SUBJECT: RESPONSE TO DTSC COMMENTS FOR THE REMOVAL ACTION COMPLETION REPORT AT THE FORMER TOM’S TRUCK CENTER, SANTA ANA, CALIFORNIA

NOTE- Two sets of responses are presented below in response to DTSC comments dated February 3, 2020, a meeting with DTSC held on March 17, 2020, and a set of comments from HERO dated April 21, and April 30, 2020.

PCA:      12018                               Site Code:   401852

I Comments and responses to DTSC comments dated February 3rd 2020

Document Reviewed
The following are DTSC review comments and Tom’s Truck Center Responses to the review comments dated January 27, 2020 regarding the Draft Removal Action Completion Report (RACR), dated December 30, 2019, for the above listed Site. The responses were prepared by Craig & Associates Environmental Management (CEM), on behalf of Tom’s Truck Center.

Background
This is an approximately 6.68 acres site, which was used as a full-service truck dealership with the business activities of dismantling used trucks, selling and servicing trucks. The site is generally located between East 4th Street on the north, East 2nd Street on the south, North Garfield Street on the west and Breeden Street/Standard Avenue on the east, in the City of Santa Ana, Orange County, California. Multiple investigations have been conducted at the site. Chemicals of Concern (COCs) identified at the site are metals, volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPHs).

The goal of the RACR is to summarize the removal action and present the confirmation data. In the report, the total volume of soil removed from the site is estimated to be approximately 3,752 tons, which were impacted by lead and TPH-d and exceeded the residential soil screening level.

Comments by Dr. Li, Human and Ecological Risk Office (HERO)

General HERO Comment
In general, HERO recommends that the RACR be revised. For example, HERO is no longer recommending using the Johnson and Ettinger (J&E) model for soil vapor risk assessment. HERO recommends providing a conceptual site model and conducting a screening level human health risk assessment for the COCs detected at the site. The followings are the specific comments:

HERO Comments
1. **Interpretation of DTSC comments**: On page viii, HERO recommends revising the statement that “DTSC reviewed this supplemental sampling report and accepted that the data gaps previously identified by DTSC were reconciled” to “DTSC reviewed this supplemental sampling report and accepted that the new data collected can be incorporated into the whole data set”.

**Response to Comment**
"Comment noted, RACR revised to read: “DTSC reviewed this supplemental sampling report and accepted that arsenic in soil, and volatiles in groundwater were not of concern at the Site and did not warrant remediation.”"

2. **Vapor Intrusion Evaluation and Johnson & Ettinger Model**: HERO is no longer recommending using the U.S. EPA’s J & E model, nor the DTSC’s modified J & E model; and has removed links to the spreadsheet from Department’s website.
Soil gas data should be evaluated using a) a screening level attenuation factor of 0.03 (see USEPA’s guidance document) and (b) an attenuation factor of 0.001 to aid risk management decisions (see DTSC’s 2011 Vapor Intrusion Guidance document).

Response to Comment

Comment noted, please see detailed discussion regarding this general comment below

a) Johnson & Ettinger (J & E) Model: HERO recommends removing the J & E model contents in the report.

On page 5, HERO recommends revising the statement “Determining whether the removal action objective for the Site shallow soils has been achieved involved a risk assessment and evaluation of the soil gas data, in which the Johnson & Ettinger Model was used to estimate the risk of site occupancy for future potential residential use” into “Determining whether ……, in which an attenuation factor of 0.03 and an attenuation factor of 0.001 will be used to estimate the risk of site occupancy for future potential residential use”.

On page 14, it states that “The potential vapor intrusion risks form the volatiles detected in soil gas at the site were evaluated using the maximum detected concentrations in the USEPA (2017a) version of the Johnson and Ettinger model (J&E, USEPA, 2017b). Table 6 presents the Johnson and Ettinger model properties……”. HERO recommends removing the relevant contents in the report.

On page 15, section 8.2 Recommendations, the third paragraph, it states that “No further action for soil gas mitigation is recommended based on the results of the Johnson and Ettinger model evaluating undue risk to potential future site occupants in the only area originally showing exceedances above PCE default action criteria”. HERO recommends removing the J & E model content.

Response to Comment

After discussions with DTSC, and due to lack of confidence in the soil gas data generated by Jones Environmental Services, Tom’s Truck Center recommended another set of soil gas testing, using EPA Test Method TO15, SUMMA canisters, and a stationary laboratory. In our opinion, the recent sampling and analyses technique, which was performed under DTSC supervision, is representative of the Site conditions.

Per DTSC, cumulative cancer risk for VOCs will be evaluated using DTSC’s recommended attenuation factors.

b) PCE screening level: HERO recommends providing PCE screening levels by using an attenuation factor of 0.03 and an attenuation factor of 0.001 for both residential and commercial/industrial scenarios.

On page 11, it is stated that “only PCE exceeded the default PCE removal action goal of 460 micrograms per cubic meter (µg/m³) in a small area of approximately 25,000 square feet”. HERO recommends adding the attenuation factor used for the screening level calculation (0.001) and providing a screening level of PCE by using an attenuation factor of 0.03 in a residential scenario.

In table 4, the screening level of PCE in a commercial/industrial scenario was identified at 4,000 µg/m³, which is not correct. HERO recommends revising it to 2,000 µg/m³ by using an attenuation factor 0.001.

Response to Comment

Comment noted RACR revised.

3. Excavation in TPH-impacted areas: On page 6, it is stated that “For TPH-impacted areas, visual observation was used to determine if excavation expansion was required beyond the originally proposed dimensions; confirmation samples were then collected for laboratory analyses”. HERO defers to DTSC’s Geologist Service Unit (GSU) to determine the reliability of visual observation as a method to characterize the TPH contamination at the site.

Response to Comment

Comment noted

4. Conceptual Site Model (CSM): HERO recommends including a CSM in the report, where the sources of contamination are identified, along with the routes, pathways of exposure and the potential receptors (residents including kids) at the site since a no further action (NFA) is proposed to be pursued for the site.

Response to Comment

Comment noted, CSM revised.

5. Human Health Risk Assessment:

a) Lead: On page 14, it is stated that “however, the 95% upper confidence limit (UCL) for lead is 28.3 mg/kg”. HERO recommends providing the 95% UCL input and output sheets for DTSC’s review. In addition, HERO recommends providing the depth of the soil samples collected for lead confirmation.
Response to Comment

Comment noted; note that the depths of samples are presented on Table 1.

b) TPHs: HERO recommends conducting a screening level human health risk assessment for TPHs detected at the site. A review of Table 2 indicates that most of the confirmation soil samples were collected at the depth of 2-5 feet bgs. HERO defers to DTSC’s GSU to determine whether the vertical extent of TPH impact has been sufficiently delineated.

Response to Comment

Comment noted; the San Francisco RWQCB risk based screening levels for TPH will be used to assess TPH risk.

c) VOCs: A review of Table 4 indicates that all the soil vapor samples were collected at depths of 10 and 15 feet bgs. On page 14, it is stated that “Vapor intrusion risks and hazards were estimated using the maximum detected concentrations at both 10 and 15 feet bgs”. HERO recommends providing the justification why soil vapor collected at the depth of 10 and 15 feet bgs were used for the vapor intrusion risk evaluation; while excluding soil vapor collected at a depth of 5 feet bgs from risk assessment.

Response to Comment

Please note that in the VOC detection area, the top 5’ soils were excavated as a result of demolition of the building which existed in the VOC area, eliminating the possibility of soil gas monitoring at 5’ bgs (i.e. currently, the site surface in the VOC area is approximately 5’ (all SG locations, except SG-108, which is 7’) below the original site grade).

6. Confirmation Samples: Based on communication with DTSC’s Project Manager, it appears that the site has been excavated without fill material. HERO defers to DTSC’s manager to decide whether the site is closed without fill material and relevant lab testing report.

Response to Comment

Comment noted.

Conclusions: In summary, HERO recommends that the report be revised. A screening level human health risk assessment should be conducted and incorporated into the report.

General Comment from Dina Kourda, PG, DTSC GSB

GSB did not provide any field oversight of the removal actions and it is unclear if the site has been adequately remediated based on the findings in the RACR. There were two elevated concentrations of lead outliers (92.1 and 102 mg/kg) at 2 feet bgs, most of the soil left in place contained soil with lead concentrations below the 80 mg/kg cleanup criterion. The TPH-d cleanup criterion (260 mg/kg) was met post-excavation; however, the confirmation soil sampling locations are not identified in the RACR. While groundwater was not encountered due to drill-rig refusal, the evidence based on previous investigation and the results of the removal action indicate groundwater was not impacted by the site activities. Concentrations of PCE range up to 1780 ug/m3 in soil gas.

Response to GSB Comment

Please note that our investigations included groundwater sampling and analyses. Specifically, CEM supplemental investigation report dated August 19, 2019, provides 2 sets of VOC results for two separate groundwater hydropunch sampling locations on Site. Per DTSC request, a paragraph will be placed in the RACR to summarize groundwater information.

GSB Comments

1. According to Section 4.3 of the RAW, “After the soil is removed, confirmation samples will be collected from the walls and bottom of the excavation prior to backfilling and compaction.” As illustrated on Figure 4, sidewall confirmation sampling is deficient in along the western and eastern portion of the northern excavation and around the entire perimeter of the southern excavation. Also, field sampling falls short of the proposed RAW sampling distribution, “Soil samples will be collected at approximately every 50 feet along the excavation sidewalls. In areas where excavation is short of 3 feet, one wall sample from 2 feet bgs for each location will be adequate to define the vertical distribution of COCs.” These deficiencies should be described in Section 7.8, “Field Variances from the Approved RAW.” GSB recommends post excavation sampling to satisfy the proposed RAW requirements.

Response to Comment

Note that delineation of lead and TPH impact outside the proposed excavation areas relies on multiple sets of existing SSI data, many of which remain in place after removal action completion. The field variances section will be expanded, to note the number of samples collected, however, note that for lead, we collected 33 samples plus
multiple exploratory field XRF samples, three times the number of samples targeted in the RAW, and met our commitments to the number of TPH and arsenic samples in the RAW, the only other chemicals to be tested.

2. Figure 4: This figure should illustrate Sample IDs for all confirmation soil sampling locations. GSB recommends i) labeling each sample location with the sample ID and ii) chem boxes listing concentrations of arsenic, lead, and/or TPH, corresponding to Tables 1 and 2. Additionally, iii) “approximate excavation extent” defined by a purple dashed line for lead and orange dashed lines for TPH-d should be drawn so they are precise and not approximate. iv) GSB recommends including perpendicular cross-sections identifying existing ground surface and confirmation soil sample IDs with corresponding analytical results. The northern excavation should be defined by a west-east trending cross-section through CS-23-W-3 to CS-22-W-3 and two north-south trending cross-sections through CS-2-W-2-D to CS-15-W-2 (and -4) and CS-10-W-1 (and -3) to CS-20-W-3 (and -5). The southern excavation should be defined by a west-east trending cross-section through CS-29-W-3 to CS-27-W-2 (and -4) and a north-south trending cross-section through CS-33-W-3 to CS-28-W-3.

Response to Comment

Comment noted. However, the following should be noted:

i. Sample IDs are identified on Figures 4 & 5
ii. Chem boxes will be added only for chemicals “exceeding” default PEC concentrations.
iii. As built excavation limits will be added to figure 4
iv. Note that due to the absence of exceedances for lead, TPH and arsenic, adding multiple soil cross sections, in our opinion, will provide no value to DTSC, as these cross sections are only useful if distribution of exceeding contaminants is of interest. No change.

3. Figure 5: SG-107 chem box PCE concentration is listed as 68 ug/m3 should be revised based on the laboratory analytical report so it is correctly documented as 877 ug/m3.

Response to Comment

Comment noted and error corrected in the Final RACR.

4. Section 7.9 Confirmation Soil Sampling: According to this section, “Confirmation soil samples were collected using a clean hand trowel.” Please clarify whether these were disposable hand trowels (metal or plastic scoops) or if the hand trowel was properly decontaminated between sample locations and provide results for the corresponding equipment blank samples. Please also include photos of confirmation soil sampling in Appendix H.

Response to Comment

Hand trowels were decontaminated and decon waters applied to the stockpile of contaminated soils, hauled offsite. Note that no photos were available for the sampling event.

5. Table 2: The Sample IDs and their corresponding analytical results for Diesel Range Organics (C10-C28) should be corrected from CS-32-3 (7.2 mg/kg) and CS-33-3 (10 mg/kg) to CS-32-W-3 (10 mg/kg) and CS-33-W-3 (7.2 mg/kg).

Response to Comment

Comment noted and RACR revised.

Summary Tables 1 and 2: Nomenclature for Sample IDs should be explained and qualifiers Z (The chromatographic response does not remember a typical fuel pattern) and F1 (MS and/or MSD Recovery is outside acceptance limits) should be discussed in the report. Also, please clarify the meaning of “D” in multiple Sample IDs and how duplicate and replicate samples are identified.

Response to Comment

Comment noted and report revised, including data quality section.

6. Tables 6, 7, and 8: These tables were omitted from the table section and should be provided for completeness.

Response to Comment

Comment noted and RACR revised.

7. Appendices G and H: While the fly sheets are in the correct order, the appendices for the Health Risk Assessment (Appendix G) and Site Photographs (Appendix H) are inadvertently reversed. Please revise


Response to Comment

Comment noted and RACR revised

8. The PDF document uploaded to Envirostor is incorrectly entitled “Riverside SSI” and should be revised accordingly.

Response to Comment

Comment noted and RACR’s electronic name is revised

CONCLUSION

Until additional data can be provided, GSB is unable to recommend a no further action based on the findings in the RACR. GSB recommends additional confirmation soil sampling as described above.

Please submit a technical memorandum for DTSC approval and incorporate findings into a revised report based on the comments above.

Response to Comment

Since excavation area was expanded from 0.35 acres to 0.5 acres, and 10 samples are customarily deemed adequate for representing a 0.5-acre excavation area, CEM believes the confirmation sampling is adequately representing the character of the excavated areas. In our opinion, adequate number of soil samples were collected to represent the nature of remaining soils in to the two excavation areas, as identified by the sample locations and analyses results. A stamped copy of current Site survey map will be added to the RACR.

II Comments and responses to DTSC HERO comments dated April 21, 2020

As requested, the Human and Ecological Risk Office (HERO) reviewed a Removal Action Completion Report (RACR) and a Response Letter to DTSC Comments for the RACR. The RACR and the Response Letter were prepared by Craig & Associates Environmental Management (CEM), for Tom's Truck Center, and dated April 2020 and April 5th, 2020, respectively.

Response Letter:

HERO finds that most of the HERO comments and concerns, which were presented in a HERO memo dated on February 14, 2020, have been sufficiently addressed. However, HERO recommends revising the response to HERO comment 1 from "DTSC reviewed this supplemental sampling report and accepted that arsenic in soil, and volatiles in groundwater were not of concern at the Site and did not warrant remediation" to "DTSC reviewed this supplemental sampling report and accepted that the new data collected can be incorporated into the whole data set".

RACR report:

In general, HERO finds that the results presented in the RACR are acceptable. HERO agrees with the risk evaluation for the detected lead and arsenic in soil samples collected at the site. HERO concurs with risk and hazard evaluation by using the latest collected soil vapor samples, which represented current site condition. HERO concurs with the conceptual site model presented.

Response to Comment

Comment noted

However, HERO has the following specific comments regarding human health risk assessment presented in the report.

1. Attenuation factors to be used for vapor intrusion risk assessment: HERO recommended using an attenuation factor (AF) of 0.03 for screening purposes (EPA VI guidance 2015) and an AF of 0.001 for risk management decision purposes (DTSC VI guidance 2011) to evaluate inhalation risk via vapor intrusion exposure pathway. HERO finds that vapor intrusion risk assessment by using an AF of 0.001 was presented in the report. Please also provide risk and hazard evaluation by using an AF of 0.03 in the report. HERO defers to DTSC's management to make the final risk management decision based on this information.
2 Inconsistency between Table 4 and Table 6: In Table 4, the maximum concentration of ethylbenzene in soil vapor samples collected at depths of 10 and 15 feet below ground surface (bgs) were 1.79 µg/m³ and 1.77 µg/m³, respectively. However, in Table 6, the maximum concentration of ethylbenzene in soil vapor samples collected at depths of 10 and 15 feet below ground surface (bgs) were 1.59 µg/m³ and 1.55 µg/m³, respectively. Please revise.

Response to Comment
Comment noted and the revisions made.

3 Errors in residential soil vapor screening level calculation: In Table 6, with an attenuation factor of 0.001, the residential screening levels for cancer endpoint and non-cancer hazard of benzene in soil vapor should be 97 µg/m³ and 3,100 µg/m³, respectively, and not 97,000 µg/m³ and 3,100,000 µg/m³. Please revise. Similarly, the residential soil vapor screening levels for ethylbenzene and naphthalene need to be revised.

Response to Comment
Note that the referenced residential levels are not errors in our report. Rather, the calculated risks rely on the bio-attenuation factors applied to petroleum storage tank releases per the State Water Quality Control Board 2012 guidelines (referenced in draft RACR). However, based on DTSC request, the risks were calculated without the use of the above referenced guidelines.

4 Table 3 and Table 4: The dates of analyses of soil gas samples presented in Tables 3 (using USEPA Method 82608 method) and Table 4 (using USEPA method TO-15) were listed as 3/4/2020. Is this correct? Based on information presented in the text, the dates on Table 3 should be November of 2019. Please clarify.

Response to Comment
Comment noted and the dates revised.

5 Evaluation of Risk and hazard via vapor intrusion exposure pathway: HERO recommends revising the risk and hazard calculation presented in Table 6. In addition, please provide the excel format for data in Table 6 for HERO to review.

Response to Comment
Comment noted and the report revised.

6 Note that Conclusion portion in the RACR report: HERO recommends revising this portion based on the corrected risk and hazard in Table 6.

Response to Comment
Comment noted and the report revised.

7 Groundwater data: A review of the RACR report indicates that there is no groundwater lab report. Please provide the lab report to support the statement that no VOCs detected in groundwater samples.

Response to Comment
Comment noted and the report revised.

8 Table 4: Please provide clear table to present all the data. There were missing data in the
Response to Comment

Comment noted and the report revised

III Comment and response to DTSC HERO comment dated April 30, 2020

“As requested, the Human and Ecological Risk Office (HERO) reviewed high-light portion in a Draft Removal Action Completion Report (RACR) and a Table (Table-6) for human health risk assessment. The draft RACR and screening level HHRA for COCs in soil vapor were prepared by Craig & Associates Environmental Management (CEM), for Tom’s Truck Center, and dated April 27, 2020 (via email correspondence). In general, HERO finds that HERO’s concerns, which were presented in a HERO memo dated on April 21, 2020, have been sufficiently addressed in the high-light portion of the draft RACR. HERO finds that the screening level HHRA, which was presented in Table 6, is acceptable. However, HERO finds that the screening level of 1,2,4-Trimethylbenzene in residential air should be 63 µg/m³, and not 2.1 µg/m³. Please revise it. HERO acknowledges that there will be no impact on the final conclusion with this error.”

Response to Comment

Comment noted and the report revised.

In conclusion, CEM is submitting the Final RACR based on the above comments and responses. If you have questions or comments, please feel free to call me at (310.689.4586).

Sincerely,

Shala Craig, PE

CEM President

CC:
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