

## **NW Natural's Framework for EPA Sediment Design and DEQ Source Control Measure FFS and IRAM Design**

### Sediment Design for EPA

- Integrated ISS wall is removed from the sediment design; however, the proposed design will identify the wall as a critical component of ISS sediment remedy effectiveness.
- NW Natural intends to construct the wall concurrently with the sediment remedy in order to integrate source control and sediment remedies,<sup>1</sup> but the evaluation and design of the wall will be performed for DEQ.
- The ISS sediment treatability and pilot studies will proceed under the EPA AOC.

### Source Control Design for DEQ

- ISS Barrier wall is both a source control measure and upland remedial measure under the DEQ VCP agreement.
- The determination of final upland source control measures will be expedited and performed as an interim removal action separately but concurrently with the upland FS.
- The Source Control Addendum will be modified to include a focused feasibility study (FFS) for the ISS barrier wall, for fill water bearing zone controls, and for optimizing the alluvium hydraulic control and containment (HC&C) system (extending alluvium controls to the upriver shoreline limit of the Gasco OU).
- One of the objectives for the ISS barrier wall will be DNAPL source control along the portions of the shoreline where DNAPL occurs (i.e., DNAPL source control). The approved Groundwater/DNAPL Source Control Focused Feasibility Study (GWFFS) refers to the portion of the shoreline where DNAPL occurs as 'Segment 1'. The approved GWFFS recommended a vertical barrier along the portion of the 'Segment 1' shoreline located on the Gasco site (the vertical barrier was not proposed on the Siltronic property) as a DNAPL source control measure. DEQ and NW Natural agreed to postpone constructing a vertical barrier, and to further evaluate the vertical barrier in the Gasco OU FS. The proposed ISS barrier wall extends laterally and vertically beyond the alignment and depth, respectively, of the vertical barrier contemplated in the GWFFS, including areas where DNAPL is not present. DEQ agrees that the proposed ISS barrier wall alignment and depth would achieve the objective of the vertical barrier described in the GWFFS.
- The ISS barrier wall will be integrated with the EPA ISS sediment remedy for concurrent construction.
- The optimal configuration of the upland source control measures (ISS barrier wall, alluvium HC&C system, and fill water bearing zone controls) will be evaluated in the Source Control Addendum.
- The need for, and effectiveness of, groundwater source control to river will be evaluated on basis of ROD Table 17 constituents. DEQ has determined that groundwater source control is necessary for the Fill WBZ and Alluvium WBZs across most, if not all, of the Gasco OU shoreline groundwater based on exceedances of ROD Table 17 cleanup levels.
- Because the ISS barrier wall is both an element of groundwater and DNAPL source control measures and an upland remedial measure, both ROD Table 17 and upland PRGs are applicable to its design. ROD Table 17 cleanup levels are applicable to source control measures and to riverbank and in-water risks addressed by the remedy selected in EPA's ROD. Upland PRGs are applicable to upland risks

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<sup>1</sup> The Gasco AOC, the ROD, and EPA's August 17, 2021 comments on the draft Combined BODR/PDR require that source control measures be coordinated and integrated with in-water remedies. "EPA will determine when sources have been controlled sufficiently for response action(s) to be implemented." (2009 AOC ¶17). *See also*, ROD Responsiveness Summary p. 2-189: "A groundwater source control decision is expected from DEQ prior to remedy implementation near Gasco. Remedial design for the Gasco remedy will account for any NAPL (also known as Substantial Product) present in sediment. Source control work will be factored into remedial design."

including identification of potential hot spots of contamination (e.g., potential groundwater hot spots because of impacts to designated beneficial uses of groundwater OU, such as surface water recharge). DEQ will expedite selection of the source control measures (e.g., ISS barrier wall, optimized alluvium HC&C system, fill water bearing zone controls) as interim removal action measures (IRAM).

- Except for the 'no action alternative,' which serves as a baseline for comparing other remedial alternatives, it is NW Natural's intention to include the source control measures listed above as components of all upland remedial alternative FS scenarios. DEQ expects that the upland FS will identify potential hot spots and incorporate the preference for removal or treatment of upland hot spots regardless of the presence of the ISS barrier wall.
- EPA will formally review and provide written concurrence in the SCD.<sup>2</sup>
- The upland FS will evaluate cleanup of the entire Gasco OU in parallel with the expedited source control/IRAM design.

#### Coordination

- NW Natural, DEQ, and EPA will coordinate efforts to assure source control is integrated with the sediment remedy.

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<sup>2</sup> "Early source control actions conducted under DEQ authority are not final CERCLA actions. EPA will be evaluating the effectiveness of any source control actions conducted under DEQ authority with final cleanup objectives and making the determination as to whether further action is warranted." ROD Responsiveness Summary p. 4-18.