



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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August 27, 2018

Mr. Gary L. Zimmerman
Golder Associates Inc.
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Re: Pre-remedial action 1,4-dioxane detection at the Landsburg Mine Site

Dear Mr. Zimmerman:

Ecology reviewed your technical memorandum of August 16, 2018, which describes the recent detections of 1,4-dioxane in groundwater monitoring wells located at the northern end of the Landsburg Mine site and the PLP Group's plan to address them.

Ecology is largely in agreement with the description of the contamination issue, its nature, and most of the proposed next steps. In particular, Ecology approves the PLP Group's plan to increase the frequency of interim groundwater monitoring for wells located at the northern end of the site from semi-annual to quarterly. Ecology also approves the plan to expedite installation of the south sentinel wells and the south contingent treatment system infrastructure as a precautionary measure. However, Ecology has the following recommendations related to the alternative source evaluation that the PLP Group has proposed:

- In order to make appropriate decisions on contamination issues such as this, Ecology heavily relies on empirical data from the site. Ecology recommends prioritizing the performance of a groundwater investigation to characterize the nature and extent of 1,4-dioxane in groundwater at areas surrounding the location of the 1,4-dioxane detections. Sampling of private wells can be conditional on the results of this groundwater investigation. Ecology would like to work with you on an appropriate design for this investigation.
- Given uncertainty on the scope and duration of the alternative source evaluation in the context of the cleanup plan schedule, please provide a work plan for the alternative source evaluation and a schedule with an estimated deadline for completing the evaluation.



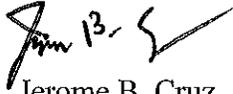
Mr. Gary L. Zimmerman

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Ecology appreciates the technical and proactive manner by which the PLP Group is approaching the issue. Please don't hesitate to contact me to plan for the follow up activities in the memorandum and this letter.

Respectfully yours,

A handwritten signature in black ink, appearing to read "Jim B. Cruz" with a stylized flourish at the end.

Jerome B. Cruz

Site Manager

Toxics Cleanup Program

cc: Robert Warren, TCP-NWRO
Ching-Pi Wang, NWRO, TCP
Caroline Cress, AGO-Ecology Division
William Kombol, Palmer Coking Coal