

MEMORANDUM

DATE June 16, 2025

TO Danielle Condit, Associate Planner
Community Development Department, City of Cupertino

FROM Rachel Goren, Associate
PlaceWorks

SUBJECT Peer Review Comment of the Phase I ESA, Phase II ESA, and Soils Removal Action for
10621 Madera Drive Cycle 2

Pursuant to your request on May 8, 2025, PlaceWorks has conducted a third-party peer review of the Cycle 2 revised Phase I Environmental Site Assessment (ESA), revised Phase II ESA, and Removal Action Workplan (RAW) for 10621 Madera Drive prepared by Enviro Assessment, PC on March 11, 2025, March 27, 2025, and March 31, 2025, respectively. The site is currently being considered for the future development of a proposed residential development.

On May 23, 2025, Dr. Cathleen Fitzgerald, PE, Senior Engineer, completed her review of the revised Phase I and Phase II ESA reports and RAW for the site. Attached are Dr. Fitzgerald's comments on the revised Phase I ESA, Phase II ESA, and RAW. Each attachment is separated into general comments and specific comments organized by section and page number, if applicable.

The comments regarding the Revised Phase I ESA are relatively minor and do not require immediate action or revision. The comments regarding the Phase II ESA and RAW are intended to reflect what typically would be required by the oversight agency who is reviewing the proposed development. It would be best to contact the oversight agency, likely Santa Clara County Department of Environmental Health, to submit an application for regulatory oversight and enter into a remedial action agreement, before making any additional changes to the reports. The oversight agency will determine if additional lateral and vertical delineation is required or if the applicant can proceed with remedial actions (i.e., excavation) while sampling and evaluating the amount of soil to be removed from the site.

Please let us know if you have any comments or concerns regarding this third-party peer review.

REVISED PHASE I ESA PEER REVIEW COMMENTS

For Proposed Residential Project at 10621 Madera Drive Cupertino, CA

PROJECT: Proposed Residential Project and Lot Split at 10621 Madera Drive, Cupertino, CA
DOCUMENT TITLE: – Enviro Assessment PC., <i>Phase I Environmental Site Assessment, Subject Property, Madera Drive Property, 10621 Madera Drive, Cupertino, CA 95014. Dated December 7, 2023 – Corrected March 11, 2025.</i>
REVIEWER: Dr. Cathleen Fitzgerald, PE, Senior Engineer
DATE: May 23, 2025
General Comments
The revised Phase I Environmental Site Assessment (ESA) has addressed most of the previous comments provided by PlaceWorks in the first review cycle. A summary of our comments follows: 1) The executive summary now includes potential Business Environmental Risks (BERs). 2) The executive summary now includes vapor intrusion risk as well as a short discussion in Section 8.3. 3) Additional topographic maps were reviewed and included in the report and appendix. 4) The conclusions and recommendations sections of the Phase I ESA now recognize the potential for OCPs to be present around the perimeter of the single-family dwelling due to the application of termiticides. However, there is no discussion of the potential for arsenic to be present in soil as the result of previous agricultural use, which should be identified as a REC (additional soil sampling did include testing for arsenic in the soil and concentrations were found to be below levels of concern). 5) The presence of lead-based paint, which was identified as a business environmental risk, is not discussed in either section of the executive summary. However, the additional soil sampling investigation as reported in the Phase II ESA did include testing for lead in the soil around the residence and concentrations were below levels of concern. 6) Section 9, Conclusions, does not discuss the potential for arsenic to be present because of past agricultural use and does not include the potential for lead-based paint to be present in soil around the residence. These two issues were subsequently included in the revised Phase II ESA soil investigation and have been resolved. 7) Section 11 now includes a resume for Stephen Ashe, who conducted the site inspection. However, the resume does not indicate whether he is currently 40-hour HAZWOPER certified, which is a requirement for conducting Phase II ESAs and will be required in conducting the remedial actions planned in the future.

C2 PHASE II ESA PEER REVIEW COMMENTS

For Proposed Residential Project at 10621 Madera Drive Cupertino, CA

PROJECT: Proposed Residential Project and Lot Split at 10621 Madera Drive, Cupertino, CA
DOCUMENT TITLE: – Enviro Assessment PC., <i>Phase II Environmental Site Assessment, Madera Drive Property, 10621 Madera Drive, Cupertino, CA 95014. Dated March 27, 2025.</i>
REVIEWER: Dr. Cathleen Fitzgerald, PE, Senior Engineer
DATE: May 23, 2025
General Comments
The revised Phase II Environmental Site Assessment (ESA) addressed many of the comments that PlaceWorks provided in the previous peer review memorandum. Two additional sampling events were conducted at the site and analyses were conducted for OCPs and lead around the building footprint, as recommended. The cleanup levels were revised to compare site concentrations to DTSC Screening Levels (SLs) for residential soil. PlaceWorks agrees that the levels of arsenic and lead present in soil at the site are below levels of concern and no further evaluation is required for these chemicals. However, these previous comments provided by PlaceWorks regarding the Phase II ESA were not addressed: • No indication of who collected the data during the field investigation and whether they are qualified and HAZWOPER certified • No chemical analyses to determine if the soil on site would be considered a California non-RCRA hazardous waste (STLC analysis) or a Federal RCRA hazardous waste (TTLIC), which would determine the appropriate landfill for disposal • No QA/QC program to evaluate the validity of the analytical results • No discussion of the regulatory requirements needed to proceed with additional investigation and/or removal actions (it is likely that it would be the Santa Clara County Department of Environmental Health [DEH], which requires a voluntary cleanup program application, remedial action agreement with the agency, and preparation and approval of a Soil Management Plan). Additional general comments are as follows: • As stated in Section 5, this follow-up investigation did not identify the lateral and vertical extent of contamination. Typically, the oversight agency will require additional step-out sampling to determine the extent of contamination prior to conducting any excavation activities • Plates B1 and B2 do not have a scale on the drawing. Therefore, the distances between the step out samples cannot be determined. DTSC requires soil samples for OCPs to be collected within two feet of the building footprint. It is not known if the samples were collected within this distance. • Although DTSC SLs were used to determine if soil at the site exceeded levels of concern, DEH and other agencies often use the San Francisco Bay RWQCB Environmental Screening Levels (ESLs) for residential soil exposure. For many chemicals, these levels are more stringent (i.e., lower) than the DTSC SLs. Enviro Assessment should consider that the oversight agency may require the use of RWQCB ESLs, which could

result in some areas that have been identified as below levels of concern (i.e., do not need excavation) to areas that would require excavation.

- The Conceptual Site Model is described in vague terms on page 7. However, it does not include a diagram that includes the primary sources of contamination, potential release mechanisms, points of exposure, exposure routes, and which pathways are complete or incomplete for receptors (residential or workers). Also, no human health screening evaluation was conducted, which compares maximum soil concentrations to cumulative exposure risk and hazard for all chemicals of concern found at the site. Because there are multiple OCPs identified at the site, if all these chemicals were remediated to their respective DTSC SLs, the cumulative impact would still exceed the cancer risk of one in a million. Therefore, individual chemical cleanup levels may be necessary to ensure that the cumulative risk is less than one in a million. Once the excavation activities have been conducted, the maximum concentrations remaining in soil should be evaluated with a human health screening evaluation to ensure that residual concentrations at the site are below the cumulative risk level to future residents.
- The first round of soil sampling on December 13, 2023 detected chlordane and toxaphene at concentrations exceeding DTSC SLs at S-3. However, no additional step-out sampling was conducted during the second and third round of sampling to determine the extent of contamination at this location. This area needs further evaluation to determine the lateral and vertical extent of OCPs in soil.

C2 REMOVAL ACTION WORKPLAN PEER REVIEW COMMENTS

For Proposed Residential Project at 10621 Madera Drive Cupertino, CA

PROJECT: Proposed Residential Project and Lot Split at 10621 Madera Drive, Cupertino, CA
DOCUMENT TITLE: – Enviro Assessment PC., <i>Removal Action Workplan, Madera Drive Property, 10621 Madera Drive, Cupertino, CA 95014. Dated March 31, 2025.</i>
REVIEWER: Dr. Cathleen Fitzgerald, PE, Senior Engineer
DATE: May 23, 2025
General Comments
Enviro Assessment prepared a Removal Action Workplan (RAW) that summarizes the results of previous investigations, the nature and extent of soil contamination, a summary of remedial action goals, description of remedial action alternatives, and an implementation plan for the proposed action. The following general comments are provided below: • The vertical and lateral extent of contamination has not been defined at the project site. Of particular concern is that no step-out sampling was conducted around S-3 which has elevated soil concentrations of chlordane and toxaphene. And some of the soil sample locations have contamination at the 2-foot depth, although the RAW states that excavation would occur only to a depth of two feet. Typically, the oversight agency, whether it is the Santa Clara County Department of Environmental Health (DEH) or the Department of Toxic Substances Control (DTSC), will require the limits of contamination to be defined prior to conducting any remedial actions. • It is possible that the DTSC Screening Levels (SLs) used as cleanup goals in the RAW may not be appropriate, depending on the agency that will provide oversight on this project. The DEH and most consultants in the Bay Area use RWQCB Environmental Screening Levels (ESLs), which are in most instances, more stringent than the DTSC SLs. • As discussed in PlaceWorks' previous comments on the Phase II ESA and Proposed Removal Action reports, the soil samples need to be tested for STL and TTL values to determine the appropriate classification of the impacted soil and where the soil can be landfilled. PlaceWorks provided these comments prior to the second round of soil sampling at the site, yet these analyses have not yet been conducted. • The frequency of confirmation sampling proposed in the RAW is not consistent with DEH's sampling requirements, which is every 400 square feet for the bottom of the excavation and every 25 linear feet for the sidewall samples. • A Human Health Screening Evaluation was not included in the RAW, which is used to determine the potential cancer risk and hazard index to future residents based on the maximum chemicals of concern (COCs) in soil at the site under existing conditions. • Although a QA/QC plan is provided in the RAW for the future removal action efforts, no QA/QC validation was provided for the previous soil sampling efforts conducted at the site. This is needed to verify the validity of the analytical results. • The excavation amounts provided in Plates B3 and B4 could not be verified, since there is no scale on the figures. Also, the limits of excavation exclude areas with COC concentrations in excess of cleanup goals (i.e., RS-2 and S-3). The area beneath the driveway and where the tree is

located (which will be removed as part of the project) may require excavation; no soil sampling has been conducted in these areas.

- Per PlaceWorks' previous peer review comments, the qualification of the person that collected the soil samples at the site has not been provided in this report nor in the revised Phase II ESA (i.e., whether they are 40-hour HAZWOPER certified and qualified to do this work). Similarly, the person that will conduct remedial action efforts at the site and act as the Site Safety Officer in the Health and Safety Plan has not been identified.

SPECIFIC COMMENTS

Comment No.	Document Section/Page	Comments	Response
1	Site History, page 4	The last sentence should include that sampling around the residence for OCPs was also identified as a REC, per the revised Phase I ESA.	
2	Phase II Environmental Site Investigation, page 8	First paragraph: Step-out sampling should also have been conducted around S-3, which also had elevated concentrations of chlordane and toxaphene above DTSC SLs. This is a gap in the site evaluation; the limits of contamination in this area have not been evaluated.	
3	Nature and Extent of COCs, page 9	As stated above, the oversight agency may require the use of RWQCB ESLs for cleanup levels, instead of DTSC SLs. The ESLs are more stringent. For example, the residential ESL for chlordane is 0.48 mg/kg as compared to the DTSC SL of 1.7 mg/kg. Therefore, the limits of contamination may extend beyond what has been identified in this report if different cleanup levels are implemented.	
4	Nature and Extent of COCs, page 9, 2 nd paragraph under Chlordane	The first sentence states that chlordane is limited to the upper 2 feet. However, there is chlordane present in the 2-foot sample of RE-1, which is above DTSC SLs. Therefore, the contamination may extend beyond 2 feet below ground surface. The second sentence states there is one area where the lateral extent of chlordane has not been determined. The extent of chlordane has not been determined (both laterally and vertically) in sample S-3.	
5	Nature and Extent of COCs, page 9, 2 nd paragraph under DDE	Same comment as #4. The depth of contamination has not been determined at RW-2, duplicate sample, which shows DDE above DTSC SLs at the two-foot depth.	
6	Nature and Extent of COCs, page 10, 2 nd paragraph under DDT	Same comment as #5. The depth of contamination has not been determined at RW-2, duplicate sample, which shows DDT above DTSC SLs at the two-foot depth.	

7	Nature and Extent of COCs, page 10, 2 nd paragraph under Dieldrin	Same comment as #6. The depth of contamination has not been determined at S-1, which shows dieldrin above DTSC SLs at the two-foot depth. Although test pits were conducted near the step out samples around S-1, no sample was collected below 2 feet at this specific location.		
8	Nature and Extent of COCs, page 10, Toxaphene	Toxaphene should be added to Plate B-2 at the location where it exceeded the DTSC SL (RN-1). The second paragraph states that toxaphene appears to be limited to the upper two feet of soil. However, the depth and lateral extent of contamination has not been determined in and around S-3.		
9	Targets Potentially Affected by the Site, pages 10 and 11	The conceptual site model (CSM) shown on Plate B5 is incomplete and incorrect (see Comment 33). Although the third paragraph on page 11 correctly identifies the exposure points and complete exposure pathways (i.e., ingestion and dermal contact exposure), this is not what is shown on Plate B5.		
10	Environmental Screening Risk Evaluation, page 12	The sentence that states that after implementation of the RAW, the COC-impacted soil will be capped should be removed since the preferred alternative is to remove all impacted soil from the site. Also, it is stated that the potential for releases of hazardous materials from the site to the atmosphere should be considered de minimis. This is only true if all appropriate dust control measures are implemented. COC-impacted soil has the potential to be released into the atmosphere as particulate matter during excavation activities if the dust control plan and perimeter monitoring are not conducted.		
11	Cleanup Goals, page 12	As stated in the general comments, it is possible that the oversight agency directing the site remediation activities may require more stringent cleanup goals (i.e., RWQCB ESLs in lieu of DTSC SLs). PlaceWorks agrees that arsenic and lead are not chemicals of concern at the site. Also, a Human Health Screening Evaluation should be included here that shows the current maximum concentrations of OCPs in soil at the site exceed the risk of one in a million and hazard index of 1.0, if corrective action at the site is not implemented.		

12	Remedial Action Alternatives, page 13	Although PlaceWorks agrees that Alternative 2 can be considered as a potential remedial action (although not likely acceptable to the oversight agency), it is very confusing as to how this would be implemented. It is stated that excavation and off-site disposal for soil exceeding hazardous waste limits would occur, with the remainder of the soil with COC concentrations exceeding residential cleanup goals capped beneath the proposed building pad. What is the differentiation between soil exceeding hazardous waste limits and soil exceeding residential cleanup goals? How would this be determined? Also, if the Land Use Covenant (LUC) prohibits sensitive land uses, aren't residences considered sensitive land uses in California?		
13	Alternative 2, page 14	The two paragraphs that discuss Alternative 2 – Limited Removal/Off-Site Disposal and On-Site Capping are contradictory. The first paragraph mentions limited removal and off-site disposal of OCP impacted soil. The second paragraph says that all excavated soil will be capped on-site. Which one is it? Also, it is stated that the LUC will prohibit sensitive uses; however, residences are considered sensitive receptors.		
14	Alternative 3, page 15	This alternative involves the removal of all impacted soil above cleanup levels and off-site disposal. The amount of excavated soil could not be verified because there is no scale on Plates B3 and B4 and the limits of excavation do not extend to the lateral and vertical extent of contamination in some areas. It should be noted that the imported soil will need to be tested as per DTSC's <i>Information Advisory Clean Imported Fill Material Fact Sheet</i> .		
15	Evaluation of Remedial Alternatives, page 17	Alternative 2 states that the highest concentration of OCPs detected will be removed for off-site disposal (what is the concentration threshold for off-site disposal?). Table C, Estimated Costs, does not include any cost for off-site disposal for Alternative 2.		
16	Table C, Estimated Costs, pages 18-19	The cost tables for Alternatives 2 and 3 do not include the oversight costs for the regulatory agency that will oversee the project. Also, the cost for Alternative 3 includes transport and disposal of 245 cubic yards of impacted soil to the Kettleman Hills facility. However, it is not known whether the impacted soil would be considered a California non-RCRA hazardous waste or a RCRA hazardous waste because the soil samples were not analyzed for STLC or TTLC levels and therefore, the appropriate landfill cannot be determined until this sampling is conducted. And Alternative 3 should also include the costs for sampling imported fill.		

17	Removal Design Implementation Plan, page 21	The second bullet item states that the Removal Design Implementation Plan will include specification for subgrade preparation and engineered fill placement in the building pad. However, this assumes that Alternative 2 would be implemented when the section above states that Alternative 3 would be implemented and all impacted soil will be excavated and transported for off-site disposal.		
18	Contractor's Licensing and Training, page 21	It is still not known whether Enviro Assessment's field technician is 40-hour HAZWOPER certified, which is required for conducting soil sampling and oversight excavation activities. This was a comment in the previous review cycle and still has not been addressed in any of the reports.		
19	Health and Safety Plan, page 21	The Health and Safety Plan provided in Appendix A is very generic and does not provide sufficient detail for this specific project (see Comment 34).		
20	Dust and Erosion Control Plan, page 24	The Dust and Erosion Control Plan should address BAAQMD's <i>Basic Construction Mitigation Measures</i> . It appears that some required provisions are not included in this section. For example, a publicly visible sign must be posted with the telephone number and person to contact regarding dust complaints and idling times for on-site equipment is restricted to 5 minutes.		
21	Excavation/Off-Site Disposal and Verification Sampling, page 26	The areas of excavation for off-site disposal do not include the area around S-3; therefore, the quantity of soil for off-site disposal is not correct. Also, this section states that the verification sampling program will include bottom samples for every 2,500 square feet of excavation and sidewalls samples at 40-foot intervals. This is not consistent with what has been required by DEH. DEH requires sampling at a frequency of every 400 square feet of excavation for a bottom sample and every 25 linear feet for sidewall samples.		
22	Table C. Sample Handling and Testing Requirements, page 27	This table should be labeled Table D. Table C is provided on page 18.		
23	Quality Assurance/Quality Control Plan, page 28	While PlaceWorks agrees that this plan should be implemented as part of the removal actions, a QA/QC plan should have been included in the Phase II ESA to verify and validate the sampling results.		
24	Soil Sampling/Laboratory Analysis for Off-Site Disposal Profiling, page 31	It is stated that the COC-impacted soil will be profiled per the requirements of the accepting facility. However, the profiling should be done during additional step-out sampling and the samples analyzed for STLC and TTLC in order to determine the appropriate disposal facility.		

25	Disposal Facilities and Transportation Plan, page 31	This table should be labeled Table E. Also, it is not known if Kettleman Hills is the appropriate disposal facility because it has not yet been verified whether the impacted soil at the site is a California non-RCRA hazardous waste or a RCRA hazardous waste, which would determine the appropriate disposal facility. Also, the amount of soil to be removed off-site cannot be accurately determined until the area around S-3 is evaluated to determine how much soil must be removed from this area. One week for the removal and disposal of the soil may be optimistic, since it will probably take several iterations of excavation before the confirmation samples show that the cleanup levels have been met.	
26	Soil Stockpiling Procedures, page 32	The first sentence states that the contaminated soil shall be loaded directly onto the hauling truck. This is not likely to be acceptable because the receiving landfill and/or the oversight agency will require the impacted soil to be sampled at a frequency determined by the landfill or agency prior to acceptance at the landfill, unless the soil classification (i.e., non-hazardous, California non-RCRA hazardous, or RCRA hazardous) has been predetermined and is acceptable to the landfill. Also, the fourth sentence states that a COC-impacted stockpile will be covered with plastic sheeting if the stockpile remains on-site for greater than 48 hours. This is inconsistent with the dust and erosion control plan, which states that stockpiles will be covered during non-working hours. It is also inconsistent with the City of Cupertino's construction Best Management Practices (BMPs) that states that stockpiles must be covered.	
27	Storm Water Protection, page 32	A SWPPP is not applicable for this project, since the amount of disturbed soil will be less than one acre. The cited references for storm water pollution controls are out of date and have been superseded by the CASQA Construction BMP Handbook. As stated in Comment No. 26, covering the soil stockpiles with plastic sheeting or tarps during rainfall events is not acceptable; they must be always covered when work is not being conducted at the site. And the last sentence that SWPPP implementation will be monitored by the QSP is not applicable, since no SWPPP is required for this project.	
28	Compaction Requirements, page 33	There is no discussion in the section regarding the need for all imported soil to be sampled in accordance with DTSC's <i>Information Advisory on Clean Imported Fill Material</i> prior to transport onto the site. Alternatively, sampling may not be required if the source of the fill material is verified through documentation that it does not contain potential contaminants.	

29	Re-Use of On-Site Soils, page 33	This section discusses consolidation of soil into the cap area, which has been dismissed previously as it is not the selected alternative for the RAW.		
30	Removal Action Completion Report and Certification, page 34	The City is not the appropriate agency to certify that the removal actions have been appropriately implemented. Certification would be subject to the oversight agency's approval that the work has been properly completed.		
31	Plate B3	The immediate area around S-1 will need to be excavated to a depth greater than 2 feet because the 2-foot sample has dieldrin present at concentrations greater than the proposed cleanup levels. Also, there is no scale on the figure so the amount of excavated soil could not be verified. The frequency of confirmation samples in the sidewalls is much less than the frequency required by DEH.		
32	Plate B4	As discussed in Comment No. 31, the amount of soil to be excavated could not be confirmed because there is no scale on the figure. Also, the depth of excavation will exceed two feet at two locations (RW-2 and RE-1) and the area around RS-2 has not been included in the area to be excavated, although it exceeds the cleanup level for chlordane. The tree present in the northwest corner of the residence will be removed and the excavated area may need to extend to this location, as well as the area under the driveway, which has not been previously sampled. This will change the amount of soil to be excavated. In addition, the frequency of confirmation sampling (i.e., once every 40 feet for sidewall samples) is not in accordance with DEH requirements. Also, excavation quantities around S-3 have not been determined because no step-out sampling has been conducted at this location.		
33	Plate B5	The conceptual site model shown here is incorrect and incomplete and contradicts what is provided on page 11 of the report. The CSM shows no complete exposure pathways for residents at the site. The purpose of the CSM is to show potential exposure pathways under current conditions, which is the reason why remedial actions are necessary. The CSM does not identify soil as a point of exposure or exposure pathway, which is the primary exposure pathway for this project. Also, the only potential exposure point for air is inhalation of particulate matter, not dermal and ingestion. And ingestion is spelled wrong on the figure. It's ingestion, not injection. This conceptual model needs to be redone.		

34	Health and Safety Plan	The Health and Safety Plan (HASP) is very generic and does not meet the requirements of a site-specific HASP. It appears to have been written for another project. For example, under Section 2.0, it states that each facility will have a designated Health and Safety Representative, who is a liaison to Corporate Manager of Health and Safety, who will report directly to the President or CEO. And under 7.4, it states that employees working with a hazardous chemical may request a copy of the MSDS. This is not applicable to the project. Section 11, <i>Site-Specific Health and Safety Plan</i> does not provide any specific details pertinent to this project. It states that the manager for site operations shall be James Robinson. However, he is based in Idaho and it is unlikely that he will be performing the excavation activities at the site. No Site Safety Officer for Enviro Assessment LLC is identified in this HASP nor their qualifications to conduct the remedial actions. There is no discussion of the health hazards of the COCs at the site. It is stated that no airborne hazards are anticipated; however, a dust monitoring plan is required due to the airborne transport of COC-impacted particulate matter and perimeter air monitoring may be required by the oversight agency, due to the proximity of adjacent residences. There is no mention of the appropriate level of PPE for this project or the decontamination procedures of personnel leaving the site. It talks about standard drilling procedures, but no drilling is proposed in this plan. The emergency contact information sheet does not include a name or contact information for the Site Safety Officer (on-site representative of Enviro Assessment LLC) nor does it include a map of the nearest route to the hospital from the site, as required.	