

Date: Tuesday, February 20, 2024

To: David Lamadrid, Oregon Department of Environmental Quality

From: Johnny Ramus and Gil Cobb, Point Source Solutions

RE: ECSI #6219 – Solterra Property (Brio Lofts) – Construction Completion Report (CCR)

David,

The following revisions to the Construction Completion Report have been added in response to DEQ's comments contained in this February 14, 2024, memorandum.

DEQ – 1) Page 6, Confirmation Sampling, and Figure 5: *“The DEQ’s August 23, 2022, comment letter requested clarification or additional information related to confirmation sampling; however, some items were not addressed in the revised CCR. Items a through c below are excerpts from the August 23, 2022, comment letter that were not addressed:”*

“a. A dashed red line around sample SG1-S1-15 appears to attempt to show the extent of remaining contamination soil contamination. However, this figure shows only one other soil sample collected in the vicinity (i.e., SG3-S1-8), approximately 25 feet away. The interpreted extent of contamination appears to be conjectural and based on limited soil data. Was the inferred extent of contamination around sample SG1-S1-15 based on other confirmation samples not shown on the figure, estimated attenuation rates, or other data (e.g., visual, olfactory or PID screening)? Please clarify.”

Point Source acknowledges the difficulty to visualize of the extent of contamination and confirmation sampling locations within Figure 5 and agrees with DEQ that the interpreted extent of contamination is conjectural in that it is based on limited analytical data. However, the screening of soils during the mass excavation and therefore the inferred extent of contamination around the confirmation samples was noted throughout the text as being *“identified using visual and olfactory observations, as well as field screening using a handheld photoionization detector (PID)”*. Point Source will make updates to the revised CCR to further clarify field methods used for soil screening. Below is a brief description to clarify details of the two aforementioned soil samples.

Soil sample SG1 was collected from the floor/terminal depth of the mass excavation at 15.0 feet bgs in a small area of visually observed PCS that spread downward through the soil profile from the former USTs removed in 2019. The inferred extent of remaining soil contamination (red line) was confirmed in the form of visual staining, odor, and volatile organic compound (VOC) detections with PID screening and was estimated to be 78.5 square feet based on visual observations.

Soil sample SG3 was collected from the south sidewall of the mass excavation at 8.0 bgs between two soldier piles before the installation of the timber lagging. This sample was collected to represent lateral delineation and soil conditions behind the future south subgrade basement wall. No indications of PCS in the form of visual staining, odor, or VOC detections with PID screening were noted in this sample location as well as in the surrounding soils.

Point Source made updates to the applicable sections in the revised CCR to include the above clarifications.

“b. Please explain if there were any site-specific factors that prevented the collection of confirmation soil data from the oval-shaped removal area between the northern and southern removal areas.”

Point Source acknowledges the difficulty to visualize of the extent of contamination and confirmation sampling locations within Figure 5 and request to clarify. The oval-shaped removal area between the northern and southern removal areas represents PCS that existed higher in the soil profile at 8.0 to 11.0 feet bgs and was fully removed during the mass excavation. Soil segregation for disposal was determined by visual, olfactory and PID screening. The black oval only represents PCS that was removed, not PCS that remains.

Point Source made updates to the applicable sections in the revised CCR to include the above clarifications.

“c. This figure shows that contaminated soil was observed at depths extending to 35 feet below ground surface (bgs) near 9 piles driven to support shoring for the excavation. Please describe if there were any logistical, access, or technical limitations to collecting soil samples from this area to characterize the magnitude of remaining contamination in the south sidewall.”

Point Source determined that adequate analytical data had been collected during the August 2017 Subsurface Environmental Investigation, April 2018 Memorandum, and August 2018 Soil Gas Vaporing Testing, and that additional sampling at the base of the piles (35 feet bgs) would not provide additional beneficial information given the planned engineering control for the Site. It was Point Source’s understanding that DEQ was satisfied with delineation efforts and that the provided analytical data was appropriate to make assumptions of the extent of contamination at the Site.

“Responses to these items should be provided. Additionally, confirmation samples were analyzed for diesel-range petroleum hydrocarbons and volatile organic compounds. Please explain why confirmation samples were not analyzed for polycyclic aromatic hydrocarbons (PAHs).”

PAHs were analyzed during the August 2017 Subsurface Environmental Investigation at depths representing remaining PCS of 30.0 feet and 40.0 feet bgs.

DEQ – 2) **Page 8, table titled Contaminants of Interest:** *“The table highlights concentrations above a screening level RBC and as a result are then considered contaminants of potential concern (COPCs), but the table and associated text do not indicate which specific RBCs were used (also see comment No. 4 below). Please describe how the COPCs were determined through the screening process (i.e., were COI concentrations screened against the most conservative RBCs?). DEQ also notes that the screening evaluation should follow discussion of beneficial land and water use, and exposure pathways and receptors, on pages 10 and 11 to provide context for selecting relevant RBCs.”*

Point Source made updates to the applicable sections in the revised CCR to more clearly describe the selection of COPCs and the risk screening evaluation.

DEQ – 3) **Page 9, Extent of Contamination, Soil, and Figure 5:** *“Two estimates of the volume of contaminated soil remaining in the southwest portion of the site are provided: one for soils represented by confirmation soil sample SG1-S1-15, and one for soils encountered during pile driving from 20 to 35 feet below ground surface. Clarify what assumption(s) was used for the lateral extent of contaminated soils encountered during pile driving, in particular toward the south beneath the adjacent sidewalk and potentially N Failing Street.”*

Point Source acknowledges the difficulty to visualize of the extent of contamination and confirmation sampling locations within Figure 5 and request to clarify. Reporting two separate estimated volumes seemed appropriate due to the lack of analytical data to confirm that those PCS volumes are from the same plume or even resulted from the same source i.e. LUST #26-14-1732 or December 2018 USTs.

To clarify what assumptions were made, Point Source conducted an August 2017 Subsurface Environmental Investigation to access the extent of PCS encountered in a geotechnical boring advanced in the southwest corner of the Site in June 2017. That investigation identified PCS exceeding Urban Residential RBCs for Vapor Intrusion into Buildings at various depths between 9.0 feet to 51.0 feet bgs in the southwest corner of the Site. Based on the data, Point Source submitted a DEQ requested memorandum with cross sections dated April 17, 2018, detailing the newly identified PCS plume. Between the August 2017 Subsurface Environmental Investigation, April 2018 Memorandum, and August 2018 Soil Gas Vapor Testing, it was Point Source's understanding that DEQ was satisfied with delineation efforts and that the analytical data was appropriate to make assumptions of the lateral extent of contamination at the Site.

DEQ – 4) **Page 10, Receptors, Pathways, Human Health and Ecological Risk Assessments:** *“This section and Tables 1 through 5 imply that the only exposure pathway considered is soil vapor intrusion into the building; however, direct contact/inhalation to future construction and excavation workers are also potentially complete exposure pathways. Clarify if COPCs considered all potentially complete exposure pathways. Also, for completeness, the summary tables should include RBCs for direct contact/inhalation for construction and excavation workers.”*

Please refer to the third bullet point on page 11 under Receptors, Pathways, Human Health and Ecological Risk Assessments to find the inclusion of “adults in the future construction/excavation worker scenario” as a potential human receptor. COPCs were compared and considered for all applicable exposure pathways. Point Source has included in the Revised CCR a more thorough risk assessment and agrees with DEQ that for completeness include RBCs for direct contact/inhalation for construction and excavation workers into the summary tables. Please note that we are already comparing the analytical data to the most stringent applicable RBCs for this site.

DEQ – 5) **Page 11, Receptors, Pathways, Human Health and Ecological Risk Assessments, and Figure 8:** *“The revised CCR notes that an ecological risk assessment was performed according to guidance outlined in “Conducting Ecological Risk Assessments” (DEQ, September 2020), and that a Basic Site Information Checklist with supporting documentation is included in Appendix H.”*

“a. Figure 8, Ecological Assessment, is listed in the table of contents and is included in the Figures section of the report; however, this figure is not referenced or discussed in the text.”

Point Source has included Figure 8 into the text of the revised CCR.

“b. Appendix H does not include the Basic Site Information Checklist and supporting documentation; it includes only the same Figure 8, Ecological Assessment, that is presented in the Figures section of the report.”

Point Source has included the Basic Site Information Checklist with all supporting documentation into Appendix H of the revised CCR.

“c. This section should include brief discussion of how the guidance document was used to assess ecological risks (if any) at the site, including how the Basic Site Information Checklist and Figure 8 were used as part of the assessment, and the results of the assessment.”

Point Source has included the ecological risks assessment in the text of the revised CCR.

DEQ – 6) Page 11, Sub-Slab Vapor Barrier and Ventilation System:

“a. The report should include a statement regarding whether the vapor mitigation system was constructed in accordance with the approved design documents and identify all deviations with supporting justification for why each deviation was necessary. DEQ notes that in addition to the one deviation noted in the CCR, there appears to be a discrepancy between the text which indicates that a minimum 2” of crushed stone was placed between the vapor barrier and the concrete slab, and drawing C03 in Appendix F which shows the vapor barrier installed directly below the concrete slab. This section would further benefit from references to the applicable design document for the vapor mitigation system and date of DEQ approval, along with documentation of DEQ’s approval of the noted design deviation, where available.”

Point Source included a statement regarding the adherence and reference to approved design documents into the text of the revised CCR. Point Source acknowledges the mention of the “minimum 2” of crushed stone to prevent slab cracking” between the vapor barrier and concrete slab. The installation requirement of the “minimum 2” of crushed stone to prevent slab cracking” was actually between the 4” PVC piping and the vapor barrier and was installed per approved design documents. Point Source made updates to the applicable sections in the revised CCR. DEQ provided comments on the PBS design document on January 9, 2019 and PBS responded with the revisions on February 2, 2019 (provided via email to Rob Hood, Jeff Schatz and Sarah Greenfield).

“b. Figure 7, Passive Ventilation System, is listed in the table of contents and is included in the Figures section of the report; however, it is not referenced or discussed in the text.”

Point Source has included Figure 7 into the text of the revised CCR.

“c. The perimeter, perforated vent piping is described as being “illustrated in Sheet C02 of the PBS Smoke Testing Memorandum”. It would be more appropriate to reference Figure 7 (modified as described above) or the Vapor Mitigation System Design in Appendix F.”

Point Source has included the more appropriate reference in the revised CCR.

“d. The Vapor Mitigation Design document in Appendix F is referenced at the end of the second paragraph only to call out a particular deviation from the design. The design document should be referenced at the beginning of this section and a statement made that the as-built design was constructed in general accordance with this document.”

Point Source has included the more appropriate reference in the revised CCR.

“e. The Vapor Mitigation Design document is described as “the as-built schematic included in Appendix F”. This text should be modified to indicate that it is a pre-construction design document approved by DEQ.”

Point Source has included the more appropriate reference in the revised CCR.

DEQ – 7) Page 12, Sub-Slab Monitoring Points:

“a. The revised CCR notes the monitoring probes were “. . . terminated in the sub-slab aggregate base material over the 40 mil vapor barrier . . .” The probe design detail in Figure 6, however, shows the probe pin does not penetrate the depth of the concrete. Please confirm actual penetration depths of the probes.”

The Vapor Pin® monitoring probes are installed as per the design detail in Figure 6 and do not penetrate the full depth of the concrete. Point Source will update the applicable text of the revised CCR.

“b. It should be stated that sub-slab monitoring reports were prepared after each monitoring event and submitted to DEQ.”

Point Source has included these mentions in the revised CCR.

DEQ – 8) Appendix F, PBS Redline Design Document: *“This appendix includes the pre-construction document entitled Revised Brio Lofts Vapor Mitigation System Design, prepared by PBS Engineering and Environmental, dated December 2, 2020. It is DEQ’s understanding that as-built system design drawings are currently unavailable or cannot be found. As-built system design drawings should be submitted to DEQ in the event they are recovered or found in the future.”*

Point Source acknowledges this request.