March 15, 2018

Christer Loftenius, LG, LHG, Site Manager
State of Washington Department of Ecology
Toxics Cleanup Program, Eastern Region
4601 N. Monroe Street
Spokane, WA 99205-1295

Re: Resubmittal of Draft Remedial Investigation and Feasibility Study
Warden City Water Supply Wells Nos. 4 and 5
1900 Block W 1st Street, Warden, WA 98857
Cleanup Site ID 1618; Facility/Site ID 2802409

Dear Christer,

Attached is the updated draft Remedial Investigation and Feasibility Study (RI/FS) for the above reference project. Also, I have updated to this letter our responses to Washington Department of Ecology's (Ecology) letter dated September 25, 2017, where Ecology provided comments on Simplot's June 2014 Draft RI/FS report.

The attached updated RI/FS includes the results of the December 2017 groundwater sampling event and reflects changes made in response to your September 2017 comments. In addition, we have updated costs and updated estimates of excavation volumes and changes in soil treatment.

We recommend a conference call or meeting to discuss the updated RI/FS report, your comments/concerns, and schedule moving forward.

Please feel free to contact me at 208.387.7033 or at mike.murray@hdrinc.com.

Thank you for your cooperation.

Sincerely,
HDR ENGINEERING, INC.

Michael R. Murray, PhD

CC: Karl Schultz, Simplot

Remedial Investigation Comment Responses

Ecology Comment 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).

Response: A box with the requested information was inserted in the updated RI/FS.

Ecology Comment 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. ·

Response: A subsection was added to the updated RI/FS.

Ecology Comment 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.

Response: A subsection was added to the updated RI/FS.

Ecology Comment 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.

Response: This requested information was added to the updated RI/FS.

Ecology Comment 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.

Response: Information on extraction wells added, including update on City wells.

Ecology Comment 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".

Response: Additional description added to the updated RI/FS including meaning of “shallow” and “deep” wells. For clarification, all groundwater monitoring wells associated with the project are in the shallow aquifer. The wells are either screened at the soil/groundwater interface or at the bottom of the shallow aquifer, where competent basalt is encountered.

Ecology Comment 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.

Response: HDR has included laboratory reports, chain-of-custody, and field notes for field work conducted on behalf of Simplot as Appendix D and included as a CD only.

Ecology Comment 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?

Response: Ecology's appear to have answered this question in Comment 15. However, this section was further expanded to provide clarification of current conditions versus past conditions.

Ecology Comment 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.

Response: Simplot has conducted reviews and did not identify another source, though there have been other agricultural entities in the area. We did update our research information on the site including historic aerial photographs and EDR environmental data search but did not find any new information that provides evidence of another source.

Ecology Comment 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).

Response: This section has been revised. The term "secondary" source is used in the report in a risk assessment exposure pathway context. An action that initially releases contaminants into the environment is the "primary source" (e.g., a leaking 55-gallon drum). As far as we can tell, no primary sources remain at the site. A contaminated medium that releases that contaminant

to another media is a “secondary source” (e.g., impacted soil leaching a contaminant to groundwater, in this case the soil is a secondary source). In this section we stated, “A current secondary source of EDB could be attributed to the deeper Wanapum aquifer” meaning that the lower aquifer medium appears to be impacted and acts as a secondary source for releasing EDB. How this aquifer became a secondary source is uncertain (thus, the hypotheses proposed in Section 1.3.2.2). The primary source is gone (leaking drum or tank or another action resulting in release of EDB to soils). All that remains are secondary sources including soil and groundwater.

Ecology Comment 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 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.

Response: The CUL has been changed to 0.27 ug/Kg.

Ecology Comment 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.

Response: This section was updated.

Ecology Comment 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.

Response: Additional information provided on the City Wells.

Ecology Comment 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.

Response: See response to Comment 11.

Ecology Comment 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.

Response: The bullet states “based on current site and area-wide conditions.” This is not describing past conditions, which are unknown. HDR believes that current levels of EDB in soils and groundwater on-site are not indicative of an on-going DNAPL type condition. While this EDB in soils needs to be addressed, the current risk is low based on monitoring results.

Ecology Comment 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.

Response: See response to comment 9, the “secondary source” is in reference to risk assessment exposure pathways not in reference to another “primary source” area.

Feasibility Study Comment Responses

Ecology Comment 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.

Response: See response to comment 11.

Ecology Comment 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".

Response: Revision made.

Ecology Comment 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.

Response: Revision made, added Section 2.2.1.1.

Ecology Comment 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.

Response: The CLARC is 0.5 mg/Kg or 500 ug/Kg.

Ecology Comment 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.

Response: See response to comment 11.

Ecology Comment 22. **Sub-subsection 2.2.1.1, City Well #5:** Please see comments No. 9 and 15 and revise the text accordingly.

Response: See responses to comment 9 and 15.

Ecology Comment 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).

Response: This section expanded per comment.

Ecology Comment 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.

Response: Additional discussion added.

Ecology Comment 25. **Sub-subsection 2.2.4.2, last paragraph City Well #5:** Please see comment No. 15 and revise the text accordingly.

Response: see response to Comment 15.

Ecology Comment 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.

Response: Ex-situ soil vapor extraction added as soil treatment method rather than windrowing.

Ecology Comment 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.

Response: Report updated per comment.