



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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August 10, 2010

Warren Snyder, Manager, Environmental Engineering
Rayonier, Inc.
P.O. Box 728
Fernandina Beach, FL 32035

Re: Approval of Draft Final Supplemental Upland Data Collection Work Plan for the Upland Portion of the Study Area, Port Angeles Rayonier Mill Site

Dear Mr. Snyder:

In accordance with the schedule set forth in Agreed Order 6815, the Washington State Department of Ecology (Ecology) received the Draft Final Supplemental Upland Data Collection Work Plan (Work Plan) for the Upland Portion of the Study Area on July 20, 2010. Ecology has completed its review of the Work Plan.

On August 5, representatives from Ecology, Rayonier and GeoEngineers discussed Ecology's draft comments on the Work Plan. Enclosed are the agreements we reached to resolve the draft comments on the Work Plan.

Contingent upon these agreements, **Ecology approves the Draft Final Supplemental Upland Data Collection Work Plan.**

We appreciate the hard work and open dialogue in developing this Work Plan, and look forward to the start of field sampling. If you have any questions, I may be reached at (360)407-6257.

Sincerely,

Marian L. Abbett, P.E.
Project Coordinator
Toxics Cleanup Program
Southwest Regional Office

MLA/ksc:ECY Approval of DF Supplemental Upland Data Collection work plan

By certified mail: (7009 2820 0001 7161 0008)

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Draft Comments on Draft Final Supplemental Upland Data Collection Work Plan
For the Upland Portion of the Study Area
GeoEngineers, July 20, 2010

Must haves:

1. Deep Aquifer (Previous Comment 35, Section 6.6.2 and Table 7)

Ecology does not accept the proposed approach to extend GWG-6 to a depth of only 6 feet into the glacial deposits. We maintain that a grab groundwater sample needs to be collected from the aquifer underlying the glacial deposits and then a monitoring well shall be installed at the base of the uppermost aquifer as described in our previous set of comments on the draft Supplemental Upland Data Collection Work Plan. The vertical hydraulic gradient between the two aquifers also needs to be measured. The assumption that the glacial deposits form a barrier to contaminant migration cannot be accepted without sampling the lower aquifer. We have knowledge of at least one site in Washington (Parkland Cleaners) where chlorinated volatile organic compounds penetrated 50 to 60 feet of similar glacial deposits to contaminate a lower aquifer.

Resolution: *Rayonier agrees to characterize the aquifer underlying the glacial deposits in the vicinity of MW-13 where VOCs were previously detected. Rayonier will characterize the deeper aquifer in a series of steps to be scheduled during Phase 2 and 3 of the Work Plan. The first step will involve installation of a monitoring well in the shallow aquifer that keys into the till layer. Groundwater sampling results from this new shallow monitoring well will inform the placement of a deep well (step 2). The deep well will be installed in the water-bearing zone beneath the till layer. The vertical hydraulic gradient between the two aquifers will be measured.*

2. Additional Boring (Section 6.8.5)

Ecology appreciates the new figures showing soil exceedances of levels protective for the three major pathways (human health, ecological, and protection of groundwater). They were very helpful in evaluating characterization of the vertical extent of soil contamination. We agree with the proposed nine borings to address the extent of vertical contamination in soil. However, in reviewing the figures and data, we request one additional boring (SSB-10) to be located in the area of the Bone Yard. Data in the Bone Yard showed exceedances for PAHs, PCBs, pesticides, metals, and dioxins/furans. As no new exploration is proposed in this area, Ecology requests a soil boring to look at the vertical extent of soil contamination – information that will be useful in understanding the ubiquitous contamination present on the property and useful for developing a Soil Management Plan. Soil samples should be collected from the same depths as the other borings (e.g., 2 ft, 5 ft, 10 ft, 15 ft, 20 ft, etc to glacial deposits). Soil samples should be analyzed for SVOCs (including PAHs), PCBs, metals (large suite), dioxins/furans, and pesticides.

Resolution: *Rayonier agrees to install a soil boring (SSB-10) in the Bone Yard. Soil samples will be collected from 2 ft, 5 ft, 10 ft, 15 ft, 20 ft, etc to glacial deposits. Soil samples from 2 ft and 5 ft will be analyzed for SVOCs (including PAHs), PCBs, metals (large suite), dioxins/furans, and pesticides. Soil samples from the remaining depths will be archived, and will be analyzed for those analyte suites detected in the 5 foot sample above screening levels.*

Recommendations:

Ecology makes the following recommendations, but approval is not contingent on these recommendations (*we want to hear Rayonier/GeoEngineers thoughts*)

3. MW63 – add analysis of dioxins in soil samples during well installation. This is along the CSO alignment for the City, near the foam tank, and dioxin information would help answer soil characterization along this part of the alignment.
Resolution: *Rayonier requested that sampling associated with CSO work be kept separate from this Work Plan. Acknowledging this concern, and given that soil samples in the new soil boring SSB-10 will have dioxins analysis, Ecology retracts this comment.*
4. GWG 7-9 – add analysis of pesticides in soil samples. Also consider the alignment of these 3 groundwater grab location in relation to the drainage ditch, a potential source of contaminants.
Resolution: *after clarification that the drainage ditch is further south than the proposed locations of GWG 7-9, Ecology retracts this comment.*
5. Previous Comment 67, Appendix A, Sampling and Analysis Plan: Sampling of targeted test pits in Phase 3 has been changed from including large suite of metals to including just lead sampling. Metals do not appear to have been adequately assessed in these areas and should be included as in the previous draft.
Resolution: *Rayonier agreed to analyze soils samples from a minimum of 3 test pits for large suite metals to fill in spatial data gaps.*

Minor comments:

Ecology makes the following comments for clarification....

6. Previous Comment 21, Section 6.2: A previous comment requested that groundwater sampling should be timed with the tidal cycle and the tidal cycle should be noted. The text now states that sampling will be timed with the tidal cycle, but it does not state that tidal cycle should be noted in the field logs. Ecology expects that the tidal cycle will be noted in the field logs.
Resolution: *Rayonier agrees.*
7. Previous Comment 73, Appendix A, Sampling and Analysis Plan: The collection of both filtered and unfiltered groundwater samples for metals analysis is now mentioned in Table 1 footnotes, Section 3.6.3 and 3.7 of Appendix A, Sampling and Analysis Plan. The explanation of analyzing all unfiltered samples, holding the filtered samples, and only analyzing the corresponding filtered samples for those samples with high turbidity doesn't seem to be included anywhere. Ecology expects that all unfiltered samples will be analyzed. When turbidity is high, then the filtered samples should also be analyzed.
Resolution: *Rayonier agrees.*
8. Previous Comment 75, Appendix A, Sampling and Analysis Plan, Section 3.11.3: Text was added to clarify that all tools directly contacting samples will be cleaned with detergent. It still doesn't clarify that pressure washing is only with water. Ecology expects that pressure washing will be with water only.
Resolution: *Rayonier agrees.*
9. Table 1, Soil Screening Level: In Table 1, Soil Screening Level, the PQL value for Total Xylenes is 0.075 mg/kg. In the Quality Assurance Project Plan, Table 1, this value is 1 ug/kg. Ecology expects that the lowest PQL for total xylenes will be achieved by the lab.
Resolution: *Rayonier agrees.*

Ecology makes the following comments for documentation in future submittals....

10. Previous Comment 6, Section 2.1.1: Text discussing the outfalls has been added to Section 2.1.1 and a figure showing their locations was added as Exhibit 1. The conclusion is made that the location of the five historic outfalls did not change during their operational life. Comparing the log pond area of the 1958 aerial Rayonier photo with the 1977 aerial Rayonier photo, the historical property shoreline of the log pond does appear to change significantly. Changes to other areas of the shoreline appear minimal.

Resolution: *Rayonier agrees that the shoreline of the log pond changed over time due to fill, but that the location of the outfall was not affected. Rayonier will forward additional photos of fill in relation to the outfalls.*

11. Previous Comment 14, Section 5.2.2: The text now states 18 PCP exceedances, but the legend on Figure 11A lists 20 PCP exceedances. FR06 and FR07, removed during the Finishing Room Interim Actions, may have been included in the list on the map, but are not shown on the map or counted in the text.

Resolution: *Rayonier will confirm values in the text and on maps are cleaned up.*

12. Previous Comment 28, Figure 27: Wastewater treatment lines to the secondary treatment plant and SSL lines have not been added to Figure 27. Ecology expects that future submittals with figures showing the piping include these lines if the information is available.

Resolution: *The piping figure shows known underground piping with minimal inference on location of piping. The wastewater treatment line to the secondary treatment plant and the SSL lines were primarily aboveground lines. If there is any new information on underground piping not already captured in the piping figure, it will be added.*

13. Cross-Section C-C': If possible, please add piezometer/boring PA-17 and -18 to Figure 9B.

Resolution: *Borings PA 17 and 18 will not be added to Figure 9B as the projection is too far away. Suggest looking at Figure 3 of the Shannon and Wilson Geophysical Report.*

14. Figure 28: Please check the locations of PA-21 and -22 on this figure. The locations shown on Figure 28 don't seem to match the locations shown on the original Shannon and Wilson map dated December 2009.

Resolution: *PA-22 is not a well, and not on Figure 28. Surveyors have recently checked all current well locations. Future maps will be updated with this information. Ecology retracts this comment.*