DEPARTMENT OF ECOLOGY
State of Washington

Response to Comments

Draft Remedial Investigation and Feasibility Study Work Plan for Colville Post & Poles

Facility Site ID: 765
Cleanup Site ID: 46

Public comment period held:

July 4 – September 2, 2016

Summary of a public comment period and responses to comments

November 2016

Publication and Contact Information

This document is available on the Washington State Department of Ecology's website at https://fortress.wa.gov/ecy/gsp/CleanupSiteDocuments.aspx?csid=46.

Contacts

Toxics Cleanup Program, Eastern Region
4601 N. Monroe Street
Spokane, WA 99205

Jeremy Schmidt, Site Manager
509-329-3484, jeremy.schmidt@ecy.wa.gov

Erika Bronson, Public Involvement Coordinator
509-329-3546, erika.bronson@ecy.wa.gov

Washington State Department of Ecology - www.ecy.wa.gov

- Eastern Regional Office, Spokane 509-329-3400
- Headquarters, Lacey 360-407-6000
- Northwest Regional Office, Bellevue 425-649-7000
- Southwest Regional Office, Lacey 360-407-6300
- Central Regional Office, Yakima 509-575-2490

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Toxics Cleanup in Washington State

Accidental spills of dangerous materials and past business practices have contaminated land and water throughout the state. The Washington State Department of Ecology (Ecology) Toxics Cleanup Program works to remedy these situations, which range from cleaning up contamination from leaking underground storage tanks, to large, complex projects requiring engineered solutions.

Contaminated sites in Washington State are cleaned up under the Model Toxics Control Act (MTCA, Chapter 173-340 Washington Administrative Code), a citizen-mandated law passed in 1989. This law sets standards to ensure toxics cleanup protects human health and the environment and includes opportunities for public input.

Comment Period Summary

Ecology held a comment period from July 4 through September 2, 2016, for the draft *Remedial Investigation and Feasibility Study Work Plan* for the Colville Post & Poles cleanup site. In response to a request from the public, Ecology made an addendum to the work plan available for review and extended the comment period end date from August 4 to September 2.

The purpose of the remedial investigation is to determine the extent and magnitude of any remaining contamination at the site. The purpose of the feasibility study is to evaluate options for cleaning up remaining contamination.

Ecology appreciates the concerns raised in the comments received, which we address in the Response to Comments section that begins on page 2. After considering the comments, Ecology has updated the work plan. The changes are explained in our responses below.

Colville Post & Poles Site Background

The nearly 23-acre site is located at 396 Highway 395 North, four miles outside of Colville in Stevens County, Washington. The site is within 200 feet of the Colville River, which flows into Lake Roosevelt, a reservoir created by the Grand Coulee Dam on the Columbia River.

Colville Post & Poles, Inc., and several previous owners treated wood, primarily fence posts and rails, for about 60 years (1940s – 2005) at this location. Raw wood was dipped in

tanks of heated solution and then dried on nearby drip pads. Treated wood was stockpiled on the ground in various locations in the yard.

Throughout the wood-treating period, pentachlorophenol (PCP) and diesel leaked from piping and drip pads. In 1989, a 10,000-gallon above-ground storage tank leaked PCP to the ground.

In 2000, the Confederated Tribes of the Colville Reservation petitioned the U.S. Environmental Protection Agency (EPA) to assess contamination at the site. Colville Post & Poles, Inc., closed down in 2005 when the owners couldn't afford upgrades required to protect human health and the environment.

Cleanup at the Colville Post & Poles site is government-funded because the site owners/former operators are unable pay for it. The EPA and Ecology have both taken interim cleanup actions to protect human health and the environment while a final cleanup plan is developed. The public was invited to review and comment on the interim cleanup actions.

Index of Comments Received

Response to Comments

Comment letters 1 and 2 are below with Ecology's responses italicized following each point.

1. Tom Price, Electronic Review for the Environment, Inc., via email August 3, 2016

RE: Colville Post and Poles, Stevens County, Washington - Remedial Investigation/Feasibility Study (RI/FS) Workplan prepared for Washington State Department of Ecology by GeoEngineers dated June 14, 2016

Dear Mr. Schmidt,

Electronic Review for the Environment, Inc. has reviewed the RI/FS and has the following comments:
1) Table of Contents- Tables A-1 to A-6 are not listed; those were referenced in section 2.2 on page 4 but appear to be missing from the report (Appendix A also lacks them). The missing data tables prevented meaningful review of the document.

Ecology's response: *We agree that these tables were inadvertently missing from the document. The information contained in Figures A-1 through A-11 depict the extent of contamination (referenced to a screening level) that is tabulated in the missing tables. But the figures do not describe the historical magnitude of contamination when concentrations were above screening levels. Tables A-1 to A-6 were emailed to you on August 10, and were posted on the project website.*

2) Page 1 discusses "steps to a comprehensive remedial investigation" however the document only presents brief summaries of investigations; concise discussions for all contaminants of concern with adequate references to data tables and figures is needed to explain the investigation rationale.

Ecology's response: *The language at the bottom of page 1 indicates that it was part of the consultant's scope of services to meet "with Ecology to discuss data gaps, Pre-RI site assessment tasks, and necessary steps to conduct a comprehensive RI." This statement, from our perspective, is accurate. GeoEngineers did meet with Ecology, and we used past investigation results and current site data gaps to develop what we feel is a comprehensive plan for this RI.*

We agree that the document only summarized past investigations. The EPA completed more than $2.5 million removing contamination from this site, and this work and subsequent monitoring was extensively documented. Ecology provided the consultant all of this documentation to develop the RI/FS Work Plan. The intent of the work plan is to thoroughly determine the magnitude and extent of any possible remaining contamination without redoing what has already been done. This is critical because this is an orphan site where cleanup is completely funded by very limited state tax dollars. Ecology believes Appendix A (and the missing tables) provides historical contaminant information to ensure that the current RI will be thorough. You can find more information about EPA's cleanup at this site online: https://www.epaosc.org/site/site_profile.aspx?site_id=10ZZ

3) Section 5.2 discusses that previous investigations showed pentachlorophenol (PCP) and diesel-range petroleum hydrocarbons (DRPH) in groundwater. Dioxins can be reasonably be expected to be co-located with PCP and DRPH however section 5.3 item #1 proposes to test groundwater for dioxins for only a single event during groundwater monitoring if concentrations are below screening levels. That seems inadequate; no

rationale to justify the proposed discontinuation was presented. In addition, Total Organic Carbon (TOC) can act as a colloidal transport mechanism for dioxins/furan's groundwater; was that considered? Shouldn't TOC analysis be added to the testing program?

Ecology's response: *There are several reasons we believe this sampling will be adequate. The first reason is past dioxin concentrations in soil were very low, and, given the tendency for dioxins/furans to sorb to soil and their very limited solubility, high concentrations dissolved in groundwater are unlikely. This is related to the second reason: given the low dioxin concentrations in soil, the most likely way for dioxins to have contacted groundwater was when the facility had diesel/PCP spills resulting in free product on groundwater. Because of past site cleanup efforts, we believe free product is no longer present at the site, and that will be confirmed through the proposed groundwater monitoring network.*

The third reason is we will complete groundwater sampling during the season when most of the historical maximum concentrations of PCP and DRPH were detected. As you point out, dioxins/furans would be expected to be co-located with the other dissolved-phase contaminants; therefore, sampling during periods of historical maximum concentrations will be the most likely time to detect dioxins/furans.

With respect to TOC, you are correct that it is not in the current sampling plan. But because we don't allow groundwater filtering prior to analysis, any colloidally-sorbed dioxins/furans will be detected by the proposed method. If dioxins/furans are detected at concentrations above cleanup levels, it may be necessary to analyze for TOC to evaluate colloidal transport and its effect on contaminant migration for the conceptual site model.

4) Based on these deficiencies, we request significant revisions to the document and the opportunity to review a corrected and revised document in another Public Comment period.

Ecology's response: *As indicated above, the missing tables were added, and the public review period was extended through September 2, 2016.*

Sincerely yours,
ELECTRONIC REVIEW FOR THE ENVIRONMENT, INC.
By: Tom Price, Director
P.O. Box 2756
Berkeley, CA 94702

2. Tom Price, Electronic Review for the Environment, Inc., via email August 30, 2016

RE: Remedial Investigation/Feasibility Study Workplan and associated Memorandum with data tables dated August 9, 2016 prepared by GeoEngineers for the Colville Post and Poles site located in Stevens County, Washington.

Dear Mr. Schmidt:
Electronic Review for the Environment, Inc. (ERE, Inc.) has reviewed the June 14, 2016 *Remedial Investigation/Feasibility Study Workplan* and associated Memorandum with data tables dated August 9, 2016 prepared by GeoEngineers for the Colville Post and Poles site located in Stevens County, Washington.

1) Page 1 discusses "steps to a comprehensive remedial investigation" however the document only presents brief summaries of investigations; concise discussions for all contaminants of concern with adequate references to data tables and figures is needed to explain the investigation rationale. The Washington Department of Ecology (WDE) provided an initial response to this comment last month including the stated goal to "*…thoroughly determine the magnitude and extent of any possible remaining contamination but not to redo what has already been done.*" WDE appears to have overlooked that there is a significant amount of investigation which has not been done. For example: groundwater dioxins and furans have not been characterized at this site. Table 1 on page identifies a groundwater cleanup goal for dioxins and furans however Table A-2 which shows groundwater data does not have any dioxins/furans analysis presented. Since diesel range petroleum hydrocarbons and pentachlorophenol are present in numerous groundwater samples, it is reasonable to expect that the dioxins and furans will also be present. Please add a scope of work to the RI/FS Workplan to fully characterize the extent of groundwater for dixoins and furans. Also, the wetland areas of the site have not been adequately investigated for all contaminants of concern. ERE, Inc. agrees that work should not be redone; however, WDE missed the point that it is necessary to adequately present descriptions of work that has already been done and adequately evaluate data that has already been collected. The shorthand approach presented in this document does not allow the investigation rationale to be meaningfully reviewed. To reiterate the original question: Please provide concise discussions for all contaminants of concern with adequate references to data tables and figures in order to explain the investigation rationale.

Ecology's response: *Table A-2 shows historic groundwater sampling EPA conducted. It does not include dioxin/furan analysis results because EPA did not sample for those contaminants in groundwater. The current work plan addresses this data gap. This work plan is written with a defined contract scope in mind; however, this will not negate Ecology's ability to expand the RI work if the results from the initial scope of work indicate more is needed. Ecology believes the*

summary description of past work in the work plan is sufficient. References are provided if the public would like more information.

2) Page10 section 3.1 – The Potential Exposure Pathways and Receptors section failed to identify the wetland areas as potential routes of transport for contaminants to the creek.

Ecology's response: *The potential exposure pathways were based on EPA's past analytical results. The sampling in the current work plan will determine if a completed pathway to the Colville River exists.*

3) Page 10 section3.1.1 Shallow Surface Soil and Sediments first paragraph describes that soil was removed and covered with an impermeable cap. Does this document consider the option of installing an impermeable cap?

Ecology's response: *The feasibility study will evaluate potential remedies based on the results from the remedial investigation. It is premature to guess what remedies might be applicable when the extent of any remaining contamination is unknown.*

4) Page 12 section 5.2 Monitoring Well Installation – The wetland areas should have monitoring wells installed in them too. Figure A-12 shows a discharge point from the wetlands into the Colville River.

Ecology's response: *It is illegal in Washington State to install monitoring wells in wetlands. Surface water samples from the wetlands may be collected if a completed pathway to the wetlands is found (for example, based on the results from groundwater and sediment sampling).*

5) Page 14 section 5.3 discusses that previous investigations showed pentachlorophenol (PCP) and diesel-range petroleum hydrocarbons (DRPH) in groundwater. Dioxins can be reasonably be expected to be co-located with PCP and DRPH however section 5.3 item #1 proposes to test groundwater for dioxins for only a single event during groundwater monitoring if concentrations are below screening levels. That seems inadequate; no rationale to justify the proposed discontinuation was presented. In addition, the presentation of the duration of monitoring for other target analytes is too prescriptive, groundwater monitoring should not be discontinued arbitrarily, it should serve the purpose to provide long-term monitoring. Specific criteria can suggest a lesser frequency of monitoring and the criteria for discontinuation should be defined.

Ecology's response: *There are several reasons we believe this sampling will be adequate. The first reason is past dioxin concentrations in soil were very low, and, given the tendency for*

dioxins/furans to sorb to soil and their very limited solubility, high concentrations dissolved in groundwater are unlikely. This is related to the second reason: given the low dioxin concentrations in soil, the most likely way for dioxins to have contacted groundwater was when the facility had diesel/PCP spills resulting in free product on groundwater. Because of past site cleanup efforts, we believe free product is no longer present at the site, and that will be confirmed through the proposed groundwater monitoring network.

The third reason is we will complete groundwater sampling during the season when most of the historical maximum concentrations of PCP and DRPH were detected. As you point out, dioxins/furans would be expected to be co-located with the other dissolved-phase contaminants; therefore, sampling during periods of historical maximum concentrations will be the most likely time to detect dioxins/furans.

This work plan is written with a defined contract scope in mind; however, this will not negate Ecology's ability to expand the RI work if the results from the initial scope of work indicate more is needed.

6) Regarding testing groundwater, since Total Organic Carbon (TOC) can act as a colloidal transport mechanism for dioxins/furan in groundwater please add TOC analysis to the testing program?

Ecology's response: *Ecology doesn't allow groundwater filtering prior to analysis; therefore, any colloidally-sorbed dioxins/furans will be detected by the proposed method. If dioxins/furans are detected at concentrations above cleanup levels, it may be necessary to analyze for TOC to evaluate colloidal transport and its effect on contaminant migration for the conceptual site model.*

7) Add the colloidal transport mechanism as a possible contaminant transport mechanism through groundwater, through wetlands, a potentially affecting off-site wells discharge to the Colville River.

Ecology's response: *Ecology does not allow groundwater filtering prior to analysis; therefore, any colloidally-sorbed dioxins/furans will be detected by the proposed method. If dioxins/furans are detected at concentrations above cleanup levels, then it may be necessary to analyze for TOC to evaluate colloidal transport and its effect on contaminant migration. The existing plan will follow a step-by-step process to determine if contaminants are migrating to the Colville River.*

8) Add investigation for characterization of contaminants of concern in wetland area sediments.

Ecology's response: *As depicted in Figure 8 of the work plan, wetland sediment characterization will occur in several locations. Locations and contaminants of concern were selected based on EPA's past sampling results.*

9) Page 17 section 6.5 only provided a general approach which is ambiguous which defeats the community's ability to comment. Isn't there any specific information regarding the types of feasibility studies that could be provided now (perhaps some initial screening alternatives can be presented)?

Ecology's response: *The feasibility study will evaluate potential cleanup options based on the remedial investigation results. It is premature to guess what remedies might be applicable when the extent of any remaining contamination is unknown.*

10) Figure A-8 shows a hotspot of pentachlorophenol (PCP) and Diesel Range Petroleum Hydrocarbons (DRPH) co-located around sampling locations PAB-7, PAB-21, and PAB-22. That location appears to have the highest potential for dioxins and furans in groundwater; please conduct delineations of that area for those contaminants.

Ecology's response: *The soil in these sampling locations was completely excavated to groundwater and disposed of offsite by EPA. The area was backfilled with clean fill. Monitoring well MW-27 will be installed in close proximity to these sampling locations and will be sampled for dioxins/furans.*

11) Table A-2 shows many pages of blank tables which appears to be an error. Was the data left out? Table A-2 shows many detections of PCPs. Those areas should be investigated/monitored for dioxins (dioxin extremely toxic and is a trace byproduct of PCP manufacturing).

Ecology's response: *It appears there are several pages in Table A-2 with few analytical results. This is an all-encompassing matrix of data, and not all contaminants were analyzed at each location during every sampling event.*

12) USEPA conducted separate phase hydrocarbon removal approximately 9 years ago. Since hydrocarbons can leach down through the soil to impact groundwater over time, a new delineations of separate phase hydrocarbons at the site should be completed.

Ecology's response: *This will be completed by installing groundwater monitoring wells. If we determine that the proposed network is not sufficient to delineate contamination (dissolved or free phase), additional monitoring wells will be installed.*

13) Based on these deficiencies, we request significant revisions to the document and the opportunity to review a corrected and revised document in another Public Comment period.

Ecology's response: *Ecology hopes these responses address your concerns. The document will be modified as indicated in the responses, and we extended the public comment period to allow for further review. We believe the changes made based on public comments don't warrant an additional review period.*

Sincerely yours,
ELECTRONIC REVIEW FOR THE ENVIRONMENT, INC.
By: Tom Price, Director
P.O. Box 2756
Berkeley, CA 94702

3. Donald Hurst, The Confederated Tribes of the Colville Reservation, via letter September 2, 2016

An image of the letter is below with comment numbers superimposed over the top. Ecology's responses follow and are numbered respectively.

The Confederated Tribes of the Colville Reservation
P.O. Box 150, Nespelem, WA 99155 (509) 634-2200
Environmental Trust Department FAX: (509) 634-4116

Friday, September 02, 2016

Jeremy T. Schmidt, Site Manager
4601 North Monroe Street
Spokane, WA 99205

RE: CTCR Comments on Draft Remedial Investigation/Feasibility Study Work Plan, Colville Post & Pole Cleanup Site.

~~Mr. Schmidt~~, Jeremy,

The Colville Confederated Tribes, Office of Environmental Trust have reviewed the Draft RI/FS Work Plan at the Colville Post & Pole Cleanup Site and offer the following comments for your consideration. Ms Patti Bailey and I appreciate the time and effort your office spent with us on August 11th to answer our questions, discuss our concerns, and improve our technical understanding of the proposed scope of work at the Site. We also appreciate your communication that comments on the draft RI/FS Work Plan would be accepted by Ecology through September 2, 2016.

We understand that until recently, EPA has functioned in the lead regulatory agency role in conducting environmental investigations and time-sensitive remedial actions related to structures, soil, and shallow groundwater contamination resulting from former operations at the Site. Following conclusion of EPA's role as lead regulatory agency at the Site, assessment and cleanup responsibility shifted to the Toxics Cleanup Program administered by the Washington State Department of Ecology, Eastern Region Office. The scope of activities presented in the Draft Colville Post & Pole RI/FS Work Plan represents Ecology's proposed path forward to address remaining data gaps related to contaminant fate and transport at the Site. Scope of work in the proposed Draft RI/FS Work Plan includes installation of multiple new shallow groundwater monitoring wells (all preexisting monitoring wells were closed by EPA)and hand auger soil borings with sampling and analysis of both soil and water media for contaminants of concern. Ecology indicates that the tentative schedule for implementation of the RI/FS Work Plan is late summer and fall of 2016.

The Colville Confederated Tribes, Office of Environmental Trust offer the following comments pertaining to the Colville Post & Pole Draft RI/FS Work Plan:

- Previous studies have concluded the predominant shallow groundwater flow direction is to the west or northwest, but data also suggests groundwater flow to the south and southwest (towards the Colville River) may occur temporally in response to seasonal water table fluctuations and heterogeneous subsurface lithology. Nine new shallow groundwater monitoring wells are proposed in the draft RI/FSA Work Plan although none of the proposed new monitoring wells are located within the southwest quadrant of the Site boundary (down gradient from contaminant plume under a south-to-southwest flow

regime). We believe this is a substantive data gap that should be addressed in the RI/FS Work Plan.

1 Consequently, we recommend that at least one additional new monitoring well be located in the southwest quadrant of the site in reasonably close proximity to both the southwestern property boundary of the Site and the Colville River. Contaminants of concern for sampling and analysis in the new well should be consistent with those identified in the draft RI/FS Work Plan for other proposed new groundwater monitoring wells located in or near the plume boundary.

- None of the previous phases of environmental investigation at the Colville Post & Pole Site included assessment of contaminants of concern in sediment and sediment pore water of the Colville River at/near the shared margin of the Subject Site and the Colville River. We believe this represents a substantive data gap that should be addressed in the RI/FS Work Plan as previous investigations have concluded hydrologic continuity exists between surface water and groundwater at the Site and under certain subsurface hydrogeological conditions, near surface groundwater flow direction may occur to the south/southwest, towards the Colville River.

2 Consequently, we recommend that sediment and sediment pore water be sampled at no less than two locations below water line on the banks of the Colville River in the southwest quadrant of the site. Contaminants of concern for sampling and analysis of sediment and pore water should be consistent with those identified for groundwater wells located at or near the plume boundary.

Thank you for your assistance in enhancing our technical understanding of the Colville Post & Pole Site history and proposed RI/FS scope of work. Please contact me at your earliest convenience if you have questions or seek further discussion regarding our comments.

Sincerely,

Donald J. Hurst, RG
Toxics Cleanup Program Manager
Colville Confederated Tribes, Office of Environmental Trust
Po Box 150
Nespelem, WA 99155.

Cc: Gary Passmore
Patti Bailey

Ecology's response 1: *Ecology agrees with your comment. An additional groundwater monitoring well will be installed on the southwest corner of the Colville Post & Poles property, approximately 350 feet south of the proposed location for MW-23.*

Ecology's response 2: *Ecology agrees with your comment and intends to address it in this manner: Based on our conversation on August 11, 2016, we believe the best nomenclature for what we discussed as "sediment pore water" is "groundwater seeps." Therefore, if "groundwater seeps" are present in the southwest corner of the property, samples of this water from at least two locations will be collected and analyzed for diesel-range total petroleum hydrocarbons, PCP, mercury, and cadmium. If the results from those "groundwater seeps" indicate contamination is present, sediment in the Colville River immediately downstream of the groundwater seeps will be sampled and also be analyzed for diesel-range total petroleum hydrocarbons, PCP, mercury, and cadmium.*