Port of Seattle

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| To Tom Luster | From L Schenkle |
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September 28, 1998

Tom Luster
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Dear Mr. Luster:

Thank you for your letter of September 25, 1998. This letter is our response. We have tried to respond as completely as possible in the very short time available. We appreciate the opportunity to provide you with the following status of stormwater elements as you requested:

**Stormwater detention**
The Port has completed an analysis and report of the stormwater detention requirements to comply with level 2 flow controls and retrofitting. The report includes tables of results that summarizes the work competed to comply with this condition. We were not able to included data tables, inputs, or model runs because of the short one-week time period we had to prepare our response (the Port received clarification of the standards in the September 11 clarification letter and in person in the September 18 meeting). We trust this information will be useful to you and look forward to discussing how best to provide you with additional information you may require.

**Stormwater treatment**
Ecology and the Port did not discuss stormwater treatment in the September 18 meeting. In July, during a four-hour work session, Lisa Zinner and the Port conducted a preliminary reasonable potential analysis of proposed water quality BMPs, which was submitted to Ecology in July [Appendix F]. The analysis made many general assumptions about receiving water quality and employed a model which was probably not appropriate for the intermittent and variable stormwater discharges from this facility, anticipated future water quality, and removal rates. The proposed BMPs, including the treatment trains required by the Order, require further analysis. While the Port could proceed with preliminary design of the required treatment, the scale of the treatment BMPs mandated in the Order dwarfs previous application of these BMPs and requires significant feasibility analysis. The Port must also explore other appropriate techniques, which would require significant analysis since new treatment technologies on this scale have not been previously considered.

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To date, the Port's consultants have held meetings to develop solutions that focus on the copper issue. Concepts considered to date include:

- Copper source controls (copper is ubiquitous throughout most outfalls as is the case with all urban stormwater, so this appears infeasible);
- Isolate areas of high copper loading to reduce treatment volumes (does not appear to be effective since copper is ubiquitous);
- Develop a treatment system or method for copper (a feasibility study for copper removal from stormwater at another site determined a cost of approximately $1,000,000 per 15 acres of treatment area, the Port may need to treat 100 times that area); and
- Comply with copper standards by developing site-specific standards for Miller and Des Moines Creeks, then design a treatment method to comply with modified standards.

The consultant is developing a work plan, including monitoring this fall, to determine the feasibility of adjusting copper standards in Miller and Des Moines Creeks. Determination of copper concentrations and loading estimates is underway at the various outfalls to determine treatment requirements.

**Source Control Best Management Practices**
The Port will be delivering the Stormwater Pollution Prevention Plan for Airport Operations on schedule on November 30, 1998. The Stormwater Pollution Prevention Plans for Construction Activities are developed as needed for Port projects prior to construction.

**First Flush Analysis**
Ecology and the Port did not discuss first flush analysis in the September 18 meeting. The Port of Seattle, as a municipal entity, must first justify the need for capital improvements such as the first flush requirement before we can obtain Commission approval for the project. In discussions with Lisa Zimmer, NWRO, we have discussed a phased approach to this issue. Phase I would include an evaluation of the receiving stream effects. Once an impact is shown, the capital improvement program can be defined and approved by the Commission.

We believe it is important to recognize that the use of pavement anti-icing and deicing chemicals is mandatory under federal law. The FAA regulates the deicing and anti-icing of commercial airport ground facilities, runways and paved surfaces relating to commercial aircraft operations within the boundaries of the United States. This is a subject of FAA focus because of its fundamental and critical relationship to human safety. It is a primary component of FAA attention to safe commercial airline operations.

If the Phase I analysis determines that treatment is needed, an engineering feasibility study would be prepared. First, the Port must develop a feasible method to effectively treat first flush for the anti-icing products proposed. The treatment design must then be developed to be feasible to be constructed and operated at each Port outfall (anti-icing is performed throughout the airfield). Stormwater runoff must be treated at a minimum of two locations (the basin divide of Miller and Des Moines Creeks must be maintained). The existing airport drainage system may have to be torn up and replaced. Pumping systems would be required to divert stormwater runoff to treatment systems.

The Port consultant has prepared a scope of work to model the anti-icing materials in the creeks. A meeting between the consultants and the Port to discuss the scope is being held in October.

Delivery Dates
The following delivery dates are proposed for the listed documents. An additional 30 days is not sufficient to complete analysis and provide reports of the complexity required. The reports indicated below are typically preliminary reports showing progress toward meeting report deadlines.

Stormwater Detention

September 23 Level 2 analysis
October 20 Revised preliminary stormwater quantity report showing level two requirements

Stormwater Treatment

October 20 Stormwater monitoring plan
October 20 Water quality standard modification Plan
October 20 Revised preliminary reasonable potential analysis with proposed treatment trains

Source Control BMPs

October 1 Updated Source Control BMP Plan

First Flush Analysis

October 20 First Flush analysis work plan

Status of Wetland Delineation

As you are aware, the Port has not acquired all of the property for third runway construction. Property acquisition, wetland delineations, and surveying are on going activities. In response to your request, we have the following updates on wetland impacts:

We do not have a current total of wetland impacts. We are continuing acquisitions and delineations daily, and have not overlaid new information with the proposed construction impact area.

The new wetland delineations have not been verified by the Corps, nor have the surveyed areas been mapped. We have not completed an updated location map of wetlands.

Approximately 400 parcels have been identified for acquisition on the west side of the airport. Approximately 65 parcels were identified as high priority to determine wetland impacts, and about one-half of these parcels have been delineated. These delineations have not been verified by the Corps.

We hope to have more information on the priority parcels in October, and will continue delineation until complete.

The Port plans to submit additional information on wetland impacts to the Corps and Ecology in November.

Status of water rights
It was anticipated by the Port that once the Tyee golf course ceases operations, the Port would apply for a change in use of that water rights to augment Des Moines Creek. There should be sufficient water from the Tyee wells to augment Des Moines Creek, and use of that water for augmentation purposes would not affect the current amount of water available to Highline's customers or the Port. Tyee Golf Course currently irrigates with a well that pumps water at approximately from 350-400 gpm. If this water were not available the Port would examine the availability of other rights held by the Port, the Highline Water District, or other private water rights owners.

The Port holds two water rights certificates and a water rights claim. One of the Port's water rights was assigned to the Port by King County Water District No. 75 in December 1962, but Ecology's records regarding these transferred rights appear to be incomplete.

The validity of the Port's water rights is currently under review. Statements in the draft augmentation plan regarding water rights and wells should also be considered preliminary, until reviewed and analyzed by the water rights counsel. This matter is complicated by Ecology's water rights files, which contain conflicting information with respect to the pertinent rights. Further examination of Ecology's files and additional historical research is necessary to determine the status of available water rights. We anticipate completion of research within the next few weeks and will report our findings and conclusions to Ecology.

**Construction Schedule** The schedule is not required by the Order until October 20, 1998. The Port will provide the current construction schedule as required by October 20, 1998.

The Port feels confident that we have complied with your request to the extent possible in the short time allowed. We hope to continue to meet your schedules, and look forward to meeting with you on October 9th to discuss our progress on the project. Please call me if you have any questions or comments regarding this letter or our reports.

Sincerely

for Barbara Hinkle

Barbara Hinkle
Senior Specialist
Health, Safety & Environmental Services

Cc: Tom McDonald, Office of Attorney General