



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

1250 W Alder St • Union Gap, WA 98903-0009 • (509) 575-2490

July 16, 2019

Jim Cach  
Coleman Oil Company  
529 E. Kennewick Avenue  
Kennewick, WA 99336

**Re: Remedial Investigations and Interim Actions at Coleman Oil Yakima Bulk Plant**

- **Site Name:** Coleman Oil Yakima Bulk Plant
- **Site Address:** 1 East I Street, Yakima
- **Cleanup Site ID:** 13200
- **Facility Site ID:** 4233

Dear Jim Cach:

The Department of Ecology has received a document titled “Technical Memorandum, re Remedial Investigation Update,” prepared by PBS and dated July 12, 2019. This document provides interim data for ongoing remedial investigation (RI) activities, including NAPL and groundwater sampling, NAPL product transmissivity testing, soil investigation, and soil vapor probe installation.

Ecology appreciates the submittal of the interim data. We are also eager to see completion of the remainder of planned RI activities, including installation and sampling of additional monitoring wells and borings.

Ecology concurs with the conclusion that a dual phase extraction system is not supported by the data, based on the current status of product at the site. We do, however, suggest that proceeding with an interim action consisting of vacuum pumping of product from wells with measurable product is appropriate.

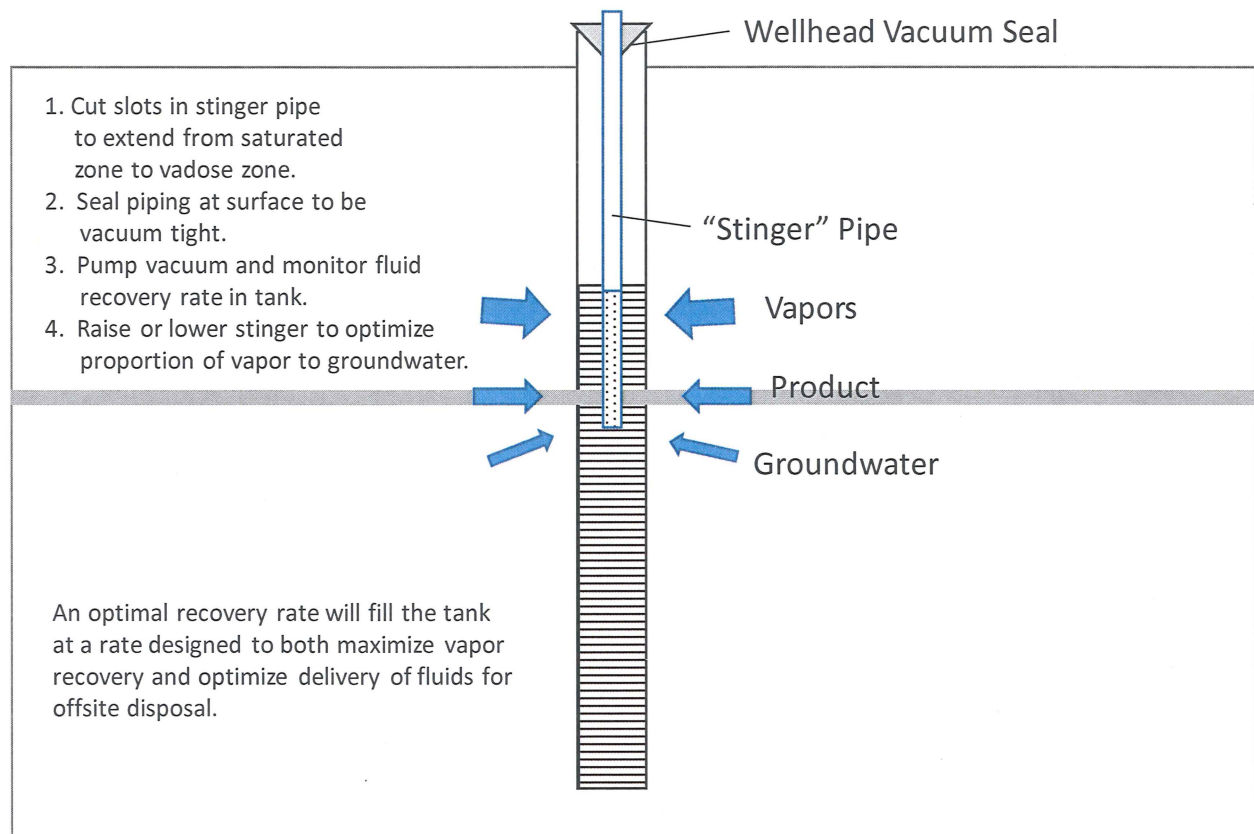
Note that as thickness of product in wells declines, the efficiency of product recovery from vacuum pumping tends to decline, and product within the wells may “break off” from product within the formation. Ecology suggests that the vacuum extraction consist of multi-phase vacuum extraction, with vapors pulled from the vadose zone as well as product and contaminated groundwater. **Figure 1** illustrates this methodology. The “stinger” inside the well is sealed at the surface and the stinger raised or lowered to optimize the recovery blend of vapor, product, and water.



Pumping from the vapor phase has two effects; volatile components of product can be pulled into the vapor phase and recovered, and oxygen can be laterally pulled within the vadose zone, thus enhancing biodegradation of vadose zone contamination, as well as some biodegradation of free product.

After vacuum pumping of the wells containing product, then they should be monitored daily for recovery of product. The frequency of performing multi-phase vacuum extraction can then be designed based on the observed product recovery rates. The suggested multi-phase vacuum extraction is a slight variation on the product vacuum extraction that was previously performed and Ecology understands is still planned as a continued interim action for the Site. Removal of free product, to the extent possible, is mandated under WAC 173-340-360(2)(c)(A).

**Figure 1: Suggested Multi-Phase Vacuum Extraction**



Ecology suggests that the suggested multi-phase vacuum extraction can proceed in the immediate future. Compliance with local air regulatory authority requirements may be needed. Please let us know when vacuum extraction is planned, consistent with the requirements of the Agreed Order, as Ecology may choose to attend.

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We appreciate Coleman Oil's continued efforts toward cleaning up this Site. Please feel free to contact me at (509) 454-7835 or email at [frank.winslow@ecy.wa.gov](mailto:frank.winslow@ecy.wa.gov) with any questions or concerns regarding this letter.

Sincerely yours,



Frank Winslow  
Cleanup Site Manager  
Toxics Cleanup Program  
Central Region Office

cc: Ken Nogeire, PBS Environmental