



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Regional Office 3190 160th SE Bellevue, Washington 98008-5452 (425) 649-7000

August 6, 2013

Via electronic mail

Mr. Brick Spangler
Project Manager Coordinator
Port of Seattle
Spangler.B@PortSeattle.org
2711 Alaskan Way
Seattle, WA 98121

Re: Ecology Review and Approval of Phase 1 of the Revised Remedial Investigation (RI/FS) Work Plan, Port of Seattle T115N Site, Agreed Order DE 8099.

Dear Brick,

Thank you for your letter dated May 9, 2013, which accompanied the Revised Work Plan for Remedial Investigation/Feasibility Study (RI/FS) on the Port of Seattle (Port) North Terminal 115 (T115N) Site (Site) dated May 9, 2013. That letter included some specific points of concern that Ecology has responded to in the attachment. We also appreciate the follow-up documents, sent May 21, which included design plans for the 48 inch Storm Drain and the example of a typical outfall apron section.

The Revised Work Plan still omits Site stormwater and sediment sampling which was required by Ecology. Ecology approves this Revised Work Plan with additional provisions as a Phase 1 RI/FS Work Plan, and stormwater and sediment sampling may be required in an additional phase of investigation¹. If Ecology determines further work is necessary to address data gaps at the Site or to understand the extent and nature of contamination at the Site – in particular the sediment and stormwater -- then Ecology will issue a written request to the Port to develop a Phase 2 RI/FS Work Plan and schedule for implementation. The Port will draft and submit for Ecology's review and comment a Phase 2 RI/FS Work Plan and schedule within sixty (60) days of the written request. The Port shall incorporate Ecology's comments on the draft Phase 2 RI/FS Work Plan and implement it according to the schedule.

¹As described in this letter, the approved RI/FS Work Plan does not cover the full nature and extent of contamination at the Site, and additional work may be necessary. Therefore Ecology will refer to this document as the "Phase 1 RI/FS Work Plan" as an indication that additional work may be needed before the Port submits a draft RI/FS Report.

August 6, 2013

The Model Toxics Control Act (MTCA), Chapter 70.105D RCW, defines the Site by the extent of contamination caused by the release of hazardous substances. Based on factors currently known to Ecology, the approved Phase 1 RI/FS Work Plan covers only a portion of the Site defined by the Port's T115N property, and its property lines do not reflect the boundaries of the Site. However, Ecology agrees that it is beneficial to continue with the remedial investigation for the area where the parties could mutually agree to expedite work without waiting. Approval of the Phase 1 RI/FS Work Plan does not relieve the Port of responsibility to conduct future remedial action at the Site if and to the extent required under MTCA.

As the Port disagrees about the need to sample Site stormwater and sediment at this time, Ecology is requiring additional provisions to this Phase 1 RI/FS Work Plan in order for Ecology to evaluate the potential for stormwater and sediment impacts and implementation of the Phase 2 RI/FS Work Plan.

- 1) A camera survey of the stormwater lines conducted at low tide, i.e., when surface water infiltration is minimized, during high groundwater elevation (i.e. when the survey can accurately observe potential leaks, breaks or inflow from groundwater);
- 2) Survey of all stormwater pipes, vaults, and connections for depth, type of pipe, size of pipe, elevation of each at the Site, or provide original as-built documents that provide requested construction information;
- 3) Characterization of groundwater in vicinity of stormwater pipe system and the 48 inch main, e.g., chemical constituents and physical parameters, elevation, gradient, water table fluctuations around stormwater system and 48 inch main;
- 4) Sampling of in-line pipe solids, if observed during camera survey. Any samples collected will be analyzed for the full suite of SMS chemicals;
- 5) Revise Conceptual Site Model to reflect any new contaminant transport pathways findings and any confirmed or potential media impacts.

Ecology will review the results of above information and if Ecology determines that stormwater and or sediment may be impacted by past or present Site activities, Phase 2 of the Work Plan would be required and implemented.

This letter provides the Port with approval of the Phase 1 RI/FS Work Plan. Ecology expects implementation of the work plan to commence within 30 days of this letter and that the Phase 1 RI sampling will be completed by August 6, 2014. Ecology looks forward to review of validated data within 90 days of analysis (as per Exhibit C of the AO) and expects the Draft RI Report 90 days following receipt of all validated data from RI sampling.

Please notify me seven days in advance of any sample collection or work action at the Site per section VIII. (G) of the AO.

Ecology is committed to working with the Port to fulfill the requirements of the AO, and appreciates your diligence. If you have any questions regarding the requirements for the Work Plan, please contact me at (425) 649-7231 or by e-mail at dort461@ecy.wa.gov.

August 6, 2013

Sincerely,

A handwritten signature in black ink, appearing to read 'D & A', with a long, sweeping flourish extending to the right.

Donna Ortiz de Anaya
Environmental Engineer, M.S.
Site Manager
Toxics Cleanup Program
425-649-7231

w/attachment

cc: Ron Timm, Ecology
Ivy Anderson, Assistant Attorney General

Ecology Responses to Points Raised in May 9, 2013 Letter:

Issue 1- Required whole stormwater sampling

- **CONCERN: Value and potential use of whole water sampling is unknown at this time.**

RESPONSE: The MTCA process includes collecting data necessary to adequately characterize the site for the purposes of developing and evaluating cleanup action alternatives. WAC 173-340-350 (7)(c)(iii)(A) describes sufficient investigations to characterize the distribution of hazardous substances present at the site. Specifically, Section (A) states, "Sufficient surface water and sediment sampling shall be performed to adequately characterize the areal and vertical distribution and concentrations of hazardous substances. Properties of surface and subsurface sediments that are likely to influence the type and rate of hazardous substance migration, or are likely to affect the ability to implement alternative cleanup actions shall be characterized."

The data will be compared to MTCA, SMS and Clean Water Act standards. The results of stormwater sampling will be used to help determine the nature and extent of the contamination at the Site and to develop a Feasibility Study. Catch basin solid analysis is not a substitute for whole water sampling for the following reasons: 1) dissolved pollutants such as Cu and Zn may pass through the system, 2) many pollutants have greater tendency to be attached with suspended fine particles than coarse particles and may pass through in stormwater.

Because the parties believe that it is beneficial to continue with the remedial investigation for the area where the parties could mutually agree to expedite work without waiting for the full nature and extent of contamination to be defined, the sampling of stormwater will take place under the Phase 2 RI/FS Work Plan.

- **CONCERN: The Site is unlikely to be a primary source of contamination (due to size).**

RESPONSE: No minimum level of hazardous substance is required to trigger MTCA liability. It is important to understand the nature and extent of hazardous substances at the site to evaluate what type of remedial action is necessary. Review of the site history indicates that hazardous substances are carried by the stormwater systems and are located within the catch basin.

A Port Drainage Plan figure dated 1971 (attached) notes perforated pipe installed below railroad tracks and draining to a catch basin 50 feet south of the Site. The catch basin was sampled on 9/12/11 and noted concentrations such as zinc at 5000 mg/kg dw, Bis(2-ethyl-hexyl)phthalate at 25000 ug/kg dw, PCBs at 313 ug/kg dw, total HPAHs at 11000 ug/kg dw and phenols at 1200 ug/kg dw. A similar drainage system underlies railroad tracks along the western portion of this Site. Additionally, sampling will rule out whether contaminated groundwater may be accessing the stormwater system during high water table events.

August 6, 2013

The nature and extent of hazardous substances within the stormwater system and catch basin is required to adequately characterize the site and review appropriate remedial actions. In addition, this information is important to insure that this Site does not contribute to recontamination of the Lower Duwamish Waterway following the EPA Superfund Cleanup.

Because the parties believe that it is beneficial to continue with the remedial investigation for the area where the parties could mutually agree to expedite work without waiting for the full nature and extent of contamination to be defined, the sampling of stormwater will take place under the Phase 2 RI/FS Work Plan.

- **CONCERN: Information collection should be prioritized**

RESPONSE: Ecology is prioritizing listed sites along the LDW with Agreed Orders for remedial investigation work plans with an adequate scope of work. This includes stormwater and sediment analysis as part of Ecology's continued source control strategy for the entire LDW site.

Ecology understands the Port's request to begin remedial investigation on the areas of the Site where the parties are in agreement. Therefore Ecology has approved the Phase 1 RI/FS Work Plan, with the understanding that additional sampling may be required to complete the remedial investigation.

- **CONCERN: Do catch basin sampling first**

RESPONSE: While catch basin sampling is important, it alone will not adequately characterize the impact of the stormwater system at the site. Catch basin solids were looked at under the Environmental Investigation Report by Landau dated December 31, 2009. A grab sample of stormwater/solids was included in the report. Laboratory analysis identified exceedances of the SQS chemical criteria within the solids for zinc and bis(2-ethylhexyl)phthalate, with many other contaminants being detected at that time. Further catch basin solid testing is identified in the Phase 1 RI/FS Work Plan. Ecology has asked for stormwater sampling because stormwater may contain other contaminants that tend to be dissolved or suspended, rather than accumulate in catch basins, and would also be transported to aquatic species in the surface water. Until stormwater system solids and water sample results can be compared to MTCA criteria, the potential contaminant hazard at this site cannot be adequately determined and the Remedial Investigation report cannot be completed.

Issue 2-Reasons for exclusion from the work plan:

- **CONCERN: No need for additional sediment sampling**

RESPONSE: The Port proposes to use the data from sediment samples collected on neighboring property (Glacier). The two points sampled during the Glacier Sediment Sampling event done May, 2012 near the 48 inch main outfall noted sample locations, SS-01 and SED-SS-12. SED-SS-12 is located 200 feet east of the outfall and over 100 feet from SED-SS-01. SS-01

August 6, 2013

is located approximately 80 feet northeast of the outfall and near the end of the Glacier dock. Visual inspection noted a distinctly separate shelf of material at the point of the outfall on Port property.

The primary reason Ecology proposes targeted outfall (sediment) sampling is to determine if there are any exceedances of sediment standards near the outfall, and whether the T115N Site has any contribution. The sampling point proposed by Ecology located up to 25 feet from the outfall would be collecting samples that are directly related to outfall discharges and have less potential to be impacted from other sources. While the data may not directly correlate to the T115N contribution (given the 48-inch main includes other sources), it will provide valuable information on sediment quality directly correlated to the outfall. Constituents found in the outfall related "shelf" of material could be correlated to upstream catch basin and stormwater discharge information. Contributions from T115N may be ruled out depending on the concentration or specific constituents found in the upstream catch basins and stormwater samples analyzed. Additionally, the requested sediment sample is located on Port of Seattle property.

Therefore Ecology considers the requested sediment sampling to be necessary to adequately characterize the Site. However, because the parties believe that it is beneficial to continue with the remedial investigation for the area where the parties could mutually agree to expedite work without waiting for the full nature and extent of contamination to be defined, the sampling of sediment will take place under the Phase 2 RI/FS Work Plan.

- **CONCERN: Port should not be responsible for sampling other entity's discharge**

RESPONSE: Agreed. Ecology believes a sampling plan can be created to take into account this concern. A comparison can be made connecting the stormwater and catch basin solids sampled on Port property to the surface and subsurface sampling done on sediment that appears to be directly related to the outfall. Further sampling may be required of other parties to provide Ecology with definitive source tracing information if T115N does not appear to be a source or the only source.

- **CONCERN: Sediment sampling is likely not feasible**

RESPONSE: A field visit on May 28, 2013 confirmed that surface and subsurface sampling of sediment within 25 feet of the outfall is feasible. Upon observation at the outfall, a distinct shelf can be seen at the pipe discharge location that may be the direct result of past sediment accumulation in the river. Both surface and subsurface sample collection appears feasible as the sediment appears soft and deep, and free of obvious obstructions.

Both stormwater and sediment sampling is feasible at the T115N Site, and would help characterize contaminants that may originate from the Port's site. Given, contaminants such as PAHs, Zn, Pb, As, PCB and PCP have already been identified in the nearby bay, and within the 48 inch main when Seattle Public Utilities sampled inline sediment November, 18, 2010 below the T115N Site, further investigation is needed.

August 6, 2013

However, because the parties believe that it is beneficial to continue with the remedial investigation for the area where the parties could mutually agree to expedite work without waiting for the full nature and extent of contamination to be defined, the sampling of sediment will take place under the Phase 2 RI/FS Work Plan.

