From:
 Winslow, Frank (ECY)

 To:
 Johnny Sweeney Jr

Cc:djohnson@cascadia-sci-eng.comSubject:Follow up on August 24, 2023 Teams CallDate:Tuesday, August 29, 2023 12:06:55 PM

Attachments: 2023.07.27 FruhlingSand&Topsoil XN0005 TechnicalAssistance.pdf

Hi Johnny,

As a recap, Ecology (Frank Winslow and Erik Snyder) and Ecology's legal counsel (Kathryn Wyatt) met with NorthPoint's team, including consultant and legal counsel within a Teams call on August 24, 2023. During that call, NorthPoint's team expressed concerns regarding several requests within Ecology's July 27, 2023 (attached). Ecology explained the rationale behind those requests and the meeting closed with the understanding that NorthPoint would provide some additional follow-up in writing to Ecology.

Following the Teams call on August 24, 2023, Ecology (Frank Winslow) received a call from your consultant (Dave Johnson) on August 25, 2023. Dave Johnson indicated that the Ecology-requested well point at MW-110 was of particular concern to the NorthPoint Team. On August 28, 2023, Toxic Cleanup Program's (TCP's) Program Manager (Barry Rogowski) received a call from your counsel requesting further review of Ecology's requests.

Following the telephone call and voice mail, Ecology has had additional discussions within our team, including with TCP's Headquarters Section Manager and Program Manager. This has included additional technical peer review of the requests within our July 27, 2023 letter. **Ecology stands by our requests**.

Groundwater to Surface Water Pathway

The following is further clarification on Ecology's request for a roughly 5 feet deep well point adjacent to Crystal Creek near MW-110.

The groundwater to surface water pathway is discussed in MTCA (WAC 173-340-720) and in *Ecology's Developing Conditional Points of Compliance at MTCA Sites Where Groundwater Discharges to Surface Water, Implementation Memorandum No. 16* dated July 25, 2017. That document states:

Use of a mixing zone under WAC 173-201A-400 to demonstrate compliance with surface water cleanup levels shall not be allowed. Although Washington State's Water Quality Standards for Surface Waters allows it for NPDES permitting (for example), MTCA does not allow using a mixing zone within the surface water body (i.e., water column) to demonstrate compliance.

Hence demonstrating compliance cannot be based on a scenario with in-stream dilution, such as sampling of surface water. TCP has adopted methodology to assess the groundwater-to-surface water pathway by sampling groundwater prior to discharge to surface water. The requested well point is anticipated to provide the following:

- 1. Assessment of losing versus gaining conditions in Crystal Creek from water level elevation data (note this might vary with seasons or in response to rainfall); and
- 2. Determination of groundwater quality immediately adjacent to the creek, where groundwater-to-surface water discharge is suspected.

In our July 27, 2023 letter, Ecology stated:

Ecology has concluded that if the requested well point is not installed and sampled, then we must conclude that the groundwater to surface water pathway is complete, and remedial actions appear to be needed to address this pathway. Hence, Ecology highly encourages the installation and sampling of this well point.

Ecology notes that the purpose of the well point is to determine whether or not this pathway is active, and if so, to provide data regarding the relative severity of this pathway. If the pathway is active, then Ecology will examine multiple points of evidence to assess the severity, which would then determine whether or not remedial actions are needed to address this pathway. Our letter was intended to emphasize the importance of collecting these data to make this assessment.

Ecology recognizes that turbidity in monitoring wells can potentially affect arsenic in water sample results, even potentially dissolved arsenic results from filtered samples. Ecology has previously approved the use of dissolved arsenic to assess groundwater at the Site, since the groundwater pathway is based on water that would come from a drinking water well (drinking water wells generally have much lower turbidity than a monitoring well). However, the groundwater-to-surface water pathway is not so clear. Hence, both total and dissolved arsenic should be sampled for and reported when evaluating this pathway. Ecology recommends installation of the well point be done in a manner that minimizes turbidity, to the extent possible. Use of a track mount rig with auger may help to have a boring with a sufficient diameter to place a sufficient well filter pack.

Feasibility Study Alternatives

Your consultant also expressed concerns regarding Ecology indicating the potential need for an additional alternative within the Feasibility Study. Ecology indicated that additional information was needed (including a map) for Alternative 2 since it was not sufficiently clear what that alternative represented. Once Ecology reviews the requested additional information within our July 27, 2023, Ecology can further assess whether or not the alternatives presented within the FS are sufficient. As noted within our letter, "Ecology has concluded that additional information is needed prior to our providing our opinion letter regarding the appropriate cleanup alternative for the Site." Ecology's review of the FS will follow our determination that the Site data gaps have been filled and that we have sufficient information to conduct our review of the FS.

Closing

Ecology recognizes that the NorthPoint team has done a considerable amount of work at the Site to characterize contamination concerns, and that the arsenic in groundwater is believed to be

attributed to buried wood materials, rather than from a direct chemical release. However, Ecology has determined that such anthropogenically derived arsenic in groundwater and surface water is MTCA-regulated contamination, and we must work through the MTCA process prior to achieving a no further action (NFA) determination. Ecology will continue to strive to provide technical assistance within the VCP that is both protective and reasonable. For the requested additional work detailed within our July 27, 2023 letter, we believe that we are continuing to strive for both protectiveness and reasonableness.

We are always are willing to hear additional information, but hope that this email provides clarity on why Ecology considers the requested well point (and other requests within our July 27, 2023 letter) to be critical at the Site.

Thanks, Frank

Frank P. Winslow, LHG

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