REDACTED

From: THOMAS Wesley * DEQ <Wesley.Thomas@deq.state.or.us>
Sent: Friday, December 15, 2023 3:48 PM
To: Taku Fuji <tfuji@anchorqea.com>
Cc: Halah Voges <hvoges@anchorqea.com>; Rob Ede <robe@hahnenv.com>; Ryan Barth <rbarth@anchorqea.com>; Bob Wyatt <rjw@nwnatural.com>; Patricia Dost <pdost@pearllegalgroup.com>; Jen Mott <jmott@anchorqea.com>; jenn.l.peterson <jenn.l.peterson@deq.oregon.gov>; HAFLEY Dan * DEQ <dan.hafley@deq.oregon.gov>
Subject: RE: Gasco OU Uplands FS - FS Data Gap Screening and Summary Statistic Tables

Taku,

Thank you for providing the Siltronic GSA data gap risk screening and summary statistics tables. DEQ approves the following proposed PRGs for the Gasco OU FS:

- Human Health Subsurface Soil:
  - Total PCB PRG of 4.9 mg/kg based on the DEQ's default construction worker RBC.
  - Total Dioxin/Furan/PCB TEQ of 0.00017 mg/kg based on the DEQ's default construction worker RBC.
- Human Health Fill WBZ
  - Total Dioxin/Furan/PCB TEQ of 0.00045 ug/L based on the DEQ's default groundwater in excavation RBC.
- Ecological Soil
  - Total PCB PRG of 73 ug/kg based on the DEQ's default mammal RBC.
- Ecological Fill and Alluvium WBZ
  - Total PCB PRG of 0.014 ug/L based on the OR/EPA chronic freshwater AWQC.
  - Total Dioxin/Furan/PCB TEQ of 0.0000000031 µg/L based on DEQ's chronic freshwater RBC.

DEQ has already approved the Ecological Fill and Alluvium WBZ PRG for Total DDx.

DEQ has reviewed your proposal for a site-specific Ecological soil Dioxin/Furan/PCB TEQ PRG. DEQ would need further discussion and technical evaluation to support development of a site-specific PRG for the Gasco OU Siltronic GSA. DEQ does not approve the proposed site-specific Ecological soil Dioxin/Furan/PCB TEQ PRG of 20 ng/kg. Based on the data gap screening tables, DEQ identifies

Dioxin/Furan/PCB TEQ as an ecological soil COC for the Siltronic GSA. However, DEQ does not require NW Natural to develop an ecological soil Dioxin/Furan/PCB TEQ PRG for ecological exposure areas 1 and 2 to inform the Gasco OU FS. We anticipate that the existing set of ecological soil PRGs will provide enough information for the Gasco OU FS to evaluate and recommend a protective and appropriate remedy for these ecological exposure areas. DEQ will re-evaluate the need to select an Ecological soil Dioxin/Furan/PCB TEQ PRG for Doane Creek bank soils and sediments after completion of the data gaps sampling for that area.

Please let me know if you would like to discuss this email further.

Thanks,

Wes

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From: Taku Fuji <tfuji@anchorqea.com>
Sent: Wednesday, December 6, 2023 12:15 PM
To: THOMAS Wesley * DEQ <Wesley.Thomas@deq.state.or.us>
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Subject: Gasco OU Uplands FS - FS Data Gap Screening and Summary Statistic Tables

Wes,

Please find attached to this email, the 11 tables to that we reviewed during the December 4, 2023, Siltronic GSA FS Data Gap Screening Meeting. These tables provide a summary of the FS data gap screening results and summary statistics for the soil and groundwater data within the Siltronic GSA. The following tables are attached and are provided as executable excel files as discussed on December 4th.

1. Table 1: FS Data Gap COI Screening Summary
2. Tables 2 and 3: Human Health Surface Soil Screening Table and Summary Statistics Table
3. Tables 4 and 5: Human Health Subsurface Soil Screening Table and Summary Statistics Table
4. Tables 6 and 7: Human Health Fill WBZ Groundwater Screening Table and Summary Statistics Table
5. Tables 8 and 9: Ecological Surface Soil Screening Table and Summary Statistics Table
6. Tables 10 and 11: Ecological Groundwater Screening Table and Summary Statistics Table

In addition, I have added the lines of evidence to support the use of the 20 ng/kg site-specific Dioxin/Furan/PCB TEQ PRG in the Gasco OU Uplands FS. See text below:

Dioxin/Furan/PCB TEQ Site-specific RBC/PRG Lines of Evidence:

1. **Terrestrial Dioxin/Furan TEQ RBC/PRG developed for two sites in the DEQ Northwest Region**

a. **Avison Mill #1, South Parcel, Molalla, OR (ECSI #4014).** DEQ developed a site-specific Ecological Soil RBC/PRG for Dioxin/Furan Mammalian TEQ of 20 ng/kg and hot spot concentration of 200 ng/kg for the Avison Mill #1, South Parcel, Molalla, OR (DEQ 2014, 2020). This Dioxin/Furan Mammalian TEQ RBC/PRG was established for the most conservative ecological receptor (small mammal) and is protective of other ecological receptors including invertebrates, amphibians, and reptiles and is documented and used in the site ROD (DEQ 2020). The ROD also established a RAL of 120 ng/kg which is not appropriate for use at GASCO OU. The habitat characteristics of Avison #1 South Parcel are similar to the Siltronic GSA ecological exposure areas and this 20 ng/kg Dioxin/Furan Mammalian TEQ RBC/PRG is appropriate for use at the Gasco OU.
b. **Permafrost Products, Hillsboro, OR (ECSI #148).** Maul Foster & Alongi, Inc. (MFA) developed a site-specific Dioxins/Furans Mammalian TEQ Tier II RBC of 20 ng/kg for the Permafrost Products site (MFA 2023). This Dioxin/Furan Mammalian TEQ RBC was developed by MFA using the Los Alamos National Lab (LANL) PRG methodology (LANL 2019) and is based on the most sensitive ecological receptor identified, ground feeding mammals. This RBC was approved by DEQ on May 23, 2023. MFA indicates that this Dioxin/Furan RBC of 20 ng/kg will be used as a site-specific PRG for use in decision making and remedial planning. The habitat characteristics of the ecological exposure areas at the Permafrost Products site are similar to the Siltronic GSA ecological exposure areas and this 20 ng/kg Dioxin/Furan Mammalian TEQ RBC is appropriate for use at the Gasco OU.

2. **Urban Soil Background Levels from Seattle, WA.** A study conducted by the Washington Department of Ecology investigating dioxins/furans in urban surface soil concluded that the median and average dioxin/furan TEQ concentrations in urban soils in the Seattle area were 12 ng/kg and 19 ng/kg, respectively (Ecology 2011).
3. **Conclusion:** These two lines of evidence indicate that the site-specific dioxin/Furan TEQ RBCs/PRGs developed for the Avison and Permafrost sites are comparable in concentration to urban background concentrations of dioxins/furans. Both of these RBCs/PRGs have been accepted by DEQ and the Permafrost Site memo is from April 2023, so is very recent. The methods used to develop these RBCs/PRGs are appropriate for the Gasco OU, and the habitat characteristics are similar for these three sites.

References:

DEQ (Oregon Department of Environmental Quality) 2014. *Remediation Goals – South Parcel, Avison Lumber Company, Mill #1*; ECSI# 4014. December 9, 2014.
DEQ 2020. *Record of Decision; Selected Remedial Action for South Parcel, Avison Mill #1, Molalla, Oregon*. June 2020.
DEQ 2023. *Revised Conceptual Site Model Update and Contaminant Screening Technical Memo; Permafrost Products, ECSI No. 148.* May 23, 2023.
Ecology (Washington Department of Ecology) 2011. *Urban Seattle Area Soil Dioxin and PAH Concentrations, Initial Summary Report.* Publication no. 11-09-049. September 2011.
LANL (Los Alamos National Laboratory) 2019. *Development of Ecological Preliminary Remediation Goals for Los Alamos National Laboratory, Revision 1.* September 2019.
MFA (Maul, Foster& Alongi, Inc.) 2023. *Revised Conceptual Site Model Update and Contaminant Screening Technical Memo*. April 12, 2023

Please let us know if you have any questions regarding these items and if the proposed PRGs are accepted (presented on Table 1).

Thanks!

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