specifically, the secondary source has not been removed to the extent practicable; a conceptual site model that assesses the nature, extent, and mobility of the release has not been fully developed; and the contaminant plume that exceeds water quality objectives is not stable or decreasing in areal extent. The following are the impediments to closure per the Policy:

1. General Criteria (f) "Secondary source has been removed to the extent practicable"

According to the Policy, General Criteria (f): "'Secondary Source' is defined as petroleum-impacted soil or groundwater located at or immediately beneath the point of release from the primary source. Unless site attributes prevent secondary source removal (e.g., physical or infrastructural constraints exist whose removal or relocation would be technically or economically infeasible), petroleum-release sites are **required** to undergo secondary source removal to the extent practicable as described within." During the removal of ten fuel USTs (six 8,000-gallon and four 10,000-gallon) in September 1986, confirmation soil samples collected from the sidewalls of the UST pit (groundwater encountered at 7 feet below grade) documented TPH-gasoline (TPH-g) and benzene concentrations ranging from 500 to 3,100 milligrams per kilogram (mg/kg) and 3.6 to 17 mg/kg, respectively, in nine of 10 sidewall samples. It should also be noted that confirmation soil samples were only collected from two of the four sidewalls (north and south). No attempt was made to further excavate or remediate the remaining soil contamination in this area, and the excavation was backfilled with imported fill and "treated" soils that had been excavated during removal of the USTs.

Following removal of the USTs, in November 1986, five monitoring wells (labeled N, E, S, SW, and W) were installed surrounding the UST pit at lateral distances ranging from 5 to 25 feet from the excavation. These five wells were subsequently re-labeled MW-1 through MW-5, respectively. Elevated concentrations of TPH-g (580 to 1,300 mg/kg) and benzene (2.4 to 9.2 mg/kg), as well as petroleum hydrocarbon odors, were detected in soil samples collected from the wells installed on three of four sides of the UST pit (wells MW-1, MW-2, and MW-3).

In August 1996, the RP proposed soil excavation in the vicinity of the tank farm in order to remove the elevated concentrations of petroleum hydrocarbons remaining in soil; however, the recommended soil excavation cleanup was never implemented because Fund staff overseeing the site at that time would not issue a pre-approval for this work. Therefore, the recommended source removal cleanup was never implemented. No physical or infrastructural constraints existed at this location in 1996 that would have made secondary source removal technically or economically infeasible, and the area is still accessible (beneath an existing parking lot). Based on the above, the secondary source has not been removed to the extent practicable and elevated concentrations of petroleum hydrocarbons remain in soil and groundwater beneath the site.

It is also important to note that elevated concentrations of petroleum hydrocarbons were detected in groundwater in an area located to the west of the former USTs (sample point HP-17), which possibly indicates that a separate source may be present on-site that has not been properly investigated or remediated.

2. General Criteria (e) “A conceptual site model that assesses the nature, extent, and mobility of the release has been developed”

This site does not meet the Policy’s General Criteria (e), which requires a Conceptual Site Model (CSM) that assesses the nature, extent, and mobility of the release. The CSM is required to identify all confirmed and potential contaminant receptors (including water supply wells, surface water bodies, structures and their inhabitants). The goal of this criterion is to identify potential threats to these receptors and collect supporting data to ensure the proper protection of these receptors from the contamination being left behind. A CSM has never been prepared and submitted for this site, nor has the supporting data and analysis used to develop a CSM been submitted in multiple reports. The following is a summary of the remaining items that need to be properly assessed as part of the CSM:

First, an updated well survey should be performed to identify the presence of any water supply wells in the vicinity of the site. The Fund’s 2nd 5-Year Review Summary stated that “there are no existing water supply wells, surface waters or other receptors threatened by the remaining concentrations in soil or groundwater.” However, Section VII, “Sensitive Receptor Survey” of the 2nd 5-Year Review Summary refers to a “July 1999” survey (Ref 1), which does not exist. A “well survey” conducted for the site in 1996 (see Report of Soil and Groundwater Investigation dated March 18, 1996) identified the presence of “two irrigation/domestic water supply wells located on the adjacent parcel,” which were reportedly located approximately 300 – 500 feet from the former UST tank farm. Therefore, we recommend that an updated well survey be performed to verify the status of these wells, and any other wells that may be located in close proximity to the site. The proper identification of all water supply wells surrounding this site is required not only as part of the CSM, but is also critical for complying with the Groundwater-Specific Criteria of the Policy, which specifies minimum distance requirements from an existing plume to nearby water wells. In addition, it appears that a survey to identify other sensitive receptors, including surface water bodies, was never conducted.

Second, the lateral and vertical extent of groundwater contamination has not been defined. The lateral extent of groundwater contamination has not yet been defined down-gradient to the west, and at this point it is not possible to conclude whether the contamination has left the property. Elevated concentrations of petroleum hydrocarbons (17,000 - 30,000 ppb of TPH-g, and 1,200 ppb of benzene) were detected in groundwater samples collected from monitoring well MW-10 in March and June 1998; however, no further samples were collected from this well prior to its destruction in October 1998 due to site construction. In August 2007, a grab groundwater sample collected from boring HP-17, which is located approximately 40 feet down-gradient (west) of former well MW-10, documented 10,000 ppb of TPH-g. Benzene was “not detected” in the sample collected from HP-17; however, the

detection limit for this sample (<50 ppb) greatly exceeds the water quality objective for benzene of 1 ppb. No further groundwater investigation has been conducted in the vicinity of, or down-gradient of, former monitoring well MW-10 or borehole HP-17 to determine the lateral extent of contamination. ACWD has made repeated requests to the RPs for the past several years to further define the extent of contamination; however, two named RPs have claimed a lack of funds as a reason to not continue work, and a third named RP (property owner) has claimed they are not responsible for performing the requested work.

In order to adequately characterize the extent of petroleum hydrocarbons in shallow groundwater in the vicinity of former well MW-10/boring HP-17, an additional monitoring well should be installed at this location. In addition, the lateral extent of groundwater contamination in the shallow zone needs to be further defined down-gradient (west) of this area. This could be accomplished by the installation of additional monitoring well(s) to the west of boring HP-17, or by first collecting grab groundwater samples from direct-push borings, followed by the installation of monitoring well(s), as appropriate.

With regards to defining the vertical extent of groundwater contamination, no groundwater samples have been collected to date beneath the impacted shallow aquifer zone to determine whether the deeper drinking water aquifer has been impacted. All of the monitoring wells installed to date are completed in the shallow zone aquifer, and no deeper grab groundwater samples have been collected. At a minimum, deeper groundwater samples should be collected in the vicinity of monitoring well MW-8R and former monitoring well MW-10/boring HP-17. This could be accomplished by the installation of monitoring wells with conductor casings, or by first collecting grab groundwater samples from direct-push borings, followed by the installation of deeper monitoring wells, as needed.

Third, the stability of the plume is unknown. As stated above, the current concentrations of petroleum hydrocarbons remaining in groundwater are unknown since semiannual sampling of the monitoring wells has not been conducted since June 2009. However, increasing concentrations of TPH-g and benzene were observed in the two most recent groundwater samples collected from well MW-8R in 2008 and 2009, which is illustrated in the Fund's Summary Report graph of benzene concentrations for monitoring well MW-8R.

Fourth, the current magnitude of groundwater contamination in the source area (former USTs) remains unknown. None of the existing or former on-site wells are located directly in the source area, where confirmation soil samples collected from the sidewalls of the UST pit documented TPH-gasoline (TPH-g) and benzene concentrations ranging from 500 to 3,100 mg/kg and 3.6 to 17 mg/kg, respectively. Also, in 2004, four soil boreholes (labeled (SP-1 through SP-4) were drilled around the perimeter of the former UST pit which indicated that free product was encountered in the grab groundwater samples collected from all four boreholes. It is also important to note that the monitoring well (MW-8R) with the highest current concentrations of petroleum in groundwater is located up-gradient of the former gasoline UST pit.

Fifth, an evaluation of the risks posed by the elevated concentrations of petroleum hydrocarbons in shallow soils (< 10 feet below grade) and groundwater is incomplete. As discussed in comment #4 (vapor intrusion to indoor air) and #5 (direct contact and outdoor air exposure) below, concentrations of TPH-g and benzene detected in shallow soils and groundwater exceed the “allowable” concentrations contained in the Policy for vapor intrusion to indoor air, direct contact, and utility workers.

Lastly, in the Fund’s Preliminary 5-Year Review Summary dated August 24, 2010, Section IX, “Comments and Justification For Recommended Action,” it is stated that the *“site summary is incomplete and lacks a conceptual model to argue adequate delineation or site closure.”* In addition, in Section X, “Recommended Action” it is further stated that **“the Fund concurs with the regulator [ACWD] that additional remediation efforts are necessary.”** Since the Fund’s Preliminary 5-Year Review Summary in August 2010, the RPs have **NOT** conducted any further work to define the extent of groundwater contamination, perform semiannual groundwater sampling, prepare a conceptual site model, or submit the requested corrective action plan. However, the Fund now states that the CSM for this site is complete. If no additional investigations have been performed to define the extent of groundwater contamination since the Preliminary 5-Year Review in August 2010, and no additional groundwater sampling has been conducted, how is it now possible to state that the CSM is complete and that the groundwater plume is now defined and stable? In order to satisfy the requirements for a proper CSM, the above issues need to be addressed in accordance with the Policy or, at a minimum, the source area should be remediated to the maximum extent possible, in order to minimize the impact of the residual contamination.

3. Media-Specific Criteria (1) - Groundwater

According to the Policy’s Media-Specific Criteria (1) for Groundwater: “If groundwater with a designated beneficial use is affected by an unauthorized release, to satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites.” As mentioned previously (comment #2 above), the lateral and vertical extent of groundwater contamination has not been defined. Therefore, the stability of the contaminant plume cannot be determined until the extent of contamination has been completely defined. Also, groundwater sampling of the existing wells has not been performed since June 2009; therefore, it is not possible to determine whether the plume is stable or decreasing, and thereby does not meet the media-specific criteria for groundwater.

Furthermore, the contaminant plume does not meet all the characteristics of one of the five classes of sites. The plume length, which is defined as the distance from the source to the water quality objective line, has not been determined because the lateral extent of groundwater contamination has not been defined. However, the plume length is greater than 100 feet and may extend off-site. As discussed previously, a well survey performed in 1996 identified the presence of two irrigation/domestic water supply wells located on the adjacent parcel, which were reportedly located approximately 300 – 500 feet from the former UST

tank farm. The proper identification of all water supply wells surrounding this site is critical for complying with the Groundwater-Specific Criteria of the Policy, which specifies minimum distance requirements from an existing plume to nearby water wells. In addition, it appears that a survey to identify other sensitive receptors, including surface water bodies, was never conducted. Therefore, we recommend that an updated well survey be performed to verify the status of these wells, and any other wells that may be located in close proximity to the site.

4. Media-Specific Criteria (2) – Petroleum Vapor Intrusion to Indoor Air

According to the Policy's Media-Specific Criteria (2) for Petroleum Vapor Intrusion to Indoor Air: "Petroleum release sites shall satisfy the media-specific criteria for petroleum vapor intrusion to indoor and be considered low-threat for the vapor-intrusion-to-indoor-air pathway" if one of three conditions is met. However, none of the three conditions have been met for the site. In particular, the first condition (a), which specifies that "Site-specific conditions at the release site satisfy all of the characteristics and criteria of scenarios 1 through 3 as applicable, or all of the characteristics and criteria of scenario 4 as applicable," has not been satisfied. Based on available soil and groundwater samples collected at the site, "Scenario 3 – Dissolved Phase Benzene Concentrations in Groundwater" has not been satisfied. Groundwater samples collected from borehole HP-14 and monitoring well MW-8R, which are located in close proximity to an existing building, have documented benzene concentrations as high as 18,000 ppb and 3,500 ppb, respectively. In addition, shallow soil samples (less than 10 feet below grade) collected from boreholes (HP-14 and MW-2) located in close proximity to an existing building, have documented TPH concentrations ranging from 1,300 (TPH-g) to 3,750 mg/kg (3,300 mg/kg TPH-d and 450 mg/kg TPH-g).

A sub-slab soil vapor investigation was conducted beneath the existing building in April 2010, and the results were contained in a report dated June 22, 2010 (copy in Geotracker). The Fund included an excerpt from this report in their 2nd 5-Year Review Summary, which states "the detected concentrations are significantly below the RWQCB's ESLs," which is incorrect. The soil vapor samples collected at the site were obtained from sub-slab vapor probes (May 2008 ESL of $2.8 \mu\text{g}/\text{m}^3$); however, the consultant incorrectly compared the sub-slab vapor sample results to the ESLs for soil-gas samples (ESL of $280 \mu\text{g}/\text{m}^3$), which is 100 times higher than the ESL for sub-slab vapor samples. Contrary to the consultant's summary, the sub-slab soil vapor samples collected were not significantly below the ESLs, and in fact, one sample exceeded the recommended ESL. No soil gas samples have been collected at the site to date. The Fund's 2nd 5-Year Review Summary further states that "indoor air samples suggest very limited to no BTEX into potentially affected structure(s)," which is also incorrect. No indoor air samples have ever been collected at the site.

Based on the above data, an evaluation of the potential for petroleum vapor intrusion to indoor air should be completed. Also, a site-specific risk assessment for the vapor intrusion pathway has not been conducted. In addition, since this is not an active service station, potential petroleum vapor intrusion to indoor air may pose an unacceptable human health risk.

5. Media-Specific Criteria (3) – Direct Contact and Outdoor Air Exposure

According to the Policy's Media-Specific Criteria (3) for Direct Contact and Outdoor Air Exposure: "release sites where human exposure may occur satisfy the media-specific criteria for direct contact and outdoor air exposure and shall be considered low-threat if one of three conditions is met. However, none of the three conditions have been met for the site. In particular, the first condition (a), which specifies that "maximum concentrations of petroleum constituents in soil are less than or equal to those listed in Table 1 for the specified depth below ground surface" has not been satisfied. Based on soil samples collected at a depth of 7 feet below grade during removal of the USTs, elevated concentrations of benzene (12 to 17 mg/kg) were detected in four of ten sidewall samples, which exceeds the maximum concentration of benzene for the commercial/industrial site classification for volatilization to outdoor air (12 mg/kg), as well as the maximum concentration of benzene for a utility worker (14 mg/kg). It should also be noted that confirmation soil samples were only collected from two of the four sidewalls (north and south). Also, in 2004, four soil boreholes (labeled (SP-1 through SP-4) were drilled around the perimeter of the former UST pit which indicated that free product was encountered in the grab groundwater samples collected from all four boreholes.

Summary and Recommendation

In summary, based on the above discussion, **NO** efforts or attempts (i.e., investigation and cleanup) have been made to satisfy the following general criteria:

- Conceptual Site Model: No groundwater samples have ever been collected to define the vertical extent of groundwater contamination.
- Secondary Source Removal: No attempt, other than removal of the USTs, has been made to remove the secondary source beneath the former gasoline USTs.

In addition, incomplete or inadequate efforts have been made to satisfy the following general and media-specific criteria:

- Conceptual Site Model: The lateral extent of groundwater contamination has not been defined to water quality objectives.
- Conceptual Site Model: An updated well survey is needed to verify the status of two water supply wells identified in 1996 on an adjacent parcel, and any other water supply wells that may be located within 1,000 feet of the defined plume boundary, once it has been defined.
- Groundwater-specific criteria: The stability of the contaminant plume cannot be determined until the extent of contamination has been completely defined. Also, groundwater sampling of the existing wells has not been performed since June 2009; therefore, it is not possible to determine whether the plume is stable or decreasing.
- Groundwater-specific criteria: The contaminant plume does not meet all the characteristics of one of the five classes of sites, as follows: The plume length, which is greater than 100 feet and may extend off-site, has not been determined; and a well

survey performed in 1996 identified the presence of two irrigation/domestic water supply wells, which were reportedly located approximately 300 – 500 feet from the former UST tank farm. In addition, it appears that a survey to identify other sensitive receptors, including surface water bodies, was never conducted.

- Vapor intrusion-specific criteria: None of the three conditions necessary to meet the vapor intrusion criteria have been met for the site. In particular, the first condition has not been satisfied. A sub-slab vapor intrusion investigation was conducted at the site; however, the investigation indicated the potential for vapor intrusion concerns.
- Direct Contact and Outdoor Air Exposure criteria: None of the three conditions necessary for the site to be considered low-threat have been met for the site. In particular, the first condition (a), has not been satisfied.

Until the above requested subsurface investigations and sampling have been performed, we do not agree with the Fund's current recommendation that the site be considered for closure. Based on the above comments, we request that the "Recommended Action," contained in the Fund's 2nd 5-Year review Summary be modified to state that the Preliminary 5-Year Review Summary's Recommended Action is still applicable, and further request additional investigation and cleanup, as appropriate, to address the above concerns.

ATTACHMENT 2
CASE CLOSURE REVIEW SUMMARY REPORT COMMENTS
Guthmiller Trucking, Inc. (Duncan & Sons)
30700 Dyer Street, Union City (Claim No. 1251)

ACWD's review of the Fund's Summary Report has identified numerous errors, omissions, and incorrect statements regarding the investigation and cleanup activities conducted at the site to date, which is critical since the Fund states that the Summary Report "forms the basis for the UST Cleanup Fund Manager's determination that case closure is appropriate." Our comments regarding the Summary Report are as follows:

MAJOR CONCERNS AND ISSUES

1. Page 1, third paragraph, first sentence states: "The petroleum release is limited to the shallow soil and groundwater." This statement is misleading and incorrect. As discussed in Attachment 1, comment #2, the vertical extent of groundwater contamination has not been defined. No groundwater samples have been collected to date beneath the impacted shallow aquifer zone to determine whether the deeper drinking water aquifer has been impacted. Without collecting deeper groundwater samples, there is no basis to make the statement that the release is limited to the shallow groundwater, which is misleading. All of the monitoring wells installed to date are completed in the shallow zone aquifer, and no deeper grab groundwater samples have been collected to date.
2. Page 1, third paragraph, second sentence states: "According to data available in Geotracker, there are no supply wells regulated by the California Department of Public Health [CDPH] or surface water bodies within 250 feet of the defined plume boundary in files reviewed." This statement is also misleading. The groundwater-specific criteria of the Policy specifies that the nearest existing water supply well must be greater than a specified distance from the defined plume boundary.

First, the Policy's definition of water supply well is not limited to supply wells regulated by CDPH. CDPH only regulates public water systems that have 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year. CDPH does not regulate private water wells that could be used for irrigation, domestic, industrial or other beneficial use.

Second, the 250-foot separation distance assumes that the plume is defined and less than 100 feet in length, both of which are incorrect. As discussed in Attachment 1, comments #2 and #3, the lateral extent of groundwater contamination has not been defined and it is not possible to conclude whether the contamination even remains on-site. However, based on the elevated concentrations of petroleum hydrocarbons (including benzene) detected in existing monitoring well MW-8R, former monitoring well MW-10, and sample point HP-17, the plume length is greater than 100 feet. Therefore, in accordance with the groundwater-specific criteria of the Policy, the nearest existing water supply well must be greater than 1,000 feet from the defined plume boundary, which has yet to be determined.

3. Page 1, third paragraph, third sentence states: "No other water supply wells have been identified within 250 feet of the defined plume boundary in files reviewed." This statement is misleading and incorrect. First, as stated above, the lateral extent of groundwater

contamination has not yet been defined and the plume length is greater than 100 feet. Therefore, the nearest existing water supply well must be greater than 1,000 feet from the defined plume boundary, which has yet to be determined.

Second, it is unclear what files were reviewed to make the determination that “no other water supply wells have been identified within 250 feet of the defined plume boundary.” As stated in Attachment #1, comment #2, the Fund’s 2nd 5-Year Review Summary, Section VII, “Sensitive Receptor Survey” refers to a “July 1999” survey (Ref 1), which does not exist. In addition, a well survey conducted for the site in 1996 identified the presence of two irrigation/domestic water supply wells located on the adjacent parcel, which were reportedly located approximately 300 – 500 feet from the former UST tank farm. This information was included in electronic copies of all reports and correspondence for the subject site that ACWD provided to Fund staff in February 2013.

4. Page 1, third paragraph, fifth sentence states: “it is highly unlikely that the affected groundwater will be used as a source of drinking water in the foreseeable future.” ACWD presumes this statement is based on the Fund’s unsubstantiated conclusion that groundwater contamination is limited to the shallow water-bearing zone without collecting any deep groundwater samples to determine whether the deeper drinking water aquifer has been impacted.
5. Page 1, third paragraph, seventh sentence states: “Remaining petroleum hydrocarbon constituents are limited and stable, and concentrations are decreasing.” This statement is incorrect. The stability of the plume is unknown. As stated previously, the current concentrations of petroleum hydrocarbons remaining in groundwater are unknown since semiannual sampling of the monitoring wells has not been conducted since June 2009. However, increasing concentrations of TPH-g and benzene were observed in the two most recent groundwater samples collected from well MW-8R in 2008 and 2009, which is illustrated in the Fund’s Summary Report graph of benzene concentrations for monitoring well MW-8R. Also, as stated previously in Attachment 1, comment #2, it is very important to note that the Fund’s Preliminary 5-Year Review stated that the “*site summary is incomplete and lacks a conceptual model to argue adequate delineation or site closure,*” and that “*the Fund concurs with the regulator [ACWD] that additional remediation efforts are necessary.*” Since the time the Fund made these statements, the RPs have **NOT** conducted any further work to define the extent of groundwater contamination, perform semiannual groundwater sampling, or prepare a conceptual site model. If no additional investigations have been performed to correct these deficiencies, how is it now possible for the Fund to completely reverse its previous conclusion “to argue adequate delineation or site closure.”
6. Page 2, first paragraph (continuation from page 1), first sentence states: “Corrective actions have been implemented and additional corrective actions are not necessary.” This statement is misleading and only partially correct. As discussed in Attachment 1, comment #1, during removal of the ten USTs in 1986, confirmation soil samples collected from the sidewalls of

the UST pit documented elevated concentrations of TPH-gasoline (up to 3,100 mg/kg) and benzene (up to 17 mg/kg) in nine of 10 sidewall samples. No attempt was made to further excavate or remediate the soil contamination in this area, and the excavation was backfilled with imported fill and “treated” soils that had been excavated during removal of the USTs.

The Fund’s “Attachment 2: Summary of Basic Case Information (Conceptual Site Model), Remediation Summary” (page 8 of 13) further states “approximately 750 cubic yards of soil were excavated and removed in 1986.” This statement is also misleading. Upon removal of the USTs, **NO** attempt was made to remove the documented elevated levels of contamination detected in the sidewall samples of the UST pit. No contaminated “soil” was removed, only overburden material and pea gravel surrounding the USTs. The “native” soil that was impacted by petroleum hydrocarbons was left in place.

In August 1996, the RP proposed soil excavation in the area of the tank farm in order to remove the elevated concentrations of petroleum hydrocarbons remaining in soil; however, the recommended soil excavation cleanup was never implemented because Fund staff overseeing the site at that time would not issue a pre-approval for this work. Therefore, the recommended source removal cleanup was never implemented. No physical or infrastructural constraints existed at this location in 1996 that would have made secondary source removal technically or economically infeasible, and the area is still accessible (beneath an existing parking lot).

7. “Rationale for Closure under the Policy,” page 2, first bullet states: “The case meets all eight Policy General Criteria.” This is incorrect. As discussed previously in Attachments 1 and 2, this case does not meet General Criteria “e” (CSM has been developed) and General Criteria “f” (secondary source has been removed to the extent practicable).
8. “Rationale for Closure under the Policy,” page 2, second bullet states: “The case meets [Groundwater-Specific] Policy Criterion 1 by Class 1.” This is incorrect. The plume length exceeds 100 feet and is undefined. In addition, an updated well survey is needed to verify that there are no water supply wells (i.e., domestic, irrigation, agricultural, and industrial supply wells) within **1,000** feet of the plume boundary, once it has been defined.
9. “Rationale for Closure under the Policy,” page 2, third bullet states: “The case meets Policy Criterion 2b” for vapor intrusion to indoor air. This conclusion appears to be based on the Fund’s statement that a “professional assessment” of site-specific risk found that there is no significant risk. It is unclear who conducted the professional assessment and what data was used to reach this conclusion.

As stated previously in Attachment 1, comment #4, in order for petroleum release sites to satisfy the media-specific criteria for petroleum vapor intrusion to indoor and be considered low-threat, one of three conditions must be met. However, none of the three conditions have been met for the site. In particular, the first condition (a), which specifies that “Site-specific conditions at the release site satisfy all of the characteristics and criteria of scenarios 1

through 3 as applicable, or all of the characteristics and criteria of scenario 4 as applicable,” has not been satisfied. Based on available soil and groundwater samples collected at the site, “Scenario 3” has not been satisfied. Groundwater samples have documented benzene concentrations as high as 18,000 ppb and 3,500 ppb, respectively. In addition, shallow soil samples (less than 10 feet below grade) collected in close proximity to an existing building have documented TPH concentrations up to 3,750 mg/kg.

This section also states “a soil vapor survey was conducted in April 2011 and samples were found to be below Environmental Screening Levels (ESLs).” This is also incorrect. As stated previously, a sub-slab vapor investigation was conducted beneath the existing building in April 2010, and the results were contained in a report dated June 22, 2010 (copy in Geotracker). However, contrary to the consultant’s summary, the sub-slab vapor samples collected were not significantly below the ESLs, and in fact, one sample exceeded the recommended ESL. The soil vapor samples collected at the site were obtained from sub-slab vapor probes; however, the consultant incorrectly compared the sub-slab vapor sample results to the ESLs for soil-gas samples, which is 100 times higher. No soil gas samples have been collected at the site to date. Based on the above, an evaluation of the potential for petroleum vapor intrusion to indoor air should be completed. In addition, a site-specific risk assessment for the vapor intrusion pathway has not been conducted.

Lastly, this section states “the on-site building is an active transport, storage and delivery facility with multiple rollup doors that would prevent the accumulation of soil vapors in the building.” This too is incorrect. The on-site building is not an active transport, storage and delivery facility with multiple rollup doors. The businesses occupying the building are Michael’s (Art & Craft store) and Smart & Final (Grocery Store).

10. “Rationale for Closure under the Policy,” page 2, fourth bullet states: “The Case meets Policy Criterion 3a” for direct contact and outdoor air exposure. This statement is based on the Fund’s conclusion that maximum concentrations in soil are less than those in Policy Table 1 for commercial/industrial use and the concentration limits for a utility worker. Both of these conclusions are incorrect. As stated in Attachment 1, comment #5, elevated concentrations of benzene (12 to 17 mg/kg) were detected during removal of the USTs, which exceeds the maximum concentration of benzene for the commercial/industrial site classification for volatilization to outdoor air (12 mg/kg), as well as the maximum concentration of benzene for a utility worker (14 mg/kg). Also, in 2004, four soil boreholes (labeled (SP-1 through SP-4) were drilled around the perimeter of the former UST pit which indicated that free product was encountered in the grab groundwater samples collected from all four boreholes.

MINOR AND EDITTORIAL COMMENTS

The following are minor/editorial comments pertaining to the Fund's UST Case Closure Review Summary Report, Attachment 2: "Summary of Basic Case Information (Conceptual Site Model):

1. Site Location/History, page 7, last bullet states "Free Product: None reported." As stated above, free product was encountered in grab groundwater samples collected from four boreholes drilled around the perimeter of the former UST pit in 2004.
2. Geology/Hydrogeology, page 8, third and fourth bullets – Both the minimum and maximum groundwater depths listed are incorrect. The minimum groundwater depth is 3.06 feet (monitoring well MW-6) and the maximum groundwater depth is 10.89 feet (MW-3R).
3. Geology/Hydrogeology, page 8, seventh bullet states: "Appropriate Screen Interval: Yes." This statement is only partially correct. Based on review of historical water levels, the majority of the well screens have been submerged during most monitoring events, including monitoring well MW-8R (highest groundwater concentrations), whose well screen has been submerged during all monitoring events.
4. Monitoring Well Information, page 8 – The screen intervals presented for 5 of the 10 wells (MW-6, MW-7, MW-8R, MW-9R, and MW-10R) listed are incorrect. Please refer to reports in Geotracker for the correct data.