



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

September 25, 2017

Mr. Andrew Hutchinson
J.R. Simplot Company
P.O. Box 27
Boise, ID 83707

Re: Comments on Draft Remedial Investigation and Feasibility Study:

- **Site Name:** Warden City Water Supply Wells No. 4 and 5
- **Site Address:** 1900 Block W 1st St Warden, WA 98857
- **Cleanup Site ID:** 1618
- **Facility/Site ID:** 2802409

Dear Mr. Hutchison:

Thank you for submitting the draft Remedial Investigation/Feasibility Study report (RI/FS). Based on the Department of Ecology's (Ecology's) review of the draft plan we have the following comments:

Remedial Investigation, Ecology Comments

1. **Section 1.1, Background Information:** Please include contact information for project coordinators (Ecology site manager, consultants, potentially liable persons (PLP), and current owner/operator). Include the Site name and identification numbers, general description, and location (e.g., GPS coordinates, assessor parcel number(s), Quarter Section Township Range, and complete address with ZIP code).
2. **Section 1.1, Background Information:** Please include a stand-alone subsection (Current Site Use) prior to current Subsection 1.1.1, Site History: that describes current Site uses, land use/ zoning, and future use plans.
3. **Section 1.1, Background Information:** Please include a stand-alone subsection (Site Vicinity) prior to current Subsection 1.1.1, Site History: that describes adjacent properties with current operations/use and conditions.

FILE COPY



4. **Subsection 1.1.2, Site Setting:** Please include a description of the Site topography, geomorphologic setting, nearest surface water body, nearest natural surface water body, and nearest undeveloped natural land.
5. **Subsection 1.1.2, Site Setting:** Please include a description with supporting table(s) and figure(s) showing all active and non-abandoned inactive extraction wells within a one-mile radius from the Site.
6. **Subsection 1.1.2, Site Setting, last paragraph:** Please define what groundwater constitutes the “upper aquifer”. Consequently, please define what groundwater constitutes the “deeper aquifer”.
7. **Section 1.2, Nature and extent of contamination-Remedial Investigation Activities:** Please provide electronic copies of all certified analytical reports, chain of custody forms, and field notes for both soil and groundwater for the data presented in this section. Analytical reports and chain of custody information are missing for some samples, particularly for the soil sampling analytical results that included data from the crucial well MW-5S that appears to have had the highest EDB soil concentration of 218 µg/kg.
8. **Subsection 1.2.5, Groundwater Pump Test City Well #5:** Please include a discussion what the ramifications are from having no drawdown in the pumping well and all the observation wells after 16 hours of pumping the well at 1,500 gpm. How do the results from the pumping test affect the Site conceptual model? Do the results from the pumping test prove no connectivity between the groundwater in the loess and groundwater in the underlying basalt?
9. **Sub-subsection 1.3.2.2, Groundwater Pathways, third paragraph, last bullet:** Do we have any information from sources such as city directories, Sanborn Maps, interviews, title searches etc. that there were other facilities in the Site vicinity that handled EDB or could be strongly suspected to have handled EDB? If so, please discuss those findings under a separate sub-subsection under Subsection 1.1.2, Site Setting. Please remove this bullet discussing alternative sources, if there is no such information to back up the hypothesis stated here.
10. **Sub-subsection 1.3.2.5, Identification of Exposure Scenario, second and third paragraph:** See comment No. 9 above. Also, unless another source for the EDB contaminations in groundwater can be reasonably identified, please remove the discussion about another source. Additionally, in the second paragraph there is a statement that there is no evidence of off-site migration from the Site. As discussed in comment No. 15 below, Ecology is of the opinion that the results from the pumping test are inconclusive to rule out that off-site migration has not occurred. As of today no other credible source for the EDB contamination in the Site vicinity has been identified (See comment No. 9 above).
11. **Subsection 1.5.1, Cleanup Levels:** The Site-specific cleanup level for soil (CUL) in accordance with MTCA Method B has been calculated to be 0.27 µg/kg. Please use a

FILE COPY

Washington State accredited laboratory whose method reporting limits are 0.27 µg/kg or less. There are laboratories available that are able to achieve this method reporting limit for EDB soil analysis.

12. **Subsection 1.5.2, Ecological Evaluation:** Please rename the header to “Terrestrial Ecological Evaluation (TEE)” to comply with the language put forth in MTCA. Please discuss the evaluation results from Table 749-1 in Appendix F and describe how the Site was ranked in Table 749-1 and how the final score affect the final TEE assessment. Please identify the distance from the Site to the nearest undeveloped land area and the size of this area.
13. **Section 1.6, Discussions and Recommendations, second bullet:** Please summarize the contaminant concentration evolution in the City Wells no. 4 and 5 and how and why City Well No. 4 was abandoned.
14. **Section 1.6, Discussions and Recommendations, third bullet:** Please see comment no. 11 above and revise the soil CUL to 0.27 µg/kg.
15. **Section 1.6, Discussions and Recommendations, fourth and fifth bullets:** Ecology disagrees with the conclusion that the results from the City Well No. 5 pumping test and the off-site groundwater monitoring results indicate the lower (basalt?) aquifer is not impacted from the EDB release from the Site. The lack of drawdown in the pumping well makes the results from the pumping test inconclusive and the nature of EDB with a high density and a potential ability to migrate through clay still indicate a risk to the basalt aquifers from a EDB spill at the Site.
16. **Section 1.6, Discussions and Recommendations, fifth bullet:** Please see comment no. 9 above and remove the reference to a second source unless other sites in the Site vicinity with confirmed or likely use can be identified.

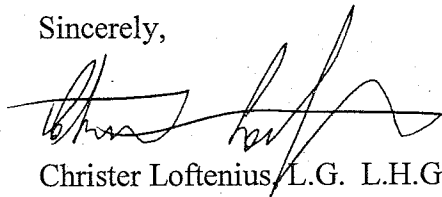
Feasibility Study, Ecology Comments

17. **Subsection 2.2.1, Development of Cleanup Levels and Remedial Action Objectives, and Table 14:** Please see comment No. 11 and change the soil CUL to 0.27 µg/kg.
18. **Subsection 2.2.1, Development of Cleanup Levels and Remedial Action Objectives, second paragraph, second bullet-Groundwater:** Please change “potable purposes” to “a drinking water supply”.
19. **Subsection 2.2.1, Development of Cleanup Levels and Remedial Action Objectives, second paragraph, third bullet-Volatile emission:** include potential inhalation risk during potential on-Site remediation of contaminated soils Please determine an appropriate CUL for maximum acceptable air contamination during potential on-site remediation.

20. **Subsection 2.2.1, Development of Cleanup Levels and Remedial Action Objectives, third paragraph, first bullet-RAO soil:** the current generic Method B soil CUL (cancer risk) in CLARC is 0.5 µg/kg for unrestricted land use. Please change the text to reflect the revised CLARC value.
21. **Subsection 2.2.1, Development of Cleanup Levels and Remedial Action Objectives, third paragraph, second bullet-RAO soil:** Please see comment No. 11 and change the soil CUL to 0.27 µg/kg.
22. **Sub-subsection 2.2.1.1, City Well #5:** Please see comments No. 9 and 15 and revise the text accordingly.
23. **Sub-subsection 2.2.3.2, Groundwater:** Please include an expanded discussion about EDB found in the basalt (lower?) aquifers in monitoring wells screened in the basalt and in City wells No. 4 and 5 and how the EDB found in the basalt aquifers are related to EDB found in overburden (loess).
24. **Sub-subsection 2.2.4.2, Groundwater:** For the remedial alternatives including monitored natural attenuation (MNA) please include a description how to prove active biological and chemical breakdown of EDB and not just dispersion or attenuation as part of the proposed MNA monitoring program.
25. **Sub-subsection 2.2.4.2, last paragraph City Well #5:** Please see comment No. 15 and revise the text accordingly.
26. **Subsection 2.2.5, Third Bullet-Alternative 3:** Uncontrolled release of EDB to the atmosphere through windrow land farming, and especially without stringent air quality monitoring, is not permitted. Instead, best available control technologies for air emissions of hazardous substances during cleanup actions must be applied in accordance with WAC 173-340-710 (7) (b). Consider alternate technical approaches such as *ex-situ* vapor extraction from covered stockpiles with collection of EDB-containing vapor, destruction of EDB using oxidants, or other pertinent techniques.
27. **Sub-subsection 2.2.6.1, Evaluation Criteria:** Please restructure this section to follow the requirements set forth in WAC 173-340-360 (2). Note that WAC 173-340-360 (2) (b) (i) evaluation of solution permanence requires a Disproportionate Cost Analysis in accordance to WAC 173-340-360 (3) (e). Please include and identify the Disproportionate Cost Analysis in the text and the tables.

If you have any questions about this request or how to complete your work plan, please contact me at (509) 329-3543 or clof461@ecy.wa.gov Thank you for your cooperation, and we look forward to working with you.

Sincerely,

A handwritten signature in black ink, appearing to read "Christer Loftenius". The signature is fluid and cursive, with a long horizontal stroke extending to the left.

Christer Loftenius, L.G. L.H.G.
Site Manager
Toxics Cleanup Program, Eastern Region

cl:mk

cc: Michael Murray PhD, HDR Engineering, Inc.
Ecology Site File

