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May 27, 2025, *via electronic delivery*

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Subject: DEQ Comments on the Focused Feasibility Study and Post RD/RA Implementation Report
Irwin Hodson Site
Portland, Oregon
ECSI # 6399

Heather Brown,

The Oregon Department of Environmental Quality (DEQ) has prepared this letter for the Irwin Hodson Company Site (Site), which conducts cleanup work under a voluntary cleanup agreement. This letter provides comments for the *November 12, 2024, Focused Feasibility Study* (FFS) *and the March 5, 2025, Post RD/RA Implementation Report* (Performance Monitoring Report) prepared by EVREN Northwest, Inc., (ENW) on your behalf.

DEQ has expressed concerns that volatile organic compounds (VOCs), particularly trichloroethene (TCE), have rebounded to elevated concentrations in sub-slab soil vapor following excavation activities in 2021 to remove TCE-impacted soil. Elevated concentrations above risk-based concentrations, including hot spot levels, indicate VOC source(s) are present that continue to pose unacceptable vapor intrusion risks. Oregon environmental cleanup law and regulations require the treatment or excavation of hot spots to the extent feasible. DEQ requested the FFS to evaluate viable remedies to treat hot spots of contamination to the extent feasible. Based on our review, the FFS does not achieve this objective.

Our comments on the FFS and Performance Monitoring Report are provided below.

FFS General Comments

1) The FFS was not prepared in accordance with DEQ guidance (e.g., *Guidance for Conducting Feasibility Studies*, *Guidance for Identifying Hot Spots*, *Guidance for Assessing and Remediating Vapor Intrusion into Buildings*) to meet the statutory requirements provided in ORS 465.315 or the applicable regulatory requirements provided in OAR 340-122.

2) The purpose of the FFS is to evaluate removal action alternatives to inform the selection of a Removal Action that will meet the standards for the degree of cleanup provided in ORS 465.315 and OAR-340-122-0040. These standards for the degree of cleanup require removal and/or treatment of hot spots of contamination to the extent feasible. The FFS does not include an adequate removal action alternative to achieve the purpose of the FFS. DEQ requires that Irwin Hodson revise the FFS to identify and recommend a removal action alternative that removes and/or treats the hot spots of contamination to the extent feasible.

3) For clarification, to-date the cleanup work at Irwin Hodson has been conducted under DEQ's Removal Action authority, as provided in OAR 340-122-0070. The cleanup approach-to-date is more flexible than the formal stepwise cleanup approach that leads to remedial action selection (e.g., Irwin Hodson has not completed a Remedial Investigation or Risk Assessment consistent with the requirements provided in Rule, and there is not enough information to proceed with formal remedy action selection, as described in OAR 340-122-0090). Revise "remedial action" to "removal action" throughout the FFS.

4) The only removal action alternative included in the FFS with the potential to remove and/or treat sub-slab vapor highly concentrated sub-slab vapor hot spots is Alternative 4, consisting of a soil vapor extraction (SVE) system that would be implemented under certain conditions. The description of Alternative 4 indicates that the SVE system would consist of the existing sub-slab depressurization (SSD) system with upgraded blowers. DEQ does not agree that upgraded blowers on the existing SSD system would result in an effective SVE configuration. Additional vapor extraction well(s) that target the sub-slab vapor highly concentrated hot spots are necessary. DEQ considers the SSD technology to be an engineering control, and not a suitable technology for removing and/or treating highly concentrated sub-slab vapor hot spots. DEQ does not approve the conditions for implementing Alternative 4, as modified by this comment.

5) The FFS misrepresents information from previous reports and/or the approval status of various reports and work plans. Revise the FFS to clearly indicate approval status of each report and work plan referenced. Where DEQ provided conditional approval, clearly describe the nature of the DEQ's conditions and caveats.

6) The FFS presents two previously proposed Removal Action Objectives (RAOs) and one new RAO.

    a) The description of RAO #2 differs from the RAO provided in the *Sub-Slab Venting/Depressurization Installation and Focused Soil Removal Action Work Plan* (RAWP). Revise RAO #2 as follows to be consistent with the previously described RAO and incorporate current vapor intrusion (VI) risk-based criteria (RBCs): "Prevent vapor intrusion of TCE at concentrations exceeding the chronic occupational RBC of 3 µg/m^3 in indoor air and the chronic occupational RBC of 100 µg/m^3 in sub-slab vapor."

b) In addition, either RAO #2 should be expanded, or a new RAO should be developed to include: "Prevent vapor intrusion of other contaminants at concentrations that exceed applicable occupational RBCs in indoor air and sub-slab vapor."

c) Revise RAO #3 as follows: "Remove and/or treat hot spots of contamination in sub-slab vapor to the extent feasible."

7) While the VI RBCs were published concurrent with the draft updated *Guidance for Assessing and Remediating Vapor Intrusion into Buildings* (draft updated VI Guidance), the VI RBCs are not considered draft. Further, DEQ clarified several times that the draft updated VI Guidance was suitable for use at cleanup sites. Note that the updated VI Guidance is now final. Revise the FFS to clarify that DEQ's current VI RBCs reflect DEQ's current policy.

8) Revise the FFS to clarify that 1) sub-slab vapor constitutes a medium other than water and that identification of such hot spots are defined in OAR 340-122-0115, and 2) use the current VI Guidance to evaluate hot spots.

9) Clarify throughout the FFS that the SSD system was activated voluntarily by Irwin Hodson without DEQ review of the SSD system design, and without DEQ-approved performance criteria. In addition, clarify that activation of the SSD system was not at DEQ's request, rather at Irwin Hodson's request and DEQ's conditional agreement.

10) The alternatives presented and purpose appear to confuse reduction below hot spots with achieving protectiveness. The final Site remedy will need to achieve protectiveness over the long-term.

FFS Specific Comments

1) **Section 2.4.2, Summary of Focused Site Investigations**. The discussion inferring competing sources is incomplete. For instance, carbon tetrachloride should be carried for further evaluation as it was used in degreasers, and it should not be found in outdoor ambient air. Furthermore, DEQ no longer uses contaminated soil to screen potential VI contaminants as it a poor indicator of VI risks. Contaminants detected in indoor air and sub-slab soil vapor above risk-based concentrations should be considered contaminants of potential concern (COPC). The site has not completed a risk assessment, and all potential contaminants should be carried forward for further evaluation and screened out as appropriate (and as approved by DEQ).

2) **Section 2.4.3., Summary of Remedial and Risk Mitigation Actions**. DEQ provided conditional approval of the removal action proposed in the *Sub-slab Venting/ Depressurization Installation and Focused Soil Removal Action Work Plan*, dated July 22, 2021, consisting of soil excavation with the conditions articulated in DEQ's August 23, 2021. DEQ has not approved the mitigation system design, construction, and operation due to outstanding comments and concerns.

a) Page 13, several statements are incorrect and should be deleted:

i) Remove statement that DEQ requested active mitigation because new VI guidance and RBCs were introduced (draft 2024, final 2025; and revised RBCs 2023, 2024, 2025). DEQ recommended a mitigation system pre-soil excavation activities that provided greater coverage, enhance design, and active mitigation (see comments on all versions of the proposed removal action plan submitted to DEQ in 2021) to provide a higher confidence to address elevated sub-slab VOCs and potential rebound.

ii) Remove the first sentence of this paragraph, as DEQ did not agree with the mitigation criteria developed by ENW or the SSV strategy as proposed in the in 2021 report.

iii) Remove statement that the updated RBCs created a TCE hot spot in sub-slab vapor. This is not factual as hot spots were exceeded at multiple location with a maximum at SUB01 of 1,439,279 mg/m^3. Hot spots should be discussed and accurately identified in the Feasibility Study.

b) See specific comments regarding the air dispersion modeling and subsequent emissions risk screening provided below on the performance monitoring report. Correct text in the FS accordingly.

3) **Section 2.4.5, DEQ Request for a Feasibility Study**. Remove statement that hot spots were newly defined by the current VI guidance.

4) **Section 2.5, Regulatory Framework and Cleanup**.

a) There is no DEQ-approved risk assessment for this site and therefore remove this statement. At present, contaminants that have exceeded indoor air and sub-slab vapor RBC should be considered COPCs, unless explicitly approved otherwise by DEQ.

b) For clarification, DEQ's current VI Guidance does not provide VI risk-based concentrations. Rather, the current VI Guidance refers to RBC tables, which are updated periodically.

5) **Section 2.6, Nature and Extent of Soil Vapor**. This section should summarize historical (pre-removal) conditions and discuss VI concentrations during both passive and active operation of the SSD system.

6) **Section 2.7, LOF**. The description of LOF should be revised to note that soil vapor has been detected outside the building footprint. For instance, soil vapor location, SG10, recently detected 1,100 ug/m^3 TCE at 5.25 feet below ground surface (ft bgs) and 180 ug/m^3 TCE at 9.75 ft bgs.

7) **Section 2.8.2, Hot Spot Levels.**

a) Determining hot spot levels should also include a discussion of "reliably controlled" to determine whether a multiplier should be used to calculate hot spots. With that said, it is reasonable that soil vapor can be reliably controlled using remedial methods for this site and the multiplier appears appropriate.

b) Typically, hot spots are evaluated based on baseline risk (i.e., in absence of engineering controls). It should be clear in this section that the concentrations presented here include an area under the influence of an active mitigation system and that hot spot levels were observed at additional locations under passive mitigation (and presumably would observe a rebound if the mitigation system transitioned back to passive operation).

c) Under active mitigation (since December 2023), in addition to the results provided in this section, more recent concentrations at SUB14 were detected at 6,837 and 10,000 ug/m^3, which further supports that hot spot levels are consistently observed at this location.

8) **Section 3.3, Remedial Technologies.**

a) There is a requirement to treat hot spots to the extent feasible. Generally, more than one treatment technology should be carried forward for comparative analysis using remedial balance factors. The justification to eliminate potentially viable treatment technologies and only retain SVE is weak. With that said, SVE is common treatment method for VI sources in the vadose zone.

b) Mitigation systems (e.g., SSD) are considered engineering controls; they are not treatment technologies.

9) **Section 3.4, Identification of RAAs**. Alternatives 2 and 3 are essentially the same response action with a different approach to evaluate performance. These alternatives do not treat hot spots. Furthermore, DEQ does not agree at this time that SSD is effective or reliable over the long-term as currently designed/operated (see additional comments on performance monitoring provided below). Presumably SSD and performance monitoring would be necessary in perpetuity if VI sources are left untreated.

10) **Section 4.2, Comparative Analysis.**

a) DEQ does not consider SSD as a treatment technology for hot spots. SSD does not provide treatment (e.g., source mass removal) of VI sources. SSD, if designed/implemented effectively, can intercept the VI pathway before entering structure but does not provide treatment.

b) Remove statement that SVE introduces a higher risk to receptors, as air emission evaluation and treatment would be an element of the SVE system. While DEQ supports minimizing disruption to tenants it should not be included in the comparative analysis.

c) Note that there is a higher threshold for evaluating the reasonableness of the costs for treating hot spots than for remediation of areas other than hot spots.

d) No RAA costs were estimated. Revise the FFS to include capital and long-term operation, maintenance, and monitoring costs, adjusted for net present value, consistent with DEQ's *Guidance for Conducting Feasibility Studies*.

11) **Section 5.0, Recommended Remedial Action Alternative**. DEQ does not concur with the recommended RAA. DEQ requests a revised FFS in accordance with DEQ guidance to meet the statutory and regulatory requirements.

General Comments on the Performance Monitoring Report

1) Consistent with the Comments on the FFS, clarify that the SSD system does not constitute a remedial action. Rather, it is a voluntary cleanup measure implemented by Irwin Hodson. At Irwin Hodson's request, DEQ conditionally approved a "removal action" consisting of soil excavation. Note that DEQ has not approved any mitigation related plans due to unresolved comments/concerns. DEQ has not selected a Remedial Action for the Irwin Hodson facility, and cleanup work to-date has been conducted under DEQ's Removal Action authority, as provided in OAR 340-122-0070. Revise "remedial action" to "removal action" throughout the Performance Monitoring Report. As such, this monitoring report, in addition to other project submittals, should not be identified as post-RD/RA documents.

2) The Performance Monitoring Report misrepresents information from previous reports and/or the approval status of various reports and work plans. Revise the Performance Monitoring Report to clearly indicate approval status of each report and work plan referenced. Where DEQ provided conditional approval, clearly describe the nature of the DEQ's conditions and caveats.

3) The Performance Monitoring Report references incorrect or incomplete highly concentrated hot spot criteria. Revise the Performance Monitoring Report to correctly reference highly concentrated hot spot criteria, including hot spots associated with chronic carcinogenic risk, chronic non-carcinogenic risk, and acute non-carcinogenic risk.

4) Revise the RAOs consistent with our comments on the FFS.

5) Revise the Performance Monitoring Report to evaluate data with respect to RAO #3. Sub-slab vapor exceeded highly concentrated TCE hot spot thresholds at SUB14 in both 4th quarter 2024 and 1st quarter 2025. Concentrations of TCE in sub-slab vapor at SUB14 have exceeded hot spot criteria for the previous 4 monitoring events and have increased over the previous 3 monitoring events. Based on these data, DEQ concludes that the existing SSD system will not reliably remove and/or treat sub-slab vapor hot spots. The FFS should be revised to reflect this understanding. In addition, TCE in sub-slab vapor exceeded hot spot criteria at CT17 in 4th quarter 2024.

6) It is not clear whether the SSD system has effectively depressurized the building foundation in all areas where COCs exceed their respective VI RBCs. Revise the Figures to include TCE isopleth contours corresponding with the occupational sub-slab vapor RBC (100 µg/m^3). Overlay the interpolated limit depressurized area. Given the published accuracy of the TEC model DG-1000 Digital Pressure Guage, pressure differentials less

than +/- 0.001 inches of water are within the margin of error of the monitoring equipment. Positive differential pressures or differential pressures within the equipment margin of area were measured at several monitoring locations with TCE concentrations exceeding the occupational VI sub-slab RBCs and/or hot spot criteria (e.g., CT17).

Specific Comments on the Performance Monitoring Report

1) **Section 1.0, Introduction.**

   a) The narrative states the scope of work of mitigation and monitoring is being conducted pursuant several previous documents prepared by ENW. However, the majority of the reports referenced in this section were not submitted to DEQ and others have not been approved by DEQ. In general, the site continues to collect data without DEQ concurrence in advance. Referenced reports should be those approved by DEQ.

   b) The narrative also states that site mitigation measures are being conducted under DEQ oversight; however, DEQ has not approved any mitigation system reports given comments on previous plans remain unresolved and engineering plans have not been prepared/stamped by an Oregon registered Professional Engineer.

   c) In our October 2024 meeting with ENW, DEQ requested a revised monitoring plan for DEQ review to ensure future work conducted at the site is well defined and agreed upon in advance. What is the status of providing a revised monitoring plan.

2) **Section 2.4, Additional ODEQ Performance Monitoring Requirements.**

   a) Bullet 1, DEQ did not identify the additional contaminants listed here as COPCs but has requested the testing/reporting of a broader suite of VOCs for further evaluation. While the list of COPCs identified appear generally acceptable, DEQ has not identified or approved a reduced list of contaminants that are of potential concern. Future sampling and analysis should be conducted to include a broader list of VOCs using EPA TO-15, as well the full potential of other methods (e.g., Radiello), until DEQ approves a reduced subset of VOCs for each sampling type/method.

   b) Bullet 3, longer duration sampling, such as Radiello methods, is recommended for indoor sampling. However, it is unclear why analytical testing using Radiello for this site has been limited to a short list of VOCs (six are listed here). It is our understanding a broader list of VOCs is possible. DEQ has provided previous recommendations for this project to achieve a greater list of VOCs (e.g., method Radiello 130). The site should continue to identify and work with qualified analytical laboratories to achieve the best outcomes in terms of analytical testing and adequate reporting limits. If ENW is unable to locate a laboratory that meets data quality objectives, this should be well documented and shared with DEQ to determine an acceptable alternative approach.

3) **Section 3, SSD Activation.**

a) Activation of the mitigation system was implemented by Irwin Hodson on their own accord. The footnote references the *Sub-slab Venting/Depressurization Installation and Focused Soil Removal Action Work Plan*, dated July 22, 2021. DEQ partially approved this document, but our approval excluded the mitigation design elements.

a) The air dispersion modeling (using AERSCREEN) presented in the *Sub-slab Venting/ Depressurization Installation and Focused Soil Removal Action Work Plan* for the mitigation system was not previously reviewed or approved by DEQ. More recently, DEQ reviewed the AERSCREEN modeling inputs/outputs presented in the above-reference report. In general, the conclusions provided are incorrect and have been misrepresented in subsequent reports, including the summary provided in this section. Accordingly, this model and results should no longer be cited.

b) In absence of an approved evaluation of mitigation system emissions DEQ requested treatment of emissions under "active" operation to ensure there would be no unacceptable discharge of emissions. This site initially implemented treatment the system's air discharge; however, treatment was terminated without notification to DEQ or approval. The basis provided by ENW to cease treatment was based on the incorrect modeling conducted, and the evaluation was limited to the sampling of TCE (in December 2023) rather than all potential contaminants discharged and an assessment of cumulative risk. Subsequently in July 2024, ENW submitted a Level 1 Emissions Risk Screening report using DEQ's March 2024 draft updated guidance on *Managing Air Discharges from Remedial Systems* (made available with the March 2024 draft updated *Guidance for Assessing and Remediating Vapor Intrusion into Buildings*). This report generally followed the updated guidelines for evaluating air emissions using data from a supplemental sampling event with additional contaminants (but still limited to 10 VOCs). However, this report was also incomplete in terms of providing all the necessary information to fully review the evaluation of air emissions (e.g., calculations, assumptions, etc.). DEQ conducted their own evaluation using what was provided (and conservative assumptions) and the results suggest no unacceptable risk from system emissions. Additional events are necessary to confirm these results and should include an expanded list of VOCs (e.g., full suite of method of TO-15).

c) This section identifies a July 2024 event that was not included in the above-referenced emissions report. Please confirm that these data have been reported to DEQ. In general, future sampling events should be conducted and for the "full" suite of VOCs using TO-15, and an evaluation conducted per updated guidance to confirm risk levels are not exceeded. Note that *DEQ's Guidance for Assessing and Remediating Vapor Intrusion into Buildings*, updated March 2025, has been finalized and Appendix E includes the updated final guidance for *Managing Air Discharges from Remedial Systems*, also dated March 2025. This final version of the discharge

evaluation guidance and related excel Level 1 tables provide additional instructions and clarifications than the March 2024 draft.

d) The last paragraph cites Figures 3A and 3B as providing differential pressure isopleths for 4Q204 and 1Q2025. These figures provide differential pressure measurements for multiple locations; however, remaining report discusses two locations (SUB18 and CT14) where real-time differential pressure measures were collected over longer durations. Clarify what methods were used and when to collect differential pressure from the other locations shown on these figures.

4) **Section 5.1, Installation and Locations.** Explain the rationale supporting the selection of SUB18 and CT14 for measuring sub-slab vapor pressures. It is reasonable to target areas with greater VI potential, including areas of elevated concentrations as observed at CT14, but measurements should also be collected in areas vulnerable to VI due to weaker system performance (e.g., away from remediation system piping).

5) **Section 4.0, Performance Monitoring Overview.** DEQ has not reviewed or concurred with data quality objectives or approach to performance monitoring of the mitigation system. Correspondingly the activities implemented, as well as the "general objectives" listed, to satisfy performance monitoring expectations have not been agreed upon and the monitoring strategy including selection of methods, locations, frequency is not well understood at this time.

6) **Section 5.0, Building Differential Pressure.** Collecting longer duration real-time differential measurements is a suitable approach to evaluate sustained sub-slab negative pressure compared to indoor air and whether the mitigation is producing sufficient sub-slab depressurization. The results suggest at the two locations, sub-slab pressurization is occurring and sustained. It is a good line of evidence, which could be expanded at other locations for different times of the year. Other strong lines of evidence are also important to assess overall system performance to reliably address risks, including sub-slab soil vapor levels which at several locations continue to exceed RBCs as well as hot spot levels. The combined information of site-specific data suggests the mitigation system in actives mode if partially functioning in terms of inducing sub-slab vacuum conditions (within the zone of influence); however, after several months has not sufficiently reduced sub-slab concentrations. In additional, zone of influence of the mitigation system in terms of sufficient sub-slab negative pressure does not provide coverage of the full extent of VI concentrations above RBCs.

7) **Section 8.0, Indoor/Outdoor Air Quality Testing.** The preferred approach for indoor air monitoring remains longer-duration methods using passive diffusion samplers, such as Radiello. Summa canisters can be used to supplement additional analysis if needed; however, comparing the different approaches as identified in Table 8-1 is not considered an objective from DEQ's perspective. ENW has chosen on their own to collect indoor samples using summa canisters.

8) **Section 8.1, Method of Section.**

a) Indoor sampling using summa canister methods were not identified in the original monitoring plan referenced. Summa canisters were identified for contemporaneous outdoor samples with indoor air events and summa canister methods for sub-slab soil vapor sampling. As noted above, ENW has been conducting indoor sampling using summa canisters on their own.

b) Further discuss QA/QC and rationale to employ summa canister methods using longer durations (20 and 28 days) which is a relatively new strategy for VI testing.

9) **Section 8.2, Methods of Analysis.**

a) As noted above, it is unclear why testing/reporting was limited to six VOCs using Radiello methods. Provide an explanation and supporting documentation.

b) Table 8-3 identifies Radiello method 130; however, the analytical laboratory reports identify an EPA method 8015B. Please clarify.

c) As noted above, the full suite of VOCs for TO-15 should be analyzed by the laboratory and reported.

10) **Section 8.3, Analytical Results**.

a) The third paragraph states that contaminants of potential concern that do not have "RAOs" are evaluated against commercial indoor air RBCs. Refer to DEQ's General Comments on the FFS. RAOs should include preventing vapor intrusion of other contaminants at concentrations that exceed applicable occupational RBCs in indoor air and sub-slab vapor. In general, the discussion about the likely or potential sources of various COPCs in indoor air is weak and incomplete. The presence of sub-slab concentrations also needs to be considered. Provide a more robust lines-of-evidence evaluation to support conclusions about likely sources of each COPC.

b) This section indicates that TCE concentrations in outdoor air (OA01) are likely from a sub-slab source. For other contaminants, this section suggests that indoor air detections could include outdoor air contributions. Considering that TCE in outdoor air could include a sub-slab source, the same conclusion could apply to benzene and naphthalene.

11) **Section 9.1, Method of Collection.** This section identifies sampling activities were conducted in accordance with outdated DEQ VI guidance (2010, updated 2020). ENW has been instructed that the draft updated March 2014 VI guidance is suitable for use in the interim and the final VI guidance dated March 2025 should be used going forward.

12) **Section 9.4, Analytical Results**. This section incorrectly suggests that occupational VI RBCs only apply to uncontrolled sources of contamination. To avoid confusion, sub-slab occupational VI RBCs and hot spot criteria apply to the Irwin Hodson site, regardless of the SSD system operation. Delete the last sentence of this section.

13) **Section 9.4.1/9.4.2, Results by Quarter.**

a) Identify that hot spot levels have been detected, concentrations, and which locations. Percent reductions is not helpful in terms of evaluating risk (in addition to evaluating performance), as elevated concentrations remain present below the sub-slab.

b) DEQ does not agree that the mitigation system as installed and operated is effective or adequate to address sub-slab concentrations and to reliably address VI risk long-term. While the mitigation system provides sub-slab depressurization within the system's zone of influence; however, it has not sufficiently reduced sub-slab location and hot spot levels are still detected. The extent of the sub-slab VI plume above the TCE RBC is also greater than the zone of influence of the mitigation system which is generally limited to the vicinity of the soil removal area.

c) Sources would need to be sufficiently delineated to support the statement that the remaining source is located immediately below the sub-slab as stated or the only source impacting soil vapor.

d) Last paragraph, explain what is intended with the statement that differential pressure in the sub-slab is "likely stripping VOCs from soil will likely continue to attenuate during subsequent monitoring before reaching asymptotic conditions." Typical VI mitigation systems do not deplete VI sources but rather are designed to influence conditions at the building-soil interface to interrupt the VI pathway. It is highly speculative that an SSD system would remove sufficient source mass and in a reasonable timeframe. It is also unclear what is intended by describing a mitigation as reaching asymptotic conditions. It would be expected that any mass removal (e.g. total mass over time), if measurable, from an SSD mitigation system to plateau quickly.

14) **Section 9.5, Trends Analysis**. DEQ disagrees that TCE concentrations are attenuating because of SSD system activation. Concentrations of TCE above highly concentrated hot spot criteria at SUB14 have increased over the past three consecutive monitoring events.

15) **Figures 3A and 3B, Differential Pressure Isopleths Diagrams**. DEQ has the following comments:

a) These figures present measured pressure differentials at several monitoring locations within the building; however, the Performance Monitoring Report only discusses differential pressure measurements at two sub-slab locations (SUB18 and CT14).

b) Revise the Performance Monitoring Report to include information about how differential pressure was measured at other locations. Revise these figures to shade the portion of the subgrade that was excavated and backfilled with granular materials. Revise these figures to show the layout of the current SSD sub-slab piping.

16) **Figures 5A and 5B, Sample Location Diagram, Soil Gas and Sub-Slab Vapor with TCE Concentration Isopleths Diagrams**.

a) Revise these figures to include a 100 µg/m3 contour.

b) Revise these figures to shade the portion of the subgrade that was excavated and backfilled with granular materials.

c) Revise these figures to show the layout of the current SSD sub-slab piping.

d) There are errors that need correcting, or no data provided for sampling locations with results in Table 3. For instance:

i) Show results for CT16.

ii) Show results for SG10 which exceeded RBCs for TCE, and hot spot levels at 5.25'bgs first quarter 2025.

iii) Please also confirm location SG11 which is shown twice.

iv) It would also be helpful to show the results at locations with multiple depths of sampling (e.g., SUB13/SG13, SUB19/SG12, SG10, SG11 and SUB22/SG14).

DEQ requests a revised FFS which addresses DEQ comments on the FFS and applicable performance monitoring comments. Contact me if you want to discuss these comments. Please provide a schedule for submitting the FFS within 30 days of receipt of this letter.

Sincerely,

Jim Orr

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