# EXHIBIT B – SCOPE OF WORK AND SCHEDULE OF DELIVERABLES

#### **SCOPE OF WORK**

#### **PURPOSE**

The work under this Agreed Order (AO) involves conducting interim action, conducting Remedial Investigation (RI) and Feasibility Study (FS), and preparing a preliminary Draft Cleanup Action Plan (DCAP) to select a cleanup alternative. The purpose of the RI, FS, and preliminary DCAP for the Site is to provide sufficient data, analysis, and evaluations to enable Ecology to select a cleanup alternative for the Site.

The PLPs shall coordinate with Ecology throughout the development of the Interim Action, RI/FS and preliminary DCAP and shall keep Ecology informed of changes to any Work Plan or other project plans, and of any issues or problems as they develop.

The SOW is divided into seven major tasks as follows:

Task 1a.	Interim Action – General
Task 1b.	Interim Action – Pipeline Removal
Task 2.	RI Work Plan
Task 3.	Remedial Investigation
Task 4.	Feasibility Study
Task 5.	Preliminary DCAP
Task 6.	SEPA Compliance
Task 7.	Public Participation

#### TASK 1a. INTERIM ACTION - GENERAL

Remedial actions implemented prior to completion of the RI/FS, including those that:

- are technically necessary to reduce a threat to human health or the environment by eliminating or substantially reducing one or more pathways for exposure to a hazardous substance;
- correct a problem that may become substantially worse or cost substantially more to address if the remedial action is delayed; or
- are needed to provide for completion of the remedial investigation/feasibility study or design of the cleanup action

will be considered interim actions, will be implemented in accordance with WAC 173-340-430 and the AO, and will be designed in a manner that will not foreclose reasonable alternatives for any final cleanup action that may be required. Remedial actions for contaminated sediments will be designated partial cleanup actions and will be implemented pursuant to WAC 173-204-550(3)(d).

As detailed in the AO (Exhibit C. Public Review Draft Interim Action Work Plan), if required by Ecology, or if proposed by the PLPs and approved by Ecology, the PLPs will implement an interim action. Based upon information in the Agency Review Draft RI Report, interim action(s) may be needed to expedite control of releases to sediments or other environmental media pursuant to WAC 173-340-430.

The scope of the interim actions may include, but not be limited to, typical source control or containment elements such as:

- Soil or sediment removal
- Groundwater remediation
- Repair, slip lining, replacement, or closure of stormwater conveyances or other structures such as conduit, vaults, catch basins, etc.
- Removal of underground storage tanks and pipes
- Removal of old drain fields or former surface impoundments
- Proper abandonment of old wells
- Removal of contaminated building or other structural material
- Construction of a treatment facility
- Shoreline stabilization such as bulkhead repair, erosion or seepage control, and grading or clearing.

If an interim action is to be performed, the PLPs will prepare and submit for Ecology approval an Agency Review Draft Interim Action Work Plan (IAWP) with detail commensurate with the work to be performed. The Agency Review Draft IAWP shall include, as appropriate:

- Description of the interim action including its purpose, general requirements, and relationship to the (final) cleanup action (to the extent known);
- Summary of relevant RI/FS information, including at a minimum existing site conditions and alternative interim actions considered;
- Information regarding design and construction requirements, including a proposed schedule and personnel roles and responsibilities;
- Compliance Monitoring Plan;
- SAP/OAPP
- Permits required.

The PLPs will also submit a copy of the Health and Safety Plan for the project. The PLPs will be responsible for complying with the State Environmental Policy Act (SEPA) Rules including preparing and submitting an environmental checklist for the interim action, and

will assist Ecology with presentations at any additional meetings or hearings that might be necessary for SEPA compliance or as part of the Public Participation Plan.

The PLPs shall prepare two (2) copies of the Agency Review Draft IAWP and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for review. The PLPs shall incorporate Ecology's comments and then prepare two (2) copies of the Public Review Draft IAWP and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology. After a public notice and comment period for the Public Review Draft IAWP (and SEPA determination), Ecology will approve the IAWP (if appropriate) and the document will be considered Final. The PLPs shall prepare three (3) copies of the Final IAWP and then submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats. Once approved by Ecology, the PLPs will implement the interim action according with the approved schedule.

Upon successful completion of the work, an Agency Review Draft Interim Action Report will be prepared as a separate deliverable. The PLPs shall prepare two (2) copies of the Agency Review Draft Interim Action Report and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for review and approval. After incorporating Ecology's comments on the Agency Review Draft Interim Action Report and after Ecology approval, the PLPs shall prepare three (3) copies of the Final Interim Action Report and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology.

#### TASK 1b. INTERIM ACTION – PIPELINE REMOVAL

Ecology has determined that an interim action is warranted under WAC 173-340-430 for the removal of abandoned pipelines beneath Berths 1 and 2 at the Port of Longview. Ecology has reviewed and approved the Agency Review Draft IAWP for this work. The corresponding Public Review Draft IAWP is included as Exhibit C of the AO. The interim action described in Exhibit C, will follow the same submittal and review process as all other potential interim actions (described in Task 1a, above).

#### TASK 2. RI WORK PLAN

The PLPs shall prepare a Remedial Investigation Work Plan (RI Work Plan). The RI Work Plan shall include an overall description and schedule of all RI activities. The RI Work Plan shall clearly describe the project management strategy for implementing and reporting on RI activities. The responsibility and authority of all organizations and key personnel involved in conducting the RI will be outlined.

A Key Project Meeting (Remedial Investigation Planning Meeting) will be held prior to submittal of the RI Work Plan. The purpose of the Remedial Investigation Planning Meeting is to review requirements for the Work Plan and plan Remedial Investigation field work, discuss the preliminary Conceptual Site Model, and identify project data needs and possible interim actions.

The RI Work Plan shall describe general facility information; site history and conditions; including previous operations; past field investigations, including any data collection and analysis of soils, air, groundwater, surface water, and sediments; a conceptual site model showing contaminants, migration pathways in all environmental media, and potential receptors; geology and groundwater system characteristics; past, current, and future land use; identification of natural resources and ecological receptors; hazardous substances and their sources, etc., in compliance with WAC 173-340-350 and WAC 173-204-560.

As part of the project background, existing environmental data on site soil, groundwater, surface water, and sediments will be compiled and evaluated for data gaps. The data gaps will be used as the basis for conducting additional site investigations, if necessary. The Work Plan will also identify specific data collection procedures in a Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) as part of the RI Work Plan in compliance with WAC 173-340-820 and WAC 173-204-600 for defining the nature and extent of contamination. The PLPs will also submit a copy of the Health and Safety Plan (HASP) for the project.

The SAP identifies the proposed number and location of all environmental samples and methods, including but not limited to soil borings, groundwater monitoring wells, soil, groundwater, stormwater, seep, catch basin and sediment samples, approximate depths, and includes a quality assurance project plan. The SAP will describe the sampling objectives, the rationale for the sampling approach (based upon the identified data gaps), and plans for data use, and shall provide a detailed description of sampling tasks. The SAP shall describe specifications for sample identifiers; sampling equipment; the type, number, and location of samples to be collected; the analyses to be performed; descriptions of sampling equipment and methods to be used; sample documentation; sample containers, collection and handling; data and records management; and schedule.

The Quality Assurance Project Plan (QAPP) will be prepared in accordance with the Guidance for Preparation of Quality Assurance Project Plans, EPA Region 10, Quality Data Management Program, QA/R-5 and requirements of the EPA Contract Laboratory Program. The QAPP will also follow Ecology's Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies (July 2004) <sup>1</sup> and Sediment Sampling and Analysis Plan Appendix (February 2008). <sup>2</sup> Laboratories must meet the accreditation standards established in WAC 173-50. Data quality objectives will reflect the criteria or threshold values used for the source control evaluation.

The SAP, including the QAPP, will be submitted to Ecology for review and approval. As with all environmental work at the site, work may not begin without written approval from Ecology. The plan shall provide seven (7) days notice to Ecology prior to beginning sampling. Ecology may obtain split samples.

<sup>&</sup>lt;sup>1</sup> Found at http://www.ecy.wa.gov/biblio/0403030.html

<sup>&</sup>lt;sup>2</sup> Found at http://www.ecy.wa.gov/biblio/qapp.html

The PLPs or their contractors shall submit all new sampling data generated under this SAP and any other recently collected data to Ecology for entry into the Environmental Information Management System (EIM) in accordance with WAC 173-340-840(5) and Ecology's Toxics Cleanup Program Policy 840: Data Submittal Requirements. Only validated data will be entered into the EIM database and must be entered within 30 days of report submittal.

RI Work Plan tasks and subtasks may include, but are not limited to, the following:

- Sampling and analysis of soil, soil vapor, indoor air, groundwater, and seeps;
- Sampling and analysis of surface and subsurface sediments;
- Sampling and analysis of stormwater and catch basin solids to determine whether the stormwater system is a source of contamination to sediments;
- Evaluate the potential to contaminate or recontaminate sediments, including analysis of the following pathways:
  - o Direct discharges
  - o Stormwater discharges
  - Overland flow
  - o Groundwater discharges and seeps
  - o Soil erosion
  - o Site operations
  - o Spills, dumping, leaks, housekeeping, and management practices;

The PLPs will provide Ecology with an Agency Review Draft RI Work Plan. Once Ecology reviews and approves the Work Plan, it will be considered the Final RI Work Plan. The Work Plan shall not be implemented until approved by Ecology. Once approved by Ecology, the PLPs will implement the Final RI Work Plan according to the schedule described in the Final Work Plan.

The PLPs shall prepare two (2) copies of the Agency Review Draft RI Work Plan and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for review and comment. After incorporating Ecology's comments on the Agency Review Draft Work Plan and after Ecology approval, the PLPs shall prepare three (3) copies of the Final Work Plan and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology.

#### TASK 3. REMEDIAL INVESTIGATION

The PLPs shall conduct an RI that meets the requirements of WAC 173-340-350(7) and WAC 173-204-560 according to the RI Work Plan as approved by Ecology. The RI will determine the nature and extent of contamination exceeding preliminary Model Toxics Control Act (MTCA) cleanup levels, preliminary Sediment Management Standards (SMS) cleanup standards, and other regulatory requirements. The RI must provide sufficient data and information to define the nature and extent of contamination.

Field sampling and analysis will be completed in general accordance with the SAP and QAPP. Deviation(s) from the approved SAP and QAPP must be communicated to Ecology immediately and documented as required by Ecology.

The PLPs shall provide interim data reports and updates to Ecology as new site data and information become available. Raw laboratory data will be provided to Ecology upon request.

Prior to submittal of the Agency Review Draft RI Report, a Key Project Meeting (Remedial Investigation Pre-Report Check-In) will be held. During the Remedial Investigation Pre-Report Check-In, Ecology and the PLPs will review available data and an updated conceptual site model and discuss the content and organization of the Draft RI Report.

The PLPs shall compile the results of the RI into an Agency Review Draft RI Report. The PLPs shall prepare two (2) copies of the Agency Review Draft RI Report and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for review and comment.

After incorporating Ecology's comments on the Agency Review Draft RI Report, the PLPs shall prepare three (3) copies of a Public Review Draft RI Report and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for distribution and public comment. Electronic survey data for monitoring locations, electronic lab data, and GIS maps of contaminant distribution shall also be provided for both the Agency Review Draft RI Report and Public Review Draft RI Report either in the report or as attachments. The RI Report will not be considered Final until after a public review and comment period.

If the data collected during this investigation is insufficient to define the nature and extent of contamination, and/or to select a cleanup action plan an additional phase of investigation shall be conducted to define the extent of contamination.

#### TASK 4. FEASIBILITY STUDY

The PLPs shall use the information obtained in the RI to prepare an Agency Review Draft Feasibility Study (FS) that meets the applicable requirements of WAC 173-340-350(8) according to the Schedule in this exhibit. The Agency Review Draft FS will evaluate remedial alternatives for site cleanup, consistent with MTCA and SMS requirements to ensure protection of human health and the environment by eliminating, reducing, or otherwise controlling risk posed through each exposure pathway and migration route.

Prior to beginning the FS, a Key Project Meeting (Feasibility Study Planning Meeting) will be held to review preliminary cleanup levels, potential remedial alternatives and establish points of compliance.

The Agency Review Draft FS will provide a detailed analysis of each remedial alternative according to the applicable requirements of WAC 173-340-350, MTCA Remedial

Investigation and Feasibility Study, and WAC 173-204-560, SMS Cleanup Study. The remedial alternatives will be evaluated for compliance with the applicable requirements of WAC 173-340-360, Selection of Cleanup Actions, and WAC 173-204-560(4), including a detailed evaluation of remedial alternatives relative to the following criteria:

- Compliance with Cleanup Standards and Applicable Laws
- Protection of Human Health
- Protection of the Environment
- Provision for a Reasonable Restoration Time Frame
- Use of Permanent Solutions to the Maximum Extent Practicable
- The Degree to which Recycling, Reuse, and Waste Minimization are Employed
- Short-term Effectiveness
- Long-Term Effectiveness
- Net Environmental Benefit
- Implementability
- Provision for Compliance Monitoring
- Cost-Effectiveness
- Prospective Community Acceptance

The remedial alternative that is judged to best satisfy the evaluation criteria will be identified. Justification for the selection will be provided, and the recommended remedial alternative further developed, in the FS.

The PLPs shall prepare two (2) copies of the Agency Review Draft FS and submit them, including one electronic copy in Word (.doc) and Adobe (.pdf) formats, to Ecology for review. After addressing Ecology's comments on the Agency Review Draft FS, the PLPs shall prepare three (3) copies of the Public Review Draft FS and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for distribution and public comment. The FS will not be considered Final until after a public review and comment period.

#### TASK 5. PRELIMINARY DRAFT CLEANUP ACTION PLAN

Upon Ecology approval of the Public Review Draft Remedial Investigation Report and Public Review Draft Feasibility Study, a Key Project Meeting (Cleanup Action Plan Meeting) will be held regarding the Cleanup Action Plan. The Cleanup Action Plan Meeting will be used to review plans for developing the Agency Review preliminary Draft Cleanup Action Plan (DCAP).

The PLPs shall prepare an Agency Review preliminary DCAP in accordance with WAC 173-340-380 that provides a proposed remedial action to address the contamination present on the Site. Where contaminated sediments are included in the remedial action, the cleanup plan will comply with WAC 173-204-580, in addition to the MTCA requirements cited above. The preliminary DCAP shall include a general description of the proposed remedial actions, cleanup standards developed from the RI/FS and rationale regarding their

selection, a schedule for implementation, description of any institutional controls proposed, and a summary of applicable local, state, and federal laws pertinent to the proposed cleanup actions.

The PLPs will submit an Agency Review preliminary DCAP for Ecology's review and approval. The Agency Review preliminary DCAP will include, but not be limited to, the information listed under WAC 173-340-380. The PLPs shall prepare two (2) copies of the Agency Review preliminary DCAP and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for review and approval.

After receiving Ecology's comments on the Agency Review preliminary DCAP, if any, the PLPs shall revise the preliminary DCAP to address Ecology's comments and submit five (5) copies of the Public Review DCAP including one electronic copy each in Word (.doc) and Adobe (.pdf) formats.

#### TASK 6. SEPA COMPLIANCE

The PLPs shall be responsible for complying with the State Environmental Policy Act (SEPA) Rules including preparing and submitting an environmental checklist. If the result of the threshold determination is a determination of significance (DS), the PLPs shall be responsible for the preparation of Draft and Final environmental impact statements. The PLPs shall assist Ecology with coordinating SEPA public involvement requirements with MTCA public involvement requirements whenever possible, such that public comment periods and meetings or hearings can be held concurrently.

#### TASK 7. PUBLIC PARTICIPATION

The PLPs shall support Ecology in presenting the Public Review Draft RI Report and the Public Review Draft FS and SEPA evaluations at a public meeting or hearing, if needed. The PLPs will assist Ecology with presentations at any additional meetings or hearings that might be necessary for SEPA compliance or as part of the Public Participation Plan.

After the public comment periods are completed, Ecology shall prepare a Responsiveness Summary that addresses public comments. If requested, the PLPs shall cooperate with Ecology in responding to the public comments. Ecology will provide the PLPs with one electronic copy each in Word (.doc) and Adobe (.pdf) formats of the Draft Responsiveness Summary prior to distribution.

### SCHEDULE OF DELIVERABLES

The schedule for deliverables described in the Agreed Order and the Scope of Work is presented below. If the date for submission of any item or notification required by this Schedule of Deliverables occurs on a weekend, state or federal holiday, the date for submission of that item or notification is extended to the next business day following the weekend or holiday. Where a deliverable due date is triggered by Ecology notification, comments or approval, the starting date for the period shown is the date the PLPs received such notification, comments or approval by certified mail, return receipt requested, unless otherwise noted below. Where triggered by Ecology receipt of a deliverable, the starting date for the period shown is the date Ecology receives the deliverable by certified mail, return receipt requested, or the date of Ecology signature on a hand-delivery form.

AO Deliverables	<b>Completion Times</b>
Final Interim Action Work Plan	Submit within 30 calendar days following the
	effective date of the AO
Implement Interim Action Work Plan	Begin within 60 calendar days following
	Ecology approval of the Final Interim Action
	Work Plan
Agency Review Draft Interim Action	Submit within 60 calendar days following the
Report	conclusion of the Interim Action (as described
	in the Final Interim Action Work Plan)
Final Interim Action Report	Submit within 60 calendar days following
	receipt of Ecology comments on the Agency
	Review Draft Interim Action Report
Agency Review Draft RI Work Plan	Submit within 90 calendar days following the
	effective date of the AO.
Final RI Work Plan	Submit within 60 calendar days following
	receipt of Ecology comments on the Agency
	Review Draft RI Work Plan
Implement RI Field Work	Begin within 60 calendar days following
	Ecology approval of the Final RI Work Plan
Agency Review Draft RI Report	Submit within 90 calendar days following
	receipt of all RI laboratory data
Public Review Draft RI Report	Submit within 60 calendar days following
	receipt of Ecology comments on Agency
	Review Draft RI Report
Agency Review Draft FS	Submit within 90 calendar days following
	Ecology approval of the Public Review Draft
	RI Report

## Exhibit B Scope of Work

Public Review Draft FS	Submit within 60 calendar days following
	receipt of Ecology's comments on the Agency
	Review Draft FS
Agency Review Preliminary Draft	Submit within 90 calendar days following
Cleanup Action Plan (DCAP)	Ecology approval of the Public Review Draft
_	FS