
# RESPONSIVENESS SUMMARY

## Marine Trades Area

## May 16 – June 17, 2013 Public Comment Period

***Agreed Order Amendment***

***Remedial Investigation/Feasibility Study Report***

Prepared by
Washington State Department of Ecology
Southwest Regional Office
Toxics Cleanup Program
300 Desmond Drive
Olympia, Washington 98504-7775

**August 2013**

# Contents

## Introduction

The Department of Ecology (Ecology) held a public comment period May 16 – June 17, 2013 on a proposed legal agreement and cleanup report for the Marine Trades Area site. The following documents were available for public review and comment:

- A draft **remedial investigation and feasibility study (RI/FS) report**. It described the nature and extent of contamination and evaluates possible cleanup actions.
- A proposed **agreed order amendment** between Ecology, the Port of Port Angeles (port) and Chevron. It:
    - Completed the process of removing the K Ply site from the Marine Trades Area site.
    - Required the port and Chevron to develop a draft cleanup action plan, which selects cleanup methods and describes how they meet Ecology's standard.
- A **public participation plan**, which described tools Ecology will use to inform the public about, and gather input on, the cleanup.

Public comments and Ecology's responses are summarized in this document.

## Site Location


The site is located at Marine Drive and Tumwater Street in Port Angeles.

## Format of the Responsiveness Summary

Ecology reviewed all comments received. Sometimes comments from different reviewers covered the same topics. We have summarized and responded to the comments and questions we received. The rest of this responsiveness summary is organized into the following sections:

- Changes to the draft RI/FS and agreed order amendment
- Summary of Public Involvement
- List of Commenters
- Acronyms and Abbreviations
- Responses to Comments
- Appendix A: Comment Letters

## Changes to the Draft RI/FS and Agreed Order Amendment

Ecology did not receive any comments on the agreed order amendment, so Ecology signed and finalized it June 26, 2013. Based on comments we received, Ecology requested that the port and Chevron make the following changes to the RI/FS report:

- Add language to further clarify that the K Ply data and conclusions are incomplete and should not be considered a definitive source of information.
- Add text in Section 3.1to clarify what soil and groundwater parameters were measured to assess the potential applicability of remedial technologies and how they were evaluated.
- Update text in Section 5.6 and Figure 5.1 to reflect consideration of all potential species that are exposed in the harbor environment.

## Summary of Public Involvement

The Model Toxics Control Act (MTCA) mandates public involvement in the site cleanup process. The public comment period for the agreed order amendment and RI/FS report ran May 16 – June 17, 2013. Ecology used the following notices to advertise the comment period:

- Fact sheet mailer – Sent to about 420 neighboring residents and stakeholders.
- Email announcement – Sent to about 250 interested residents and stakeholders.
- Notice sent to local media outlets
- Website - https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=1301
- Other - Notices on Ecology's Public Involvement Calendar and Site Register**.** Legal ad in the Peninsula Daily News.

## Contacts

Connie Groven, Site Manager
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Connie.Groven@ecy.wa.gov

Diana Smith, Public Involvement Coordinator
Washington Department of Ecology
(360) 407-6255
Diana.Smith@ecy.wa.gov

## List of Commenters

| Date | Name | Affiliation |
|---|---|---|
| 5/17/2013 | Lindsey Schromen-Wawrin | Community member |
| 5/18/2013 | Francisco de la Cruz | Community member |
| 5/20/2013 | Rita Cirulis | Olympic Regional Clean Air Agency |
| 6/12/2013 | Bob Sextro | Community member |
| 6/12/2013 | Darlene Schanfald | Olympic Environmental Council |
| 6/17/2013 | Peter deFur | Environmental Stewardship Concepts/Olympic Environmental Council |
| 6/17/2013 | Darlene Schanfald | Olympic Environmental Council |
| 7/18/2013 | Warren Snyder | Rayonier Inc. |

## Acronyms and Abbreviations

| | |
|---|---|
| Ecology | Washington State Department of Ecology |
| LNAPL | Light non-aqueous phase liquid |
| MTCA | Model Toxics Control Act |
| ORCAA | Olympic Region Clean Air Agency |
| PLPs | Potentially liable persons |
| RI/FS | Remedial investigation and feasibility study |
| VOC | Volatile organic compound |
| WAC | Washington Administrative Code |

# Responses to Comments

## Stormwater

One commenter questioned why stormwater runoff was not being considered a pathway since this site is adjacent to Port Angeles Harbor. The commenter notes that during large storm events there might be more stormwater than can infiltrate into the soil resulting in runoff into the harbor.

**Ecology Response:** All stormwater that falls on the site is collected in several drains that lead to an outfall to the harbor or infiltrates into the ground. The outfall discharges are allowed under a permit related to the current boat yard operations. The port monitors these discharges to insure they meet the requirements of the permit.

Since all areas of surface soil contamination lie under asphalt or under buildings and there is no surface soil contamination in the unpaved areas of the site, the stormwater discharged through the outfall only contacts current boatyard operations. Only stormwater that infiltrates into the ground comes in contact with the pre-existing soil and groundwater contamination that are being addressed by this investigation. For these reasons, the remedial investigation does not include stormwater as a pathway. It does not intend to claim that stormwater discharges do not occur or have no potential to carry contamination.

## Potential Receptors

One commenter questioned whether all potential receptors, such as the marbled murrelet and other animals that feed in the harbor, had been considered since the report only mentioned aquatic organisms and humans.

**Ecology Response:** Groundwater at this site is not considered a source of drinking water based on its proximity to the harbor and the tidal influence causing it to be non-potable. Since the groundwater at this site discharges to surface water, groundwater cleanup levels must be protective of the surface water uses at this site.

The surface water quality standards considered in the RI/FS report are designed to be protective of aquatic life and human health. The criteria considered include the Washington State Water Quality Criteria (WAC 173-201), the National Toxics Rule, and the National Recommended Water Quality Criteria. These criteria are based on the highest concentration of a pollutant or parameter in water that is not expected to pose a significant risk to the majority of species in the given environment. If more than one criterion exists, the lowest is selected as the cleanup level.

In these standards, and thus in the RI/FS, aquatic life includes fish, birds, and other animals that feed in the harbor. The text in RI/FS Section 5.6, *Potential Exposure Scenarios and Receptors*, and Figure 5.1, *Conceptual Site Model of Potential Exposure Pathways and Receptors*, will be updated to reflect that all potential species that are exposed in the harbor environment were considered.

## Sediment Data

Two commenters requested additional information on the sediment sampling data evaluated in the RI, including data from Tumwater Creek, Tumwater Creek Delta, and Port Angeles Harbor.

**Tumwater Creek delta data:** One commenter asked if anything toxic was found in the 1997 data from Tumwater Creek. Another asked for details about how the samples from the delta were collected and analyzed, and whether conclusions could be drawn from the number of samples. The commenter was concerned that the creek delta samples were combined, as information about hot spots and volatile organic compounds could have been lost.

**Port Angeles Harbor data**: One commenter stated that more sediment samples should be collected. The commenter also recommended that all samples collected to date should be analyzed for benzene and gasoline.

### Ecology Response:

Tumwater Creek delta data: Appendix E contains the results, locations, and analytical methods used for the 1997 Tumwater Creek delta sampling. Sample analysis included volatile organic compounds, semi-volatile organic compounds and metals. Nothing toxic was found in the samples. The only detects were arsenic, barium, and chromium. The results were well below Sediment Management Standards (WAC 173-204) Sediment Quality Standards and MTCA method A (arsenic and chromium) and MTCA method B (barium) screening levels.

Composite sampling may be used as a screening tool to search for small areas of contamination. Because compositing can dilute high contaminant concentrations from some sampling locations with low concentrations from other locations, the screening level should be divided by the number of samples combined into each composite sample. For example, if the screening level is 100 mg/kg, then a composite sample composed of 5 samples should be compared to a modified screening level of $100 \div 5 = 20$ mg/kg. In this case, all the metals detected were well below a modified screening level.

If the composite sample was above the modified screening level, it would be important to reexamine the locations separately to see if there are areas of higher and lower concentrations. Although compositing is sometimes used to make decision on the need for remediation, it is not acceptable after remediation to determine whether cleanup standards have been met.

Compositing is also not usually acceptable for volatile organics, because it may cause the loss of material from the sampling when the samples are combined in the field. If the mixing is done under controlled conditions in the laboratory, the results can be acceptable. The information we have on the Tumwater Creek delta sampling leads us to believe that the lab combined the samples, which are therefore acceptable.

We agree that it would be difficult to draw conclusions about sediment contamination near this site based on just two composite samples. However, the Marine Trades Area RI/FS report also uses data from Ecology's 2008 sediment investigation sampling and other harbor studies (see "Port Angeles Harbor Data" section below).

Port Angles Harbor data: The volatile organic compounds (VOCs) gasoline and benzene are not contaminants normally associated with sediment. Gasoline and benzene are less dense than water and float. They also don't mix or dissolve in water, but stay separate. Volatile substances evaporate at relatively low temperatures. For these reasons, gasoline and benzene released to surface water stays near the surface and evaporates into the air instead of contaminating the sediment. Sediment contamination from gasoline and benzene would only be found where the contaminants were releases directly into the sediment. At this site, the pathway of release of these contaminants is groundwater to surface water, not to sediment.

The harbor sediment sampling conducted by Ecology in 2008 included 113 surface samples and 45 subsurface samples. Seventy (70) surface samples were analyzed for petroleum hydrocarbon fractions including diesel and motor oil. We did not sample for gasoline and benzene for all the reasons given above. However, gasoline was estimated by evaluating the analytical chromatograms from the diesel analysis. Gasoline was not detected in any of the samples. Four of these samples were near the Marine Trades Area and are appropriate for characterizing conditions related to this site. For more information on the sediments investigation, visit http://www.ecy.wa.gov/programs/tcp/sites_brochure/portAngelesHarborSed/paSed_hp.htm.

## Groundwater Data

One commenter expressed concern that there is not enough data about deep groundwater to conclude that only the upper 10 feet of groundwater is contaminated.

**Ecology Response:** Ecology considers two wells sufficient if they are located appropriately. In this case both deep wells are located on the downgradient side of the site at the bulkhead where contamination would enter the harbor if it exists. Gasoline and diesel float on water instead of sinking because they are less dense than water. They also don't mix or dissolve in water. Instead they stay separate and so are rarely found in deeper groundwater.

## Cultural Resources

One commenter asked if Ecology is working with the Lower Elwha Klallam Tribe to develop a cultural resources plan for the site. The commenter noted that the port and Chevron list a preferred cleanup option that includes excavation.

**Ecology Response:** Ecology has been consulting with the Lower Elwha Klallam Tribe throughout the Marine Trades Area cleanup process. We plan to work with the Tribe to develop a cultural resources plan for cleanup work while we are developing the draft cleanup plan.

## Future Site Use

One commenter stated that cleanup options should consider what would happen if the site is no longer used for heavy industry at some point in the future.

### Ecology Response:

Under the Model Toxics Control Act (MTCA), Washington's cleanup law, Ecology does not have the authority to dictate land use and development. Rather, we consider current land use, projected future land use, and local zoning in determining appropriate cleanup levels. We typically consult with the property owner and local land use authorities about future uses of a site. Based on information we have received to date, the current and projected future uses for the Marin Trades Area site are industrial.

Under MTCA, the final cleanup options for a site must address contamination at a site that is above site-specific cleanup levels. Cleanup levels must be protective of human health and the environment under specific types of exposure. This can be partly based on the type of land use, such as residential or industrial. Ecology sets cleanup levels for a site as part of developing the draft cleanup action plan.

If the final cleanup action plan uses cleanup levels for industrial lands, the plan will require institutional controls, such as an environmental (restrictive) covenant, to protect human health and the environment. Ecology does periodic reviews to check the status of sites with institutional controls at least every five years.

## Cleanup Methods

Two commenters discussed the cleanup methods from the feasibility study. One commenter felt that the site contaminants lend themselves to some of the newer technologies that do not involve dredging or pumping. The commenter was concerned that falling back on older remediation technologies thwarts an opportunity to efficiently and permanently cleanup the site.

**Bioremediation:** The commenter stated that the feasibility study needs to give greater consideration to bioremediation, which is the active treatment of soil and groundwater contaminants with bacteria. The commenter felt that consideration of this method should not be hindered due to the current active use of the site by industry. The commenter felt cleanup goals could be achieved in less time than monitoring, with fewer future property use restrictions, and with no capping for surface soils. Another commenter requested that the PLPs use bioremediation on all areas of contaminated soil that are left in place. The commenter believes this method has become routine and Ecology should incorporate it in the final feasibility study.

**Contamination under structures:** One commenter stated that at least one cleanup option should include removing empty buildings and above-ground storage tanks so that the port and Chevron could remove contaminated soil beneath them. The commenter was concerned that the RI/FS says that the contaminated soil under buildings will continue to be a source of contamination if it is not removed. The commenter also felt that the other cleanup options should discuss how contamination under structures will be removed.

**Permanence of cleanup:** One commenter wanted more emphasis on the permanence of cleanup and less on institutional controls and capping. The commenter felt that if the PLPs use bioremediation there is no reason to rely on institutional controls and capping.

### Ecology Response:

Bioremediation: Bioremediation was considered in the initial evaluation of alternatives, but rejected in each of the three cleanup areas (see RI/FS table 7.1). In situ, or in-place, bioremediation is more an art than a science, and so takes a tremendous amount of operating time, maintenance, and tweaking to accelerate biological growth. Air sparging also has a significant biodegradation component as it enhances microbial growth by increasing the dissolved oxygen content of groundwater. However, air sparging is much easier to install and operate, with similar or greater effectiveness than in situ bioremediation.

For the Bulkhead cleanup area bioremediation was rejected because tidal flooding effects would make it very difficult to treat groundwater to cleanup levels with such limited space for downgradient reactions to occur.

For the Upgradient cleanup area, bioremediation was rejected because the Westport Marine building restricts access to the soil. Also, the upgradient plume is quite extensive and using in situ bioremediation would present tremendous challenges.

For the Pettit Oil cleanup area, bioremediation is not feasible because it cannot treat light non-aqueous-phase liquids (LNAPLs), such as the free diesel product floating on the groundwater surface in this area.

Contamination under structures: Where buildings or structures limit access to contamination, in situ treatment approaches are often undertaken. On this site, contamination is under several buildings as vapors, free product, in the groundwater, and in the soil. It is unlikely that a single remediation method, such as bioremediation, could address them all.

Excavating contaminated soil would provide the most permanent cleanup but is not possible without removing the buildings. Most of the buildings on this site are fairly new and in use, so removing them is not practicable. Though bioremediation may be possible on portions of the contamination under the buildings, the size of the plume and the difficulties in reaching the contaminated soil to introduce microbes and provide oxygen and nutrients would be very difficult.

Permanence of cleanup: While excavation is often considered the quickest way to a permanent solution, the Westport Marine building and other site structures prevent excavation except for small areas of the site. The Westport Marine Building is quite new and is expected to be in place for the next thirty years. This makes institutional controls a necessary part of the remedy. The other cleanup options will each need time to achieve an acceptably permanent cleanup. As a result, the PLPs will need to use institutional controls and capping to reduce risks during that time.

## Assessing Cleanup Methods

Section 3.0 of the draft RI/FS report states "Additional soil and groundwater parameters were measured to assess the potential applicability of remedial technologies including in-situ chemical oxidation (ISCO), natural attenuation and bioremediation…"

A commenter was concerned that the results are given in section 4.0 without any reference to their use in assessing remedial technologies. The commenter was particularly concerned that the results were not discussed in relation to bioremediation.

**Ecology Response:** Ecology agrees that the report should be clearer about what soil and groundwater parameters were measured to assess the potential applicability of remedial technologies and how they were evaluated. The PLPs have added additional text in Section 3.1 of the Marine Trades Area RI/FS to address this.

## Regulatory Requirements for Cleanup Options

Olympic Region Clean Air Agency (ORCAA) submitted comments about regulatory requirements for possible cleanup options. The commenter noted that if a cleanup method that calls for on-site treatment facilities is selected, ORCCA will require the submittal of a Notice of Construction application.

ORCAA also stated that if cleanup involves soil excavation, stockpiling, and loading, an enforceable dust, volatile organic compound (VOC), and odor mitigation plan should be included in the cleanup action plan. The commented requested that ORCCA have the chance to review and comment on the draft mitigation plan.

ORCAA stated that if recovered groundwater is sent directly to Port Angeles' wastewater treatment plant through the sanitary sewer, the maximum allowable concentrations of contaminants in recovered groundwater and potential emission increases at the treatment plant should be evaluated and disclosed.

**Ecology Response:** Ecology agrees with these comments. We will require that the PLPs comply with regulatory requirements that apply to the final cleanup methods selected in the cleanup action plan. This will include developing mitigation plans, if needed, and submitting required notices. Ecology will also require that the PLPs develop a sampling and analysis plan if recovered groundwater is sent to the city's wastewater treatment plant.

The PLPs may develop some sampling or mitigation plans as part of the cleanup engineering design report. After Ecology finalizes the cleanup action plan, the PLPs will develop an engineering design report, which we review and approve. The engineering design report describes, in detail, how the final cleanup actions will be implemented and maintained. Because of the detailed information needed for permitting, Ecology often does not require that PLPs do some permitting until they develop the engineering design report.

## Evaluation of Alternatives

**Disruption of business**:
One commenter objected to disruptions to business operations being considered in the feasibility study. The commenter asked if alternative methods of doing business could be developed so that disruptions to operations would not need to be considered and a more permanent cleanup option could be chosen.

**Potential for air emissions**:
One commenter asked that total potential air emissions of benzene, toluene, ethylbenzene, and xylenes (BETX) and volatile organic compounds (VOCs) be estimated for each alternative and used in the evaluation of alternatives.

**Ecology Response:** The purpose of the feasibility study is to develop and evaluation cleanup action alternatives so that a cleanup action can be selected for the site. Ecology considers many factors when evaluating alternatives, such as the cleanup options' protectiveness, permanence, cost, long-term effectiveness, management of short-term risks, ability to be technically and administratively implemented, and consideration of public concerns.

**Disruption of business**:
Ecology considers public concerns when selecting a cleanup action. When considering disruptions to business operations, there are public concerns on both sides of the issue. The Marine Trades Area is located at a critical junction at the base of the Port of Port Angeles' Marine Terminals 1 and 3. Terminal 1 is use for ship repairs and cargo operations. Terminal 3 is used for loading forest products onto ships. The land within the Marine Trades Area site is a combination of public (port) and privately owned properties supplying many jobs to this community. As such, disruptions to business operations are one factor to consider when evaluating these cleanup options.

The PLPs considered disruptions to business operations under Alternative U3 for the Upgradient Cleanup Area because they would be substantial disruptions. This cleanup action was also not expected to reduce the overall cleanup time or provide a highly permanent remedy due to the presence of substantial contaminated soil beneath existing buildings. It is unlikely that this option would be selected even if disruptions to businesses were not included in the considerations. Alternative methods of doing business will need to be used temporarily to implement almost any of the alternatives considered.

**Potential for air emissions**:
Estimates of air emissions are not normally required in the evaluation of alternatives. This level of detailed work will be including in the engineering design for the selected cleanup. Any system selected will be required to meet all permitting requirements related to air emissions. For more information, please see "Regulatory Requirements for Cleanup Options" on page 11 of this responsiveness summary.

## Air Deposition into Port Angeles Harbor

One commenter expressed concern that we are spending lots of money to clean up the harbor, yet Nippon continues to add pollutants each day. The commenter notes that the prevailing winds blow most of their stack emissions right into the western side of Port Angeles Harbor.

### Ecology Response:

Ecology agrees that there is evidence that burning wood can release dioxin. Dioxins are known to form at relatively low burning temperatures, which were common in older, less efficient boilers (and also in fireplaces, outdoor burning and wood stoves). It has also been shown that burning salty wood, such a wood rafted in the harbor, at these lower temperatures contributes to forming greater amounts of dioxins. The chlorine in the salt and incomplete combustion from low-temperature burning can result in high levels of dioxin in the ash and air emissions.

Air deposition from the wood burners was not the only likely source of dioxin in Port Angeles Harbor. Several pulp mills discharged untreated wastewater from bleaching and other industrial processes directly into the harbor. Ash from the boilers was also discharged directly into the harbor and used in fill materials in areas of the shoreline.

Ecology's *Port Angeles Harbor Sediment Dioxin Source Study* discusses the types of dioxins found in the harbor, their potential sources, and where different types of dioxins are located. The former Rayonier Mill and historic western harbor sources are the dominant contributors to the dioxin contamination now present in the harbor. You can read the report on our website at http://www.ecy.wa.gov/programs/tcp/sites_brochure/portAngelesHarborSed/pollutants2.html.

Nippon's new biomass cogeneration facility would replace a boiler fueled by oil and biomass. The new boiler will have increased capacity, operation temperature, and operation pressure. The new boiler would generate steam for paper production, and it would also supply excess steam to a turbine generator to create electrical power. The new system will have state-of-the art air pollution controls meeting standards as required by Olympic Region Clean Air Agency (ORCAA) and the Washington State Clean Air Act.

The high levels of dioxin in the harbor today appear to be the result of many years of untreated, uncontrolled sources. The likelihood of significant deposition of dioxin or other chemicals into the harbor from the proposed Nippon biomass boiler is much less than from historical operations. Only clean (non-salt laden, non-treated, uncontaminated) wood would be allowed to be used as fuel in the proposed biomass boilers. Advanced pollution control devices and modern burning technologies using high temperatures also reduce potential dioxin releases to extremely low levels.

## Conclusions about Sources and Releases at the K Ply Site

One commenter was concerned about statements made within the Marine Trades Area RI/FS report about the K Ply Site. The commenter felt conclusions about sources and releases at the K Ply site should be removed from the Marine Trades Area RI/FS report and left for the K Ply RI/FS report since additional data is being collected and analyzed there.

**Ecology Response**: When the port and Chevron originally submitted the Marine Trades Area draft RI/FS report to Ecology, the Marine Trades Area site included K Ply. Based on this draft report and recent investigations, it became clear that two distinct areas of contamination exist with separate source areas.

The report contained enough information to fully characterize the Marine Trades Area portion of the site, but not the K Ply portion of the site. Because of the two distinct areas of contamination with separate source areas, Ecology decided to split the site. This allows the two areas to move forward on separate timelines.

With some minor revisions, Ecology approved the RI/FS report as a public review draft for the Marine Trades Area site. We allowed information about the K Ply site to remain in the Marine Trades Area RI/FS report because it provides supporting information for the site split.

However, there are gaps in the K Ply data that don't allow for full characterization of the K Ply site. Any conclusions about the K Ply site presented in the Marine Trades Area RI/FS report were based on the limited and incomplete information available at the time the report was prepared. The K Ply RI/FS report is expected to be available for public review in 2015 after additional site investigation.

We have requested that the port and Chevron add language to the RI/FS report introduction to further clarify that the K Ply data and conclusions are incomplete and should not be considered a definitive source of information. The port is developing a separate RI/FS report for the K Ply site.

## Mailing Lists

Several commenters requested to be added to the mailing list for the K Ply site.

**Ecology Response:** We have added these commenters to the mailing list for the site. To be added to the mailing list, please send your contact information to public involvement coordinator Diana Smith at diana.smith@ecy.wa.gov or (360) 407-6255. Please include whether you would like to be added to the email or hard copy mailing list.

# Appendix A: Comment Letters

From: Lindsey Schromen-Wawrin
Sent: Friday, May 17, 2013 8:09 PM
To: Groven, Connie (ECY)
Subject: question/comment on Port Angeles Marine Trades Area site

Connie,

Thank you for your work to address toxins in the Port Angeles harbor.

I have a question/comment after reading the fact sheet (Pub. No. 13-09-105) and briefly searching the Draft RI/FS (March 2013).

The RI/FS makes no reference to the Lower Elwha Klallam Tribe, even when mentioning that "[a] Cultural Resources Plan must be developed and submitted to the City of Port Angeles when significant ground disturbing activities are implemented." Page 10-8.

Is Ecology already working with the Tribe in developing a Cultural Resources Plan? As the Pettit Oil Cleanup Area preferred option involves excavation (fact sheet page 3), it would be appropriate to include the Tribe in the planning process as soon as possible.

I apologize if I missed this information in the public documents.

Thank you,
Lindsey

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Lindsey Schromen-Wawrin
306 West Third Street
Port Angeles, WA 98362
lindsey@world.oberlin.edu
phone (360) 406-4321
fax (360) 752-5767
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From: Francisco de la Cruz
Sent: Saturday, May 18, 2013 8:46 AM
To: Groven, Connie (ECY)
Subject: clean-up of Port Angeles Harbor and Marine Trades area

Connie - I am befuddled....we are spending lots of money to clean up the various pollutants spread about, around and in Port Angeles harbor..Yet we still allow Nippon Paper to continue to add to those pollutants on a daily basis...the prevailing winds indicate that a vast majority of what comes out of their stack is blown right into the western side of PA harbor...

how does that make sense to you?

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/)  Francisco
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Strait Solutions, LLC
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**From:** Rita Cirulis]
**Sent:** Monday, May 20, 2013 9:17 AM
**To:** Groven, Connie (ECY)
**Cc:** Mark Goodin
**Subject:** Marine Trades Area (Port Angeles) Public Comment Period

Ms. Groven,

The Olympic Region Clean Air Agency (ORCAA) has reviewed the cleanup action alternatives for the cleanup areas of the Marine Trades Area in Port Angeles, Washington and offers the following comments.

1. Total potential air emissions of BETX and VOCs should be estimated for each alternative and used in evaluating alternatives.

2. Selection of alternatives B2, B3, B4 and P2 which call for on-site treatment facilities using technologies such as carbon adsorption, air stripping, catalytic oxidation, air sparging, or vapor recovery will require the submittal of a Notice of Construction application to ORCAA for review.

3. If alternatives U3 or P3 utilizing soil excavation/stockpiling/loading are selected, an enforceable dust, VOC and odor mitigation plan should be included in the Cleanup Action Plan. ORCAA should be afforded the opportunity to review and comment on a draft mitigation plan.

4. If recovered groundwater is sent directly to the Port Angeles POTW through the local sanitary sewer system as noted in Alternative B2, the maximum allowable concentrations of volatile contaminants in the recovered groundwater and potential emission increases at the POTW should evaluated and disclosed.

Thank you for this opportunity to comment on the draft RI/FS report.

Rita Cirulis, Air Quality Specialist III
++++++++++++++++++++++++++++++++++++++++++
**Olympic Region Clean Air Agency** – *Clean Air is Everyone's Business*
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2940-B Limited Lane NW • Olympia, WA 98502
1-800-422-5623 • (360) 417-1466 • www.orcaa.org

From: Sextro, Bob
Sent: Wednesday, June 12, 2013 5:43 PM
To: Smith, Diana (ECY)
Cc: Groven, Connie (ECY); darlenes@olympus.net; pdefur@estewards.com
Subject: RE: Marine Trades Area Public Comment Period

I do not see any scheduled public meeting on this report, especially considering the costs and long durations of some of the selected remedies. I believe section 10 indicates that a public meeting can be scheduled if enough public requests are received. this is a request to schedule a public meeting, thanks, Bob

Bob Sextro
Principal Engineer
Sequim WA
(360) 808-2672 (cell)
(360) 582-1422 (office)

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From: Smith, Diana (ECY) [smid461@ecy.wa.gov]
Sent: Thursday, May 16, 2013 1:41 PM
Cc: Groven, Connie (ECY)
Subject: Marine Trades Area Public Comment Period

The Department of Ecology invites you to comment on a draft remedial investigation (RI) and feasibility study (FS) report and an agreed order amendment (legal agreement) for cleanup of the Marine Trades Area cleanup site. The public comment period runs May 16 through June 17, 2013. Public comment period fact sheet: https://fortress.wa.gov/ecy/publications/SummaryPages/1309105.html

The site is located at Marine Drive and Tumwater Street in Port Angeles. It is contaminated with petroleum hydrocarbons and benzene, toluene, ethylbenzene, and xylenes from several sources.

The following documents are available for public review and comment:

* A draft RI/FS report<https://fortress.wa.gov/ecy/gsp/DocViewer.ashx?did=20095>, which describes the nature and extent of contamination, and evaluates possible cleanup actions.

* A proposed agreed order amendment<https://fortress.wa.gov/ecy/gsp/DocViewer.ashx?did=20094> between Ecology and the Port of Port Angeles and Chevron. It will complete the process of separating the K Ply site from the Marine Trades Area site and requires the Port of Port Angeles and Chevron to develop a draft cleanup action plan. This process of separating K Ply from the Marine Trades Area site started last fall with the new K Ply agreed order.

* A public participation plan<https://fortress.wa.gov/ecy/gsp/DocViewer.ashx?did=20093>, which describes tools Ecology will use to inform the public about, and gather input on, the cleanup.

You can access these documents and more information about the cleanup site and comment period on the Marine Trades Area website at https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=1301.

Please send technical comments and questions on these documents to site manager Connie Groven at Connie.Groven@ecy.wa.gov<mailto:Connie.Groven@ecy.wa.gov> through June 17.

Best,

Diana

Diana Smith
Public Involvement Coordinator
Toxics Cleanup Program
Southwest Regional Office
Washington State Department of Ecology
(360) 407-6255
diana.smith@ecy.wa.gov

Sent: Wednesday, June 12, 2013 8:51 PM
To: Smith, Diana (ECY)
Subject: Fwd: RE: Marine Trades Area Public Comment Period

Diana:
I agree that there should be a public meeting.
ds

>From: "Sextro, Bob" <robert.sextro@noblis.org>
>To: "Smith, Diana (ECY)" <smid461@ecy.wa.gov>
>CC: "Groven, Connie (ECY)" <cgro461@ecy.wa.gov>,
>         "darlenes@olympus.net"
>     <darlenes@olympus.net>,
>         "pdefur@estewards.com" <pdefur@estewards.com>
>Subject: RE: Marine Trades Area Public Comment Period
>Date: Thu, 13 Jun 2013 00:43:16 +0000
>
>I do not see any scheduled public meeting on this report, especially
>considering the costs and long durations of some of the selected
>remedies. I believe section 10 indicates that a public meeting can be
>scheduled if enough public requests are received. this is a request to
>schedule a public meeting, thanks, Bob
>
>
>
>Bob Sextro
>
>Principal Engineer
>
>Sequim WA
>
>(360) 808-2672 (cell)
>
>(360) 582-1422 (office)
>

June 17, 2013
Environmental Stewardship Concepts, LLC

**Comments on:**
**Marine Trades Area Draft Remedial Investigation/Feasibility Study March 2013**

**Summary**
The Marine Trades Area (MTA) has soil and groundwater contaminated with petroleum hydrocarbon, including diesel (TPH-D) and gasoline (TPH-G) grade hydrocarbons, as well as benzene, toluene, ethyl benzene, and xylenes (BTEX). Based on findings of a separate source of contamination, the K Ply property has been removed from the MTA area and will be investigated separately. The rest of MTA has been broken up into three cleanup areas with separate remediation alternatives: 1. Bulkhead; 2. Pettit Oil; 3. Upgradient. The Bulkhead describes the area of rip-rap at the shoreline of Port Angeles Harbor; the Pettit Oil area is the former Chevron bulk fuel plant; the Upgradient area consists of the subsurface soil contamination that is scattered throughout the site and includes overlap with the Bulkhead and Pettit Oil areas; these areas were formerly operated by companies such as ARCO, Shell Oil bulk plant, D&D Distributors/Phillips 66 Bulk Plant, and others. The Bulkhead cleanup technology will utilize an air sparging treatment curtain, essentially a carefully monitored system intended to strip volatile organic compounds (VOCs) out of contaminated soil by injecting some type of gas (such as air, oxygen, or carbon dioxide) into the soil and passing the resultant air flows through a curtain or membrane that acts as a filter. The Pettit Oil cleanup technology will include excavation of light non-aqueous phase liquids (LNAPLs) from only the accessible areas. The Upgradient cleanup technologies include capping, institutional controls, and monitoring.

**Recommendations**
Proposed remediation would use a multi-method approach, including: the long term (30 year) operation of an air sparging treatment curtain and monitoring system, excavation and removal of some contaminated soils, impervious capping over remaining contaminated soils to prevent additional groundwater impact, and the implementation of institutional controls to inform contractors or utility workers of existing contamination prevention protocols.

The FS needs to give greater consideration to bioremediation, which is the active treatment of soil and groundwater contaminants with bacteria. The use of bacteria to breakdown organic hydrocarbons, such as those found on the MTA site, is an effective site remediation. Consideration of this remediation method should not be hindered due to the current active use of the site by industry. Remediation goals could be achieved in

less time than monitoring (especially for groundwater), with fewer restrictions for subsurface soil (less property use restrictions), and with no capping for surface soils (no need for impervious surfaces).

**General Comments**

The RI/FS lists several remediation technologies, some of which are relatively new and others that have been used at Superfund sites for a long time. However, the site contaminants lend themselves to some of the newer technologies that have been shown to be successful in remediating soils and groundwater without dredging or pumping. Falling back on older remediation technologies for contaminants that have a proven track record via bioremediation methods thwarts an opportunity to efficiently and permanently cleanup the site.

There are some structures remaining on site, such as empty buildings and aboveground storage tanks (ASTs), but no mention of their possible removal. At least one of the alternatives should list the removal of the structures as a means to remove contaminated soil from beneath, which the RI/FS acknowledges will be a continual "source" of contamination for the rest of the site. In addition, the other remediation options, besides structure removal, should include a discussion on how the specified alternative will remove contamination from beneath the structures. There is no effort made to discuss remediation of the soils under the structures and this is a major gap in site cleanup. Consideration should be made that the site may not stay a heavy industrial site in perpetuity.

**Specific Comments**

3.0 Additional Investigation Activities

- "Additional soil and groundwater parameters were measured to assess the potential applicability of remedial technologies including in-situ chemical oxidation (ISCO), natural attenuation and bioremediation… results presented in Section 4.0"
    - Section 4.0 presents results but without any reference to their use in assessing remedial technologies. There is little further discussion of these results in relation to, in particular, bioremediation methods, and no strong explanation for why bioremediation methods are not being considered at the site.

4.6 Sediment Quality

- For the Tumwater Creek Delta, "Surface sediment samples were collected from six Port Angeles Harbor locations… The six locations were combined by the laboratory into two composite samples for analysis."

- This is a very small number of samples from which to draw any conclusions.
- What is the depth of these "surface" samples?
- Why were the sediment samples combined? In doing so, a test result becomes an average of the contaminants present and loses important information about potential hot spots.
- The mixing involved in combining sediment samples risks losing VOCs and SVOCs from the sediment samples.

4.6.2 Port Angeles Harbor

- "Two of these samples were located in the vicinity of the MTA Site: surface samples BL03 and BLO4. BL03 was collected adjacent to or underneath the Terminal 3 pier structure, and BLO4 was collected adjacent to the Terminal 1 pier structure approximately 500 feet from the shoreline. Additionally, surface sample BLO1 and subsurface core BLO2 were collected in the shoreline sediments west of Tumwater Creek. All surface samples were analyzed for a broad suite of contaminants including site COC TPH-D. The motor oil fraction of TPH was also reported for all samples, but site COCs benzene and TPH-G were not analyzed. Subsurface samples from BLO2 were not analyzed for TPH."
  - Insufficient data collected from just three surface sediment samples and one subsurface sediment sample, of which not all were tested for benzene and TPH-G.
  - Additional samples of a reasonable number should be collected for both surface and subsurface sediments, and all samples collected to date should include testing for benzene and TPH-G.

4.7.3 Deeper Groundwater

- "The absence of contaminants in the groundwater in the deeper wells (screened below the upper 10 feet of the saturated zone) of the two shoreline well pairs, MW-20A/B and MW-21A/B, indicates that significant downward mixing of contaminants from the shallow part of the aquifer is not occurring. These findings indicate that only the uppermost 10 feet of the saturated zone site-wide, including near the bulkhead, is impacted by groundwater contamination above cleanup levels."
  - There is insufficient deep well data, i.e. only two locations, from which to draw these conclusions.

5.2 Secondary Release Mechanisms

- "Contaminant transport by stormwater is not considered a pathway, however, due to the current lack of contaminants in surface soils, as surface soil (approximately the upper 2 feet) has been removed, reworked, and/or covered with several feet of imported fill as various industrial concerns have redeveloped the MTA Site following cessation of the bulk plants and preceding site uses.

Stormwater runoff in contact with surface soils generally infiltrates into the subsurface."

- Contaminant transport by stormwater should be a pathway considered in this Conceptual Site Model (CSM) because of the site's proximity to the Port Angeles Harbor. Generally, runoff resulting from large storm events has too high a flow rate to infiltrate the surface or subsurface soil, thus it is usually a major contributor to contaminated water bodies.

8.2 Upgradient Cleanup Area

- "Monitoring and institutional controls will be included in the preferred comprehensive site remedy (refer to the description of the preferred remedy in Section 10.0) to prevent direct contact with contaminated subsurface soil. The institutional controls are expected to consist of information provided to contractors or utility workers about subsurface contaminants and soil handling protocols prior to trenching or other subsurface work. Capped areas would also need to undergo routine inspection and repair."
  - There should be more emphasis on the permanence of cleanup and less on institutional controls (IC) and capping. As there are effective bioremediation methods for cleanup of these site Contaminants of Concern (COCs), there is no reason to rely on capping and IC. Consideration of bioremediation methods should not be hindered due to active industrial use of the site.

**From:** Darlene Schanfald
**Sent:** Monday, June 17, 2013 8:50 AM
**To:** Groven, Connie (ECY)
**Subject:** Additional OEC MTA comments

Connie Groven, Site Manager
WA Department of Ecology
Toxics Cleanup Program, SWRO
P.O. Box 47775
Olympia, WA 98504-7775

Connie:

In addition to comments Environmental Stewardship Concepts LLC submitted for the Olympic Environmental Council, I will add the following comments**.** Please confirm receipt of these.
Thank you,
ds

4.1 GEOLOGY
In portions of the site
THERE SHOULD BE A COMMA AFTER "SITE."

TYPO IN DOCUMENT
5.4.2.2 SOIL SOURCES mil SHOULD BE MILL

**QUESTION:** TUMWATER CREEK 1997 DATA!
Was anything of toxic substance found in the creek?

**COMMENT: OEC wants to underscore that with all these contaminated areas the the PLPs choose to leave in place (see following excerpts from the MTA Draft RI/FS) so as to not hinder themselves or their finances, bioremediation should be applied. A routine check of the chemicals and finding the right bioremediation "food" is not daunting. It has become routine. OEC wants to insure that Ecology incorporates this in its Final FI/FS.**

"By removing the area of contaminated soil between Westport Marine and the bulkhead, this alternative would clean up virtually all soil within approximately 300 feet of the bulkhead north of
Westport Marine. While it may have an initial effect on the concentrations of COCs in groundwater that are to be remediated in the Bulkhead Cleanup Area, this alternative is not expected to reduce the overall restoration time frame of the Bulkhead Cleanup Area remedy because a more substantial amount of contaminated soil would remain in place beneath the Westport Marine building and K Ply mill and continue to leach into groundwater.

Based on the assumption that only the four feet at the smear zone would be excavated within an approximately 2-acre area, the volume of contaminated soil to be excavated is estimated to be approximately 11,000 cubic yards out of a total of 31,000 cubic yards of contaminated soil estimated to be located at the MTA Site.12."

"The volume of contaminated soil that would remain in
place further upgradient beneath existing buildings and structures is estimated to be a minimum of 7,000 cubic yards from the smear zone beneath Westport Marine, 4,200 cubic yards from beneath the southern portion of K Ply, 2,000 cubic yards from the area south of K Ply, and 2,000 cubic yards of TPH-G contaminated soil at the hydraulic oil release beneath the north portion of K Ply. With vadose zone contamination included, the total volume of contaminated soil from these areas that would remain in place is estimated to be approximately 20,000 cubic yards."

"In addition, the scale of the excavation of accessible soil would substantially affect the operations of the Port and its tenants. The excavation would dramatically disrupt the transfer of logs from west of Tumwater Creek to cargo vessels docked at Terminal 3 north of the bulkhead. At the current capacity, approximately two to three ships are loaded with logs for export each month, each requiring approximately 1,200 truckloads across the bulkhead entrance to Terminal 3."

**COMMENT: WA State trees are being cut to export to Asia. Port Angeles Harbor waters are polluted and on-land pollution continues to pollute Harbor waters. The PSPI is about cleaning up the Sound/Strait and Ecology is offering much financial help to these PLPs to assist in the cleanup. The funding should not be offered to those worried only about their own finances, only about their distrubance. They need to know this project and these funds are about decontaminated the Harbor stemming further Harbor contamination, and making healthy marine habitat for all to enjoy and feel safe taking food from and recreating in.**

"In addition, the excavation would prevent Westport Marine from moving watercraft in and out of the facility through the large bay at the north side of the building for several months. This activity is central to the operations at Westport Marine. Thus, the excavation may drastically limit
production at Westport Marine or result in a temporary shutdown. The excavation would also temporarily eliminate the employee parking lot. Additionally, the staging area and substantial truck traffic required would likely interfere with Platypus Marine's ability to transport watercraft between the waterfront and the repair facility."

COMMENT: **Perhaps these firms could move their watercraft another way. PLPs should be asked to report options they have to move watercraft, for alternative employee parking, and other issues they have. Alternatives will be only for a few months. The point is to get a**

**good cleanup and not leave the toxins. There may have to be some temporary inconvenience but surely there are interim options.**

P. 5-6
The potential ecological receptors are the aquatic organisms in the harbor that contact contaminated groundwater at its point of discharge into marine waters. People who consume seafood are the human receptors in Port Angeles Harbor who may become exposed to contaminated groundwater via ingestion of aquatic organisms.
**We also have an federally listed animal that feeds in these water, the marbled murrelet. ( See recent article below. ) Other animals besides humans consume the harbor food, as well.**

<http://peninsuladailynews.com/article/20130611/NEWS/306119995/strate>http://peninsuladailynews.com/article/20130611/NEWS/306119995/strategies-for-marbled-murrelet-discussed-in-forks-on-wednesday
Strategies for marbled murrelet discussed in Forks on Wednesday

The Associated Press
The marbled murrelet, federally listed as threatens, has as its habitat old growth forests.

FORKS - Possible long-term strategies for conservation of marbled murrelets will be discussed in Forks on Wednesday.

Staff members from the U.S. Fish and Wildlife Service and state Department of Natural Resources will host an informational meeting on long-term strategies for conservation of marbled murrelets at the DNR Olympic Region Office, 411 Tillicum Lane, from 5 p.m. to 7 p.m.

The marbled murrelet is federally listed as a threatened species.

Old-growth forests trees are considered critical habitat for the small seabird, which is a member of the auk family.

Wednesday's session will include an introduction to the planning process, as well as brief presentations about three proposed conceptual alternatives for long-term conservation of the marbled murrelet on state trust lands.

All alternatives would provide buffers zones around areas known to be sites for the endangered birds. The extent of protection differs in the proposals.

The agencies also will present a "no action" concept, which represents what would happen if a strategy is not developed.

The agencies will have discussion stations with detailed information, where people can talk to staff and ask questions.

Once completed and adopted, the strategy will become an amendment to DNR's State Trust Lands Habitat Conservation Plan.

DNR and the federal Fish and Wildlife Service are conducting a joint environmental review process according to the State Environmental Policy Act, or SEPA, and National Environmental Policy Act, or NEPA.

The Forks meeting, one of four in the state and the only one on the North Olympic Peninsula, and the associated comment period represent the second phase of an expanded two-phase public scoping process that will help guide the development of a joint environmental impact statement for the strategy.

Meetings also were held in Olympia last Wednesday and in Sedro-Woolley on Monday. A meeting is set for June 19 in South Bend.

Phase One scoping took place in 2012 and included public meetings and a comment period.

Participants should submit their Phase Two written comments by 5 p.m. July 1.

Comments should include the file number: 12-042001.

A description of the proposal's conceptual alternatives and the State Environmental Policy Act scoping notice are available on DNR's SEPA webpage at <http://tinyurl.com/DNRsepa>tinyurl.com/DNRsepa.

A comment card can be found on this page.
Comments can be submitted to the SEPA Center at <mailto:sepacenter@dnr.wa.gov>sepacenter@dnr.wa.gov or P.O. Box 47015, Olympia, WA 98504-7015
- -
Darlene Schanfald
Project Coordinator
Rayonier - Port Angeles Harbor Hazardous Waste Cleanup Project
Olympic Environmental Council Coalition
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Sequim WA 98382
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Rayonier

Value From The Ground Up™

Corporate Headquarters

July 18, 2013

**Via Email (connie.groven@ecy.wa.gov) and First Class Mail**

Ms. Connie Groven
Washington Department of Ecology
P. O. Box 47775
Olympia, WA 98504-7775

**Re: Marine Trades Area Remedial Investigation/Feasibility Study**
**Comments of Rayonier Inc.**

Dear Ms. Groven:

Rayonier Inc. appreciates the opportunity to provide the following comments on the March 2013 Marine Trades Area (MTA) Remedial Investigation and Feasibility Study (RI/FS).[1] We have limited our review to the MTA RI/FS's discussion of the K-Ply Site. In sum, we are concerned that the conclusions and inferences about the nature and extent of contamination at the K-Ply Site presented in the MTA RI/FS are inconsistent with MTCA requirements, premature and not supported by sufficient data. Conclusions about sources and releases at the K-Ply Site are properly within the scope of the K-Ply RI/FS and should be made after all data has been gathered and analyzed. Indeed, a robust RI/FS Work Plan for the K-Ply Site has been prepared and submitted to Ecology. This work should be completed before conclusions regarding the nature and source of contaminants at the K-Ply site are made.

The purpose of an RI/FS is to "collect, develop, and evaluate sufficient information regarding a site to select a cleanup action." WAC 173-340-350 (emphasis added). Indeed, WAC 173-340-350(6) encourages drafters to "avoid the collection and evaluation of unnecessary information" when preparing an RI/FS. Here, the "site" that is the subject of the MTA RI/FS excludes the plume of petroleum contamination beneath the K-Ply Property, yet the RI/FS draws conclusions about the nature and extent of the contamination in this area. If Ecology supports the conclusions reached in the MTA RI/FS, then the workplan for the K-Ply facility should be revisited and adjusted to avoid unnecessary data collection.

The following specific comments are provided for your consideration:

[1] Submission of these comments shall not be construed as an admission of responsibility or liability for any aspect of the MTA Site or the K-Ply Site.

P: 904.357.9100 | Rayonier Inc.
F: 904.357.9101 | 1301 Riverplace Boulevard
www.rayonier.com | Jacksonville, FL 32207

- **Conclusions Regarding Potential Sources for TPH-G and Benzene Contamination on the K-Ply Site (Section 4.3.6.1, page 4-8, Figs. 4.3 & 4.4; Section 5.1, page 5-1 & Fig. 5.1)**
    - The MTA RI/FS asserts that "one or more surface spills of gasoline within the mill building footprint is considered the most likely sources of the Cedar Street Plume." These conclusions are carried on throughout the report. (*See e.g.* Section 5.1). The conclusion is based on incomplete data and is inconsistent with other statements in the MTA RI/FS which note that "contamination is not well defined due to minimal data in this area." (Section 4.2.6.1). This conclusion should be removed and replaced as a data gap for further investigation. At a minimum, the discussion should also state that any such surface spills would have had to have occurred before 1964 when the mill extension was completed and a concrete slab was installed over the area.
    - The MTA RI/FS concludes that shallow vadose zone contamination at B16 is unlikely to be associated with a leak from Pipeline 8. This conclusion is also premature, conflicts with other available data and should be removed. Rayonier's investigation to date indicates that this pressurized pipeline is the most likely source of the gasoline impacts in this area. Our November 15, 2011 comment letter to Ecology on the Agency Review Draft MTA RI/FS summarizes many key points related to pipeline operation in greater detail. Operation and maintenance of Pipeline 8 should be identified as a data gap and should not be prematurely ruled out as a possible source.
- **Conclusions Regarding the Connectivity of the K-Ply/Cedar Street Benzene Plume (Section 4.4.2, page 4-11).** The MTA RI/FS concludes that low concentrations of benzene in areas across the alley adjacent to the Peninsula Fuel company property "is not substantial enough to suggest any connection with the . . . K-Ply/Cedar Street Benzene Plume." (Page 4-11). This conclusion is premature and inconsistent with data summarized by Landau Associates in two reports dated July 16, 2009 and August 19, 2009 that do suggest a connection between Peninsula Fuel Company and the K-Ply/Cedar Street Plume.

These conclusions, and ones like them, should be removed from the MTA RI/FS and reserved until the K-Ply RI/FS is issued.

Likewise, many of the conclusions regarding the K-Ply Site warrant further clarification because they do not include relevant information, are internally inconsistent, or reference outdated information:

- **Historic Pipeline Discussion.** The MTA RI/FS discussion references an early investigation that discovered hydrocarbons beneath the K-Ply facility. It states that samples were collected from various locations "throughout the facility" before citing a 1988 report prepared by Landau Associates (1988 Landau Report)

as attributing the source of the petroleum to a release from a bulk fuel facility on adjacent property and not the high-pressure petroleum pipeline that traversed the K-Ply property (Section 2.4.1.3, page 2-6). The 1988 Landau Report, however, stated that the "pipeline does not seem to have been the source of hydrocarbons, **at least where the samples were collected."** While the discussion suggests that the samples were taken throughout the facility, samples were actually taken in a limited area south of the mill building. Similarly, the section fails to discuss or mention subsequent reports which conclude that a release from Pipeline No. 8 likely contributed to the hydrocarbon contamination beneath at the K-Ply Site.

- **Groundwater Data for Benzene.** The MTA RI/FS (Section 2.4.2.1, page 2-8, Figures A.1, A.2. and A.3) depicts and compares historical and recent groundwater plumes and concludes that contaminant concentrations are decreasing. With respect to the K-Ply area, the historic figures are not an accurate representation of conditions because of the limited amount of data they are based on. The historical data for benzene used to depict the historical plume consists of a mere nine data points. Similarly, the data used for the gasoline-range total petroleum hydrocarbons consisted of only eight data points. The recent plume figures (A.1 and A.2), however, are based on over 40 sampling locations. Due to the limited amount of data for comparison, conclusions about trends in the K-Ply plume size are highly speculative.
- **Combination of Diesel Fuel and Hydraulic Oil (Sections 4.3.6.2 and 4.4.2).** The MTA RI/FS discussion combines the hydraulic oil and diesel range fuel detections within the "TPH-D" category. The grouping and references do not distinguish the differences between petroleum fuel and hydraulic oil. The remedial measures for these contaminants will likely be different. Therefore, we suggest that the MTA RI/FS discuss hydraulic oil and petroleum fuel contamination separately.
- **Outdated Information Regarding K-Ply Site Conditions (Sections 4.4.2, 5.2 and 5.4.2)**. The MTA RI/FS includes statements that are outdated and no longer accurate. For instance, the MTA RI/FS states that "stormwater collected from the roof of the K-Ply Mill Building this is channeled to and infiltrating through soil . . ." As Ecology is aware, the mill building was demolished in 2013 and plastic sheeting has been placed over the soil in some areas to prevent infiltration. Similarly, section 5.4.2 discusses air monitoring to be conducted inside the K-Ply Mill Building. These sections to not reflect current conditions which existed at the time the MTA RI/FS was prepared and should be removed.

We believe that removing these conclusions from the MTA RI/FS will help ensure that the data drives the ongoing investigation of the K-Ply Site. Thank you for considering these comments. Please feel free to call me if you have any questions about the facts or information presented herein.

Respectfully submitted,

Warren Snyder

Warren Snyder, P.E.
Senior Manager, Environmental Engineering