MEMORANDUM

Date: 22 July 2019 **Job No.:** 19307-00.02636

To: Benjamin Fu, Director of Community Development, City of Cupertino

From: Cem Atabek, Judith Malamut, Bruce Abelli-Amen

Subject: **Peer Review of Site Characterization Report, Former Vallco Shopping Mall, 10123 North Wolfe Road, Cupertino, California**

Baseline has performed a peer review of the Site Characterization Report (Report) for the Former Vallco Shopping Mall located at 10123 North Wolfe Road in Cupertino, California (Site), prepared by WSP USA, Inc., dated April 2019 and revised June 2019. Baseline's scope of work included the following:

- Review the Report to compare its contents to American Society for Testing and Materials (ASTM) Standard E1903-11, Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment (ESA) Process. (Section I)
- Compare the analytical data to the most recent environmental screening levels published by the Department of Toxic Substances Control (DTSC) and the San Francisco Bay Regional Water Quality Control Board (Regional Water Board). (Section II)
- Provide conclusions regarding the adequacy and accuracy of the Report in meeting standards and whether any further investigation or changes to the Report are required in order to assist in determining whether any additional clearances are necessary. (Section III)

Findings and conclusions from Baseline's peer review of the Report are presented below. Recommendations for additional actions are provided in **bold text.**

Section I: Comparison to ASTM Standard E1903-11

Baseline found the Report to be generally consistent with the standard guidelines presented in ASTM Standard E1903-11. The following typographical errors should be addressed:

- Section 3.2 of the Report indicates that PCBs were not detected in 31 of the 32 samples, rather than 30 of the 32 samples. **Please correct this typographical error.**
- The last few pages of Table 4, and all of Tables 5 and 6 are missing from the Report. **The missing Tables should be added to the Report.**

- The titles of Figures 4 and 5 in the Revised Site Characterization Report are not consistent with what is shown in the table of contents or referred to in the text. There is an additional figure following figure 5 of the Revised Site Characterization Report which appears incomplete, has no title or number and appears to have technological issues. **The discrepancies in figure titles and references should be corrected and a figure that shows the extent and depths of proposed excavation throughout the Site should be included in the Report.**

Section II: Comparison of Analytical Results to Screening Levels

The Executive Summary and Section 3.2 of the Report indicate that there is no evidence to suggest the widespread presence of PCBs at the Site at any level, including above applicable screening levels. **The wording "…at any level, including above applicable screening levels" is not accurate, as discussed below, and should be eliminated from the Executive Summary and Section 3.2 of the Report.**

The Report's comparison of analytical results to the most recent Environmental Screening Levels (ESLs) for residential soil direct exposure published by the Regional Water Board, dated January 2019, is generally accurate; however, the following revisions are recommended:

- In Section 3.2, the Report indicates that concentrations of the PCB Aroclor 1254 detected in sample E5-1 exceeds the residential ESL for PCBs. **Section 3.2 of the Report should be revised to specify that the residential ESL for PCBs is 0.23 mg/kg since PCBs results and screening levels are not presented in data tables of the Report.**

- The Executive Summary and Section 3.2 of the Report indicate that no concentrations of metals (excluding cobalt) exceeded their respective residential screening levels. The Report does not discuss that concentrations of arsenic exceed residential screening levels, but only compares arsenic concentrations to background levels in in Table 2 of the Report. **The Executive Summary and Section 3.2 of the Report should be revised to indicate that concentrations of arsenic exceed residential screening levels and are below background levels.**

The Report compares analytical results to background levels for arsenic in soil. A reference is provided for the use of a background level of 11 mg/kg for arsenic in soil (as supported by the Regional Water Board); however, a reference is not provided for DTSC's support of a background level of 12 mg/kg. **A reference for DTSC's support of a background level of 12 mg/kg should be provided, or the background level of 12 mg/kg should not be referred to in the Report.**

The Report indicates that it compared analytical results to modified-Regional Screening Levels published by DTSC, dated November 2018. However, the November 2018 Regional Screening Levels (RSLs) in the Report are screening levels previously published by the United States Environmental Protection Agency (EPA), not DTSC. The most recent screening levels published by DTSC are the DTSC Modified Screening Levels, dated April 2019, presented in DTSC's Human Health Risk Assessment Note 3. DTSC's Modified Screening Levels do not include screening levels for several of the constituents analyzed in soil samples collected at the Site, and for such constituents DTSC typically refers to EPA's RSLs (which are more comprehensive and often the basis for DTSC's Modified Screening Levels) as screening levels. **The report should be revised to include and refer to the latest DTSC Modified Screening Levels and EPA RSLs (for those constituents which lack DTSC Modified Screening Levels), which are both dated April 2019.**

Baseline compared the analytical results presented in the Report to DTSC's Modified Screening Levels dated April 2019, and found that the analytical results presented in the Report did not exceed DTSC's Modified Screening Levels for residential soil with the following exceptions:

- Two samples had concentrations of the pesticide dieldrin that exceed DTSC's Modified Screening Level, which is equal to the EPA RSL discussed in the Report. The Report identifies these samples as exceeding screening levels and indicates that the 95 percent upper confidence level of the mean for concentrations of dieldrin at the Site is below the residential screening levels. **Baseline agrees with this analysis, and the determination in the Report is appropriate and adequate.**

- All detected concentrations of arsenic exceed DTSC's Modified Screening Level. As discussed above, the concentrations of arsenic detected at the Site are below naturally-occurring background levels. **Baseline agrees with the determination in the Report that past agricultural uses have not resulted in impacts from arsenic.**

- The PCB Aroclor 1254 was detected in soil sample E5-1 at a concentration of 0.523 mg/kg (as discussed above), which exceeds DTSC's Modified Screening Level for Aroclor 1254 of 0.24 mg/kg. **Section 3.2 of the Report should be revised to specify that the DTSC's Modified Screening Level for PCBs is 0.24 mg/kg since PCBs results and screening levels are not presented in data tables of the Report.**

Section 4.1 of the Report indicates that "laboratory results for all analytes show no evidence of contaminants of concern at the Site at concentrations above residential screening levels. No areas of concern were identified that would warrant remedial actions to be taken or further investigation…. There is also no evidence of any impacts/exceedances of ESLs or RSLs for pesticides, lead or arsenic in shallow soil samples collected throughout the Site…" These sentences are not accurate. **Section 4.1 of the Report should be revised to describe the**

exceedances of residential screening levels for arsenic, cobalt, dieldrin, and PCBs, and describe additional investigation and excavation to address the PCBs in soil in the area of boring E-5 as detailed in the Revised Environmental Site Management Plan (ESMP).

The Analytical Soil Sampling and Testing Study prepared by Geosphere Consultants, Inc., dated October 25, 2016 (2016 Study), which is included in Appendix C of the Report indicates that concentrations of cobalt, vanadium, benzo(a)pyrene, and dibenz(a,h)anthracene in soil samples exceeded the 2016 Treasure Island Soil Import Criteria (Import Criteria). The 2016 Study indicated that the Import Criteria was based on the ESLs and RSLs established at the time for residential land use. However, based on the review of the Final Soil and Groundwater Management Plan, Former Naval Station Treasure Island, San Francisco, California, prepared by Terra Phase Engineering Inc., dated July 20, 2016, the Import Criteria for cobalt was based on the ambient (background) concentrations for Treasure Island, and therefore would not be appropriate for comparison to concentrations of cobalt detected at the Site; and the Import Criteria for vanadium is 390 mg/kg (which is equal to the current ESL and RSL), and not 39 mg/kg, as indicated in the 2016 Study. Based on the consistency of the level of cobalt and vanadium concentrations detected in soil samples collected from the Site, the cobalt and vanadium concentrations appear to be naturally occurring background concentrations, and they do not exceed current ESLs or RSLs for residential land use (there are no DTSC Modified Screening Levels for cobalt or vanadium). As indicated in the Report, there was only one sample, out of 102 soil samples, in which the cobalt concentration equaled, but did not exceed, the ESL and RSL. While the concentrations of benzo(a)pyrene and dibenz(a,h)anthracene detected in one soil sample collected during the 2016 study exceeded the ESLs and RSLs established in 2016, these concentrations of benzo(a)pyrene and dibenz(a,h)anthracene are below the current ESLs, RSLs, and DTSC Modified Screening Levels.

Section III: Data Gaps Requiring Clarification or Further Evaluation

The following information is required to allow further evaluation of Site conditions prior to any demolition or soil disturbing activities in the area of boring E-5 where PCBs were detected in soil exceeding residential screening levels:

- **Section 4.2 of the Report should be revised to include a discussion of additional investigation and excavation to address the PCBs in soil in the area of boring E-5 as detailed in the Revised ESMP.**