Response to Workplan Questions

Oak Street Commons-6739

By S Kingery in preparation for meeting 2/25/2026

Groundwater (question 1 and 2)

Groundwater has been encountered across the site at varying depths, typically, between 7 and 11 feet. However, groundwater was as shallow as 4 feet in the former log pond. Contaminants found in groundwater onsite are diesel, 3+4 Methyl phenol(s), dioxin and dissolved metals (arsenic, barium, chromium and lead). Dioxin was detected at 16 pg/l which is less than the groundwater in excavation RBC but greater than surface water ecological RBC.

Please collect an additional groundwater sample from the former log pond (eastern portion of the site) and test for diesel, pesticides (DDT and penta) and dioxins (see description in section below). Additional testing of groundwater on the western portion of the site is not necessary based on data thus far.

Water will be supplied by the municipality. Stormwater from the site will likely be managed via the stormwater ditch located on the east side of the property (between former log pond and rail line). In a Teams meeting on 2/20/2026 the public works director, Aaron Swan said that water in this ditch flows south and into Sutherlin Creek. While onsite doing field work, please collect information on the ditch to determine if there is a groundwater connection with the drainage ditch. Please sample sediment in the ditch for dioxins (southern ditch and eastern ditch).

Log pond depths and buried materials (DU1, DU2, DU10, DU12, DU9)

Decision units DU1, DU2, DU10, DU12, DU9 on the east side of the property represent the former mill log pond. The development plan for this part of the project is an open grassy area and parking. Residents and the public will have access to this area as open space. The former log pond portion of the site will serve as a repository for soil that is stripped from other parts of the property where development will occur. This will include soil over-excavated under foundations and roadways. Some soil removed may also contain concentrations of dioxins and metals greater than the residential RBCs for ingestion dermal contact and inhalation.

The current plan is for woody material in the former log pond to remain in place and not be disturbed. Because of the woody material, former log ponds have the potential risk of generating methane and hydrogen sulfide gases. Methane can reach explosive levels, and it

can displace oxygen in the homes. Hydrogen sulfide gas is toxic. At this time these gases have not been assessed.

Assess Methane & Hydrogen sulfide Risk -question 8

Prior to placement of soil on the east side of the property assess the risk of methane and hydrogen sulfide from organics in the former log pond. Assessment requires the installation of vapor points at 5-foot depths. Use a landfill gas meter to test for the presence and concentration of methane and hydrogen sulfide. If no hydrogen sulfide is detected with the landfill gas meter, switch to a hydrogen sulfide meter with a lower detection (such as the Jerome®X631 hydrogen sulfide Analyzer). The residential RBC for hydrogen sulfide in soil vapor is 70 µg/l. That range needs to be assessed. The vapor points should be analyzed the day of installation and again 24 hours later.

Analyze methane and hydrogen sulfide conditions at 9 sample locations around the perimeter and center of the former log pond. The number of sample locations is based on a rate of one sample per 10,000 square feet of area. We used the former pond area for this calculation. I will need you to submit documentation of this sampling plan that includes a figure with sample locations, well point construction, and equipment used. Field notes and logs should be submitted along with the results.

Seasonal fluctuations of groundwater and barometric pressure can impact methane production and movement. A minimum of two seasons of data is required, typically during wet and dry conditions.

Determining if a methane plume is present prior to construction is important because this will inform any needed design changes in advance.

A decision about future monitoring and sampling should be made after initial screening results of the log pond are reviewed.

Log Pond Soil Repository

There is a plan currently for oil stripped from the western side of the property to be placed in a designated repository above the former log pond. This location is planned for the large grassy area shown on the Civil Solutions Engineering Plan. Soil that contains contaminants such as dioxin could be placed in this area if it is at depths greater than 3 feet. This depth makes residential and ecological pathways incomplete. The location of contaminated soil should be shown in an as-built plan and have a demarcation barrier placed above it. DEQ will require a plan of the repository to ensure that it is adequate to prevent risk. We will place a deed restriction on the property called an easement and equitable servitudes (EES). The EES will limit future use of the area, for example, the type of vegetation allowed.

Pesticides sampling

Pesticide sampling was previously discussed due to the historical practice of DDT application to log ponds to control mosquitoes. DDT, if present would be concentrated in the debris and sediments at the base of the former pond. At this depth, contamination would be well below residential human exposure but could still impact construction and excavation worker receptors. There was discussion in the geotechnical report about perched water being a possible issue around footings and would need to be collected in drains. These drains may be part of the site stormwater management plan making the characterization of this water critical since stormwater will be moved offsite via the ditch to Sulivan Creek. For DDT analysis use EPA method 8081B.

Anti-sapstain was used on lumber to prevent a blue fungal staining. Pentachlorophenol was used in Oregon. A soil sample from the DU-7 should be analyzed for this chemical. I think the method is EPA 8520. The water sample from the log pond should also be analyzed for penta (EPA 528).

Additional Characterization of soils for Dioxin

Dioxin was detected in soil in the vicinity of the former tepee burner and the southern part of the site **(DU7 and DU10**). This soil is planned to be scrapped down and placed in the repository. The full extent of the dioxin has not been delineated laterally nor vertically. We recommend that you use composite sampling to assess the extent of contamination. Given your current decision unit designs, 5 samples from each decision unit from a specific depth would be composited into one for analysis. Each depth zone in each DU would require its own 5-point composite.

In **DU7, DU11, and DU10** for example, you would collect 1 composite from the 0-1' depth, another composite from 1-2' depth and a third sample from the 2-3' depth. You could analyze the top two layers and hold the 3rd sample until you receive results. This will tell you how much soil you have that needs to be placed in the repository below 3 feet in the berm.

For the decision units north of the tepee burner area you could address characterization several ways. You could first focus on **DU 4, DU3, and DU8**, collecting samples from the layers and waiting for results to determine if you sample **DU5 and DU6**. Or you could collect all the samples at once and hold them.

Wood waste/burned wood waste at the surface

There is wood waste (sawdust?) in the organic rich soils onsite based on the descriptions in the workplan and phase II report. It has been proposed to use this in landscaping around the development. If penta is found in soil and/or groundwater characterization of wood

waste should be completed before placing where residential receptors have exposure. I'm not sure what method is applicable to organic wood waste.

DU 8- dioxin sampling of lower layer could be collected and held for other results.

DU 9-as described.

DU 10- sample ditch sediments for dioxins

DU 11- This is where the conveyer system moved wood waste to burner. Composite sample of layer 2 for analysis, composite sample of Layer 3 and hold for results on layer 2.

DU12-Trenching this area would disturb the subsurface and cause a 30-day delay in methane assessment to wait for stabilization.