



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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October 22, 2009

Janusz Bajsarowicz  
Pacific Topsoils, Inc.  
805 80<sup>th</sup> Street SW  
Everett, Washington 98203

Re: Status of Weyerhaeuser Mill E site in Everett, Washington

Dear Mr. Bajsarowicz,

Thank you for your time and effort in providing updated data and site review evaluation and recommendations on this site. The purpose of this letter is to document the results of Ecology's review of this site and respond to the proposal for reduced monitoring at the site.

Based on review of the existing information, Ecology recommends the following:

**Observations based on review of continuing site conditions**

1. The terms of the final approved Consent Decree have no specific language for reassessment of the remedial system for this site, nor is there language for corrective action if contaminants are out of compliance. Given present constraints and conditions, the institutional controls and monitoring should continue indefinitely.
2. The analyte concentrations in PZ-3A and overall groundwater monitoring schedule should continue to be monitored at least annually (not every 2 years as recommended in the 10 year report), and indefinitely. There remains a lack of consistently low concentrations as seen in time series plots of contaminants. Although the 10 year report cites a decreasing trend, this trend may change as seen in earlier rising patterns in concentration.
3. Sampling events should continue following a more consistent time of the year to make water level and analyte measurements comparable. Furthermore, reports should indicate the tidal stage in the adjacent Snohomish River at the time of sampling. The last four annual sampling events were done in September. It is not known if this time of the year represents an average representative concentration or more conservatively a maximum concentration in the containment wall.



4. The site continues to have arsenic contamination above cleanup levels in groundwater. The Consent Decree does not detail a response or plan of action when contaminants are not in compliance following periodic review. Therefore, a corrective action might be needed for the arsenic exceedance. Note that because this site is located at the Everett Smelter arsenic site, this may be reflective of area background, although this has not been demonstrated. The report cites a 1997 Weyerhaeuser Feasibility Study as indicating that arsenic concentrations are below an upgradient concentration of 0.443 mg/L. The 0.443 mg/L value appears to have been cited as a proposed value for area background based on previous discussion on the arsenic exceedances at the site. The FS states that an investigation by EMCON showed that "groundwater arsenic concentration in the upper sand aquifer upgradient of the Former Mill E/Koppers Facility Site was approximately 0.054 mg/L (Hydrometrics, 1994)." Immediately upgradient of the site in the upper sand aquifer (on Weyerhaeuser property), average arsenic was 0.443 mg/L. Therefore, the quoted value of 0.443 mg/L refers to groundwater that is still part of the site and does not constitute background. Much of the measured arsenic data within the containment is above the Method A value of 5 µg/L (as per consent decree) and above 54 µg/L, the aforementioned quoted average value upgradient of the site. Likewise, it has not been adequately demonstrated what natural or area background is based on criteria stated in WAC 173-340-709.
5. The UECA periodic review person (Joe Hickey) should make an independent evaluation of the 5 and 10 year periodic review of this site. The PLPs should follow his recommendation for future actions at this site.
6. Cap monitoring and inspection should proceed as before. The PLPs have done a good job maintaining the integrity of the asphalt cap and fulfilling notification requirements of the institutional controls required in the consent decree.

### **Long term recommendations**

Long term recommendations are presented in a technical advisory capacity only. This is recommended only if there is an opportunity or decision to implement such an action at the site:

1. One means to better evaluate the temporal variation in containment wall hydraulic performance is to determine water levels over a continuous period. A 48 hour tidal study of groundwater levels within and outside of the containment wall can be conducted to establish tidal variations in water levels and observe if the water level within the containment system consistently remains lower than levels outside the containment wall throughout a complete tidal cycle. As designed, the system was meant to keep water lower inside the containment wall compared to outside and thus maintain a hydraulic gradient inward to keep contaminants from escaping the containment wall while minimizing breakthrough at the basal confining unit. Water level measurements were taken once or twice a year (with no measurements in 2005) and thus does not have the resolution to show temporal variation in water levels needed to show the degree to which

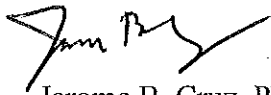
inward gradients are sustained (and thus ensuring the continued performance of the system). This is especially the case in the diurnal tidal cycle where groundwater levels may be expected to be lower outside the containment system than within.

2. Contaminant mass loading through the basal confining unit is believed to occur (especially during low tide), but there are no measurements beneath the layer that allow for direct measurement and confirmation of mass loading. No wells or sediment pore water measurements exist that would confirm the amount of contaminants that goes into the Snohomish River.

In summary, Ecology recommends continuing with the existing annual monitoring schedule, continued operation and maintenance of the surface cap, and continued implementation of institutional controls as per the 1998 Consent Decree. An UECA (Uniform Environmental Covenants Act) periodic review will be carried out for this site as per state statute. Ecology will contact you when UECA review has been carried out for this site.

Please don't hesitate to contact me if you have any questions or comments.

Respectfully yours,



Jerome B. Cruz, Ph.D., L.G., L.H.G.  
Toxics Cleanup Program

JBC:jc