



STATE OF WASHINGTON  
**DEPARTMENT OF ECOLOGY**

Southwest Region Office

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Scott Hooton  
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**RE: Ecology Comments- Sediment Characterization Report and Interim Action Plan for the Tru-Grit Site**

Dear Scott Hooton:

The Washington State Department of Ecology (Ecology) has reviewed the Sediment Characterization Report and Interim Action Plan for the Tru-Grit site in support of the Blair Waterway deepening project. Ecology understands the Port views the proposed work to be an Incidental Remedial Action under the Sediment Management Standards (SMS) (WAC 173-304-540(3)(c)). While Ecology reviews this position, we do support completing the interim action and are providing the following comments on the submitted materials:

1. Sediment Characterization Report – Comments / Requests

1.1 Grit material per sample (results requested)

Ecology requests the results showing the amount of grit material collected per sample during this sampling effort (e.g., mass or volume of grit recovered per core/sample). In addition, Ecology requests contour maps (or equivalent gridded concentration maps) showing the spatial distribution of percent grit with the following intervals:

- No Apparent Grit
- < 5% Grit
- 5% - 15% Grit
- + 15% Grit

1.2 Wood presence (request to quantify as percent)

Ecology noted “wood fragments,” “wood chunks,” “wood fibers,” and odor in several sediment core samples (TG SC03, TG SC05, TG SC06, TG SC09, TG SC09RE, TG SC10, TG SC10RE, TG SC11, TG SC11RE, TG SC14, TG SC16, TG SC19, TG SC20, TG SC22, TG SC25, TG SC26, TG SC30). Please report the estimated

wood content for each affected sample as percent wood volume (or another clearly defined percent basis, if more appropriate).

Ecology notes that TVS results were generally ~2.5% or less in samples where wood fragments were described. TG SC31 should likely be retested for bioassays, because TVS was close to 15% and abundant fibrous woody debris was present. All other samples had TVS below 5%. Please provide the percent wood debris metric to confirm.

#### 1.3 Collect porewater at locations with elevated TBT (bioavailability evaluation):

Ecology requests that porewater samples be collected at sediment locations where tributyltin (TBT) concentrations exceed 73 µg/kg cited in the PSDDA 1996 memo. Porewater is a better indicator of bioavailable contaminant fractions and potential biological exposure than bulk sediment alone. Porewater results should be compared to Ecology's porewater sediment cleanup objective (SCO) and chemical screening level (CSL) from the Ecology TBT memo (attached): 0.06 µg/L as TBT as Sn and 0.15 µg/L as TBT, respectively. These porewater results should be used to evaluate whether additional lines of evidence are warranted, including additional/targeted bioassay testing at locations with elevated TBT and/or where porewater results indicate elevated bioavailable concentrations.

#### 1.4 Contour maps requested (chemical exceedance categories by depth interval)

Ecology requests plan view contour maps (or equivalent gridded concentration maps) showing the spatial distribution of chemistry results by depth interval, using the bin ranges listed below. Please provide separate map panels (or clearly separated layers) for each depth interval and analyte.

- Arsenic (mg/kg)
  - 0-57
  - 57.1-93
  - 93.1-186
  - >186
  
- Zinc (mg/kg)
  - 0-410
  - 410.1-685
  - 685.1-960
  - >960
  
- Total PCB Aroclors (mg/kg-OC)
  - 0-12
  - 12.1-38.5
  - 38.6-65
  - >65

OR

- Total PCBs ( $\mu\text{g}/\text{kg}$  dry weight)
  - 0-130
  - 130.1-450
  - 450-1000
  - >1000
  
- Chromium (mg/kg)
  - 0-260
  - 260-270
  - >270
  
- Copper (mg/kg)
  - 0-390
  - 390.1-500
  - >500
  
- Lead (mg/kg)
  - 0-450
  - 450.1-530
  - 530-1000
  - >1000

PAHs

- Total cPAH TEQ
  - 0-21
  - 21-78
  - 78-200
  - 200-500
  - >500
  
- Total HPAH mg/kg-OC
  - 0-960
  - 960.1-2600
  - 2600-5600
  - >5600
  
- Total LPAH mg/kg-OC
  - 0-370
  - 370.1-780
  - >780

- Total HPAH ug/kg
  - 0-12000
  - 12000.1-17000
  - >17000
  
- Total LPAH ug/kg
  - 0-2600
  - 2600-5200
  - >5600

## 2. Interim Action Plan – Comments / Requests

2.1 Provide more detail on contingency actions and monitoring (including remaining contamination, slopes, and vessel disturbance)

Ecology requests additional details to ensure the interim action is implementable, protective, and supported by a clear monitoring and contingency framework. Please revise the Interim Action Plan (or provide a stand-alone technical memorandum) to include the items below.

### 2.1.1 Monitoring and confirmatory sampling program (baseline, construction, and post-construction)

Please provide a water quality monitoring plan that clearly identifies:

- Objectives and decision points: What decisions the monitoring will support (e.g., confirm dredge limits were achieved; confirm residuals meet criteria; confirm no recontamination).
- Sampling design and rationale: Proposed station locations, sample density, depth intervals, analytes, and how locations will be selected (random/systematic/judgmental; bias near docks, slopes, and vessel corridors).
- Performance criteria/action levels: Numeric criteria used to determine compliance/performance (e.g., cleanup levels, residuals criteria, turbidity/action thresholds, recontamination triggers), including how background conditions will be established.
- Timing/frequency: When monitoring occurs (pre-dredge baseline, during dredging, immediate post-dredge, and longer-term monitoring), including a proposed schedule (e.g., 30/90/180 days; annual, etc.) and justification.
- Methods and QA/QC: Field methods, lab methods, detection limits, data validation level, and data quality objectives sufficient to support decisions.
- Reporting and documentation: Required deliverables (e.g., daily logs, sampling reports, data packages, maps, bathymetry/as-builts), submittal timelines, and a clear format for presenting results (tables, figures, exceedance maps).

### 2.1.2 Contingency dredging (and other contingency actions) triggers, implementation, and documentation

Please provide additional details on contingency dredging, including:

- **Trigger conditions (measurable):** Define the specific conditions that would trigger contingency dredging and/or other contingency actions, such as confirmatory sediment chemistry exceedances above defined performance criteria; residual contamination criteria not met; documented recontamination (deposition) in the dredged area; slope instability/slumping indicators; and/or monitoring exceedances attributable to project activities.
- **Monitoring during contingency work:** Specify how contingency work will be monitored (sampling locations/density, turbidity and/or other water column monitoring, bathymetry checks, and documentation of dredge cuts/volumes).
- **Documentation/reporting:** Describe how contingency actions will be documented and reported to Ecology (daily logs, maps/as-builts, analytical results, and a post-action summary).

### 2.1.3 Remaining contamination adjacent to docks (areas not proposed for dredging) prevent recontamination from slopes/slumping/erosion

Ecology requests more detail on how contamination in areas not proposed for dredging, particularly adjacent to docks, will be managed to prevent recontamination of the dredged area. The resulting residual slopes could slump or erode and recontaminate the dredged footprint. Please provide:

- **Conceptual slope geometry and stability basis:** Expected post-dredge slope configuration (include cross-sections), and the technical basis supporting stability under expected site conditions. Ecology has noted that a preliminary geotechnical analysis was conducted and requests the report.
- **Recontamination prevention measures:** Proposed engineering and/or operational controls to prevent slumping/erosion and recontamination (as applicable), such as grading/benching to stable slopes; armoring (rock, mats, etc.); targeted removal in high-risk areas; isolation/capping (design thickness/materials/placement methods); and/or other controls.
- **Performance verification and maintenance:** How performance will be verified over time (e.g., bathymetry, cap/armor integrity surveys, sediment monitoring), the proposed monitoring frequency, and maintenance/repair triggers and response actions.

### 2.1.4 Boat traffic / prop wash / vessel disturbance — evaluation, mitigation, and adaptive management

Ecology requests that the plan address vessel-related disturbance that may resuspend and redistribute contaminants during and after construction. Please describe:

- Evaluation approach: How vessel types, drafts, prop wash potential, and traffic patterns will be evaluated relative to sensitive areas (newly dredged slopes, residual contamination zones, any caps/armor).
- Mitigation measures: Specific operational controls and/or physical measures to minimize disturbance (e.g., temporary exclusion zones, navigation/speed restrictions during and/or after construction, signage/coordination with operators).
- Monitoring triggers and response actions: How vessel-related resuspension/recontamination will be detected (monitoring parameters and action levels), and what actions will be taken if triggers are exceeded (e.g., additional monitoring, maintenance/repair, additional armoring/capping, revised vessel controls), including documentation and Ecology notification. In addition, Ecology requires a Water Quality Monitoring and Protection Plan (WQMPP) to be approved along with the dewatering effort.

## 2.2 Provide more detail on the Preliminary Engineer's Cost Estimate

Please provide a more detailed cost breakdown showing how costs are allocated within each category. At a minimum, include itemized costs (or unit costs and quantities) for dredging, transloading, transportation, and disposal. Please also address whether dewatering and any treatment of dredged material are included, and if so, how those costs were estimated and allocated. Finally, please estimate the expected cost for monitoring/confirmatory sampling (including field collection, laboratory analyses, data validation, and reporting, as applicable).

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If you have any questions regarding these comments, please contact me at (564) 669-0298 or [vchu461@ecy.wa.gov](mailto:vchu461@ecy.wa.gov). Ecology appreciates the opportunity to review these materials and looks forward to continued coordination.

Sincerely,



Val Chu

Toxicologist / Site Manager

Washington State Department of Ecology

Toxics Cleanup Program

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## **Reference**

Puget Sound Dredged Disposal Analysis (PSDDA). 1996. *SMS Technical Information Memorandum Testing, Reporting, and Evaluation of Tributyltin Data in PSDDA and SMS Programs.*