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RECEIVED

MAY 14 2009

DEPT. OF ECULOGY

May 14, 2009

# BY MESSENGER

Ms. Donna Ortiz De Anaya Washington Department of Ecology NWRO Toxics Cleanup Program 3190 160th Avenue SE Bellevue, WA 98008-5452

Re: Reichhold, Inc. and Glacier Northwest, Inc. Agreed Order Signatures

Dear Ms. Ortiz De Anaya:

Please find enclosed the document package for Agreed Order No. DE 6000, which includes executed copies of the Agreed Order and its three exhibits that Ecology sent to Reichhold, Inc. and Glacier Northwest, Inc. for signature in part on April 3, 2009 and in part on May 7, 2009.

Could you please provide us with an executed copy of Bob Warren's signature page on this Agreed Order for our records? We would also like to know when Ecology expects to publish this Agreed Order in the Site Register, and thereby, begin the public notice process for this Site.

Let me know if you have any questions.

Very truly yours,

Travis A. Exstrom Enclosures

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# STATE OF WASHINGTON DEPARTMENT OF ECOLOGY DRAFT

In the Matter of Remedial Action by:

AGREED ORDER

Glacier Northwest, Inc. and Reichhold, Inc.

No. DE 6000

TO: Ms. Shawn Lilley

Glacier Northwest, Inc. 5975 East Marginal Way South Seattle, WA 98134

Mr. Roger Willis Reichhold, Inc. P. O. Box 13582

Research Triangle Park, NC 27709-3582

# TABLE OF CONTENTS

I.	INTRODUCTION	2
II.	JURISDICTION	2
III.	PARTIES BOUND	2
IV.	DEFINITIONS	2
V.	FINDINGS OF FACT	3
VI.	ECOLOGY DETERMINATIONS	6
VII.	WORK TO BE PERFORMED	
VIII.		8
	A. Public Notice	
	B. Remedial Action Costs	9
	C. Implementation of Remedial Action	
	D. Designated Project Coordinators	10
	E. Performance	10
	F. Access	11
	G. Sampling, Data Submittal, and Availability	12
	H. Public Participation	12
	I. Retention of Records	13
	J. Resolution of Disputes	
	K. Extension of Schedule	15
	L. Amendment of Order	
	M. Endangerment	17
	N. Reservation of Rights	17
	O. Transfer of Interest in Property	18
	P. Compliance with Applicable Laws	18
	Q. Indemnification	20
IX.	SATISFACTION OF ORDER	20
X.	ENFORCEMENT	
23.		
	EXHIBIT A. Site Diagram	
	EXHIBIT B. Scope of Work	
	EXHIBIT C. Schedule of Deliverables	

#### I. INTRODUCTION

The mutual objective of the State of Washington, Department of Ecology (Ecology), Reichhold, Inc. and Glacier Northwest, Inc. under this Agreed Order (Order) is to provide for remedial action at a facility where there has been a release or threatened release of hazardous substances. This Order requires Reichhold, Inc. and Glacier Northwest, Inc. (the PLPs) to conduct a Remedial Investigation (RI), Feasibility Study (FS), and prepare a Draft Cleanup Action Plan (DCAP) under formal guidance provided by Ecology. Ecology believes the actions required by this Order are in the public interest.

#### II. JURISDICTION

This Agreed Order is issued pursuant to the Model Toxics Control Act (MTCA), RCW 70.105D.050(1).

# III. PARTIES BOUND

This Agreed Order shall apply to and be binding upon the Parties to this Order, their successors and assigns. The undersigned representative of each party hereby certifies that he or she is fully authorized to enter into this Order and to execute and legally bind such party to comply with this Order. The PLPs agree to undertake all actions required by the terms and conditions of this Order. No change in ownership or corporate status shall alter responsibility under this Order. The PLPs shall provide a copy of this Order to all agents, contractors, and subcontractors retained to perform work required by this Order, and shall ensure that all work undertaken by such agents, contractors, and subcontractors complies with this Order.

# IV. DEFINITIONS

Unless otherwise specified herein, the definitions set forth in Chapter 70.105D RCW and Chapter 173-340 WAC shall control the meanings of the terms in this Order.

A. <u>Site</u>: The Site is referred to as the Glacier Northwest, Inc. Site and is generally located at 5900 W. Marginal Way SW, Seattle, WA 98106. The Site is defined by the extent of contamination caused by the release of hazardous substances at the Site. Based upon factors currently known to Ecology, the Site is more particularly described in the Site Diagram (Exhibit A). The Site constitutes a Facility under RCW 70.105D.020(5). The Site includes

upland property, groundwater, the streambank and adjacent tidal flats, including portions of the Lower Duwamish Waterway affected by the release of chemicals from the Site.

- B. <u>Parties</u>: Refers to the State of Washington, Department of Ecology, Reichhold, Inc. and Glacier Northwest, Inc.
- C. <u>Potentially Liable Person (PLP)</u>: Refers to Glacier Northwest, Inc. and Reichhold, Inc.
- D. <u>Agreed Order or Order</u>: Refers to this Order and each of the exhibits to this Order. All exhibits are integral and enforceable parts of this Order. The terms "Agreed Order" or "Order" shall include all exhibits to this Order.

#### V. FINDINGS OF FACT

Ecology makes the following findings of fact, without any express or implied admissions of such facts by the PLPs:

- A. The Site is located at 5900 W. Marginal Way SW, Seattle, WA on the west bank of the Lower Duwamish Waterway (LDW) approximately 1.5 miles south of Harbor Island. Glacier Northwest, Inc. is the property owner.
- B. Glacier Northwest, Inc. is currently operating a cement terminal and warehouse at the Site. A concrete batch plant was operated in the Site between 2000 and 2002. Reichhold's operations at the Site included resin manufacturing between 1948-1958, dry plywood protein glue manufacturing between 1947 and 1956, and pilot-scale pentachlorophenol and sodium pentachlorophenate production between 1953 and 1956.
- C. The Site has been the subject of several environmental investigations beginning in 1985. The previous Independent Remedial Investigations and cleanups were conducted without department guidance, oversight or approval and not under an order, agreed order, or consent decree. The following reports include PLP investigations as well as investigations conducted for regional information:

The Remedial Activities Summary Report for the Reichhold-Glacier Northwest Site, prepared by Shaw Environmental, Inc. and submitted to Ecology in April 2008, documents the remedial actions and supplemental site characterizations activities that have been conducted at the Site since 1990. Remediation activities included seven years of ozone-sparging and hydrogen peroxide injections. Ongoing soil and groundwater concentrations above MTCA for arsenic and pentachlorophenol were documented in this

report.

The Lower Duwamish Waterway Glacier Bay Source Control Area, Summary of Existing Information and Identification of Data Gaps, by Science Applications International Corporation (SAIC) dated June 2007, prepared for Department of Ecology, provides a summary of site investigations documenting releases of hazardous substances at the Site. This report noted findings of metals, pentachlorophenol, and 2,4-dichlorophenol in soil and groundwater and dioxins directly offshore at the Site. Sediment recontamination via groundwater was noted as a significant concern and data gaps mentioned include further soil and groundwater evaluation, a Site inspection and storm water testing.

The Site History Study - Kaiser Cement Company, Parametrix, January, 1985 for the Port of Seattle, and Final Report: Kaiser Property Environmental Audit, Parametrix, May, 1985 for the Port of Seattle. This report identified Reichhold Chemical as a lessee from 1947 to 1961 manufacturing phenol formaldehyde resins and pentachlorophenol with an impoundment in the northeast portion of the property.

The *Phase II Site Assessment*, August 1990, prepared by Parametrix for Lone Star Northwest, found concentrations of pentachlorophenol in groundwater exceeding the Model Toxics Control Act (MTCA) cleanup level and levels of TPH, arsenic and silver exceeded the Maximum Contaminant Levels listed in the Federal Drinking Water Standards and the cleanup levels for general soil under MTCA. Barium, chromium and mercury were detected in soil samples and acetone, chloroform, 2-chlorophenol, 2,4-dichlorophenenol, naphthalene, 2,4,6-tricholorophenol, cadmium, copper, lead and zinc were detected in groundwater.

The Remedial Investigation Report Lone Star/Reichhold Site, prepared by Remediation Technologies May 1996, documented detections of TPH, 2-chlorophenol, 2,4-dichlorophenol, 2,4,6-trichlorophenol, 2,4,5-trichlorophenol, pentachlorophenol 2,3,5,6-tetrachlorophenol, 2,3,4,6-tetrachlorophenol, arsenic and silver in soil while formaldehyde, pentachlorophenol, 2,3,4,6-tetrachlorophenol and arsenic were detected in groundwater.

The proposed *RI/FS for Independent Cleanup Reichhold/Lone Star Site*, by Hart Crowser, Inc. for Lone Star, Inc., August 1995, reported arsenic, silver, pentachlorophenol and 2,4,6-trichlorophenol and pentachlorophenol detections above MTCA surface water cleanup levels and, additionally, 2,4-dichlorophenol and naphthalene were detected. Seeps measured arsenic in excess of current water quality criteria in two out of three locations.

The Data Report: Survey and Sampling of Lower Duwamish Waterway Seeps, by Windward 2004 for the Lower Duwamish Waterway Group, documented concentrations exceeding State Water Quality Criteria (WAC-173-201A) for arsenic. Cadmium, lead, mercury, silver, and zinc were detected.

The Phase 1 and Draft Phase 2 Sediment Remedial Investigation Report, by Windward Environmental, LLC for the Lower Duwamish Waterway Group, July 2003 and November 2007, documented detections of arsenic, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, silver, vanadium, zinc, dibutyltin, tributyltin, polychlorinated bi-phenols, DDTs, fluoranthene, benzo(g,h,i)perylene, benzo(a)anthracene, benzo(a)pyrene, total HPAH, indeno(1,2,3-cde)pyrene, chrysene, phenanthrene, bis(2-ethylhexyl)phthalate, and PCP in sediments within the property

boundary, and copper and BEHP additionally, within the sediments immediately downstream of the Site.

A report prepared by Integral Consulting, Inc. for the City of Seattle in May 2008 documented concentrations of dioxins, furans, and 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) toxic equivalent concentrations (TEQ) in the LDW Surface Sediments. The highest TCDD TEQ concentrations in the Lower Duwamish Waterway were detected in sediment samples within the property boundary.

- D. The U.S. Environmental Protection Agency (EPA) added the LDW to the federal Superfund List on September 13, 2001. The LDW Superfund site is undergoing a Remedial Investigation (RI) under the Joint Administrative Order on Consent of April 2000. Ecology listed the LDW on the state Confirmed and Suspected Contaminated Sites List (CSCSL) on February 26, 2002. Cleanup of sediment in the LDW has been delayed because of potential recontamination of sediment from upland sources. The Site requires additional investigation to determine whether contamination, and therefore the Site, extends from the uplands to the LDW.
- E. The Washington State Department of Ecology conducted a Site Hazard Assessment of the Glacier Northwest Site on August 21, 1991. This Site has been listed and was ranked with the Washington Ranking Method to categorize sites using data from site hazard assessments. Sites are ranked on a scale of 1 to 5. A score of 1 represents the highest level of risk and 5 the lowest. Based on the releases of hazardous substances to soil, groundwater, and sediment and suspected releases to surface water, the Site was ranked "1" on the Washington State Hazardous Sites List on August 21, 1991. This ranking is designed to estimate the potential threat to human health and/or the environment, relative to all other sites in Washington State.
- F. Glacier Northwest, Inc. and Reichhold, Inc. have conducted independent remedial actions including the installation and operation of an ozone sparging system for seven years to treat chlorophenols and pentachlorophenol as well as chemical fixation by hydrogen peroxide injection to treat arsenic. Groundwater monitoring has indicated short-term reductions of contaminants; however, concentrations remain above MTCA standards.
- G. On the basis of the facts set forth herein, Ecology has determined that a release or threatened release of hazardous substances at the Site requires remedial actions to protect human

health and the environment. This Order sets forth the measures that need to be taken to perform a RI/FS and DCAP for the Site.

# VI. ECOLOGY DETERMINATIONS

- A. Glacier Northwest, Inc. is the current owner of the property at 5900 W. Marginal Way SW, Seattle, Washington. Reichhold, Inc. was an operator of the above-referenced property from 1947 to 1958, and the lessee until 1961 under a lease from the United States Army. Glacier Northwest, Inc. and Reichhold, Inc. are "owners or operators" as defined in RCW 70.105D.020(17) of a "facility" as defined in RCW 70.105D.020(5).
- B. Based upon all factors known to Ecology, a "release" or "threatened release" of "hazardous substance(s)" as defined in RCW 70.105D.020(25) and RCW 70.105D.020(10), respectively, has occurred at the Site.
- C. Based upon credible evidence, Ecology issued PLP status letters to Reichhold, Inc. and Glacier Northwest, Inc. dated February 26, 2008, pursuant to RCW 70.105D.040, -.020(21), and WAC 173-340-500. By letter of March 24, 2008, Reichhold agreed not to contest Ecology's determination that Reichhold is a "potentially liable person" under RCW 70.105D.040. By letter of March 27, 2008, Glacier Northwest agreed not to contest Ecology's determination that Glacier Northwest is a "potentially liable person" under RCW 70.105D.040. After providing for notice and opportunity for comment, reviewing any comments submitted, and concluding that credible evidence supported a finding of potential liability, Ecology issued determinations that Reichhold, Inc. and Glacier Northwest, Inc. are PLPs under RCW 70.105D.040 and notified Reichhold, Inc. and Glacier Northwest, Inc. of this determination by letter dated May 6, 2008.
- D. Pursuant to RCW 70.105D.030(1) and 70.105.050(1), Ecology may require the PLPs to investigate or conduct other remedial actions with respect to any release or threatened release of hazardous substances, whenever it believes such action to be in the public interest. Based on the foregoing facts, Ecology believes the remedial actions required by this Order are in the public interest.
  - E. Under WAC 173-340-430, an interim action is a remedial action that is

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, that corrects a problem that may become substantially worse or cost substantially more to address if the remedial action is delayed, or that is needed to provide for completion of a site hazard assessment, remedial investigation/feasibility study or design of a cleanup action. Ecology will determine if interim actions are warranted; including those that reduce or eliminate sources of contamination into the LDW, and Ecology will give direction to the PLPs regarding the scope and schedule for such interim actions.

#### VII. WORK TO BE PERFORMED

Based on the Findings of Fact and Ecology Determinations, it is hereby ordered that the PLPs take the following remedial actions at the Site and that these actions be conducted in accordance with Chapter 173-340 WAC unless otherwise specifically provided for herein:

- A. The PLPs shall prepare the following deliverables in accordance with WAC 173-340-350 through 173-340-390, and WAC 173-204:
  - Existing Information Summary and Data Gaps Report;
  - Remedial Investigation (RI) Work Plan;
  - Remedial Investigation;
  - Feasibility Study (FS) Work Plan;
  - Feasibility Study; and
  - Draft Cleanup Action Plan (DCAP)

A scope of work for the RI/FS and DCAP is more particularly described in Exhibit B, "Scope of Work" and is incorporated by reference as an enforceable part of this Order. To plan and manage the RI/FS/DCAP, the project tasks and management strategies shall be summarized in the RI/FS/DCAP Work Plans (Work Plan) that will be developed and submitted to Ecology for review and approval in accordance with the Scope of Work.

- B. The schedule of performance and list of deliverables is described in Exhibit C, "Schedule of Deliverables" and is incorporated by reference as an enforceable part of this Order.
  - C. Should an interim remedial action be determined necessary under Section VI.E.,

the PLPs will prepare and implement Interim ActionWork Plans as specified in Exhibit B, Scope of Work.

- D. The PLPs shall submit Monthly Progress Reports. Progress reports shall be submitted to Ecology until satisfaction of this Order in accordance with Section IX of the Order. Progress Reports shall be submitted to the Ecology project coordinator by the 15<sup>th</sup> of the month following the reporting month. If this day is a weekend or holiday, deliverables will be submitted to Ecology on the next business day. At a minimum, progress reports shall contain the following information regarding the preceding reporting period:
  - A description of the actions which have been taken to comply with this Order;
  - Summaries of sampling and testing reports and other data reports received by the PLPs;
  - Summaries of deviations from approved work plans;
  - Summaries of contacts with representatives of the local community, public interest groups, press, and federal, state, or tribal governments;
  - Summaries of problems or anticipated problems in meeting the schedule or objectives set forth in the SOW and Work Plan;
  - Summaries of solutions developed and implemented or planned to address any actual or anticipated problems or delays;
  - Changes in key personnel; and
  - A description of work planned for the next reporting period.
- E. If, at any time after the first exchange of comments on drafts, Ecology determines that insufficient progress is being made in the preparation of any of the deliverables required by this Section, Ecology may complete and issue the final deliverable.

# VIII. TERMS AND CONDITIONS OF ORDER

# A. Public Notice

RCW 70.105D.030(2)(a) requires that, at a minimum, this Order be subject to concurrent public notice. Ecology shall be responsible for providing such public notice and reserves the right to modify or withdraw any provisions of this Order should public comment

disclose facts or considerations which indicate to Ecology that this Order is inadequate or improper in any respect.

#### B. Remedial Action Costs

The PLPs shall pay to Ecology costs incurred by Ecology pursuant to this Order and consistent with WAC 173-340-550(2). These costs shall include work performed by Ecology or its contractors for, or on, the Site under Chapter 70.105D RCW, including remedial actions and Order preparation, negotiation, oversight, and administration. These costs shall include work performed both prior to and subsequent to the issuance of this Order. Ecology's costs shall include costs of direct activities and support costs of direct activities as defined in WAC 173-340-550(2). The PLPs shall pay the required amount within ninety (90) days of receiving from Ecology an itemized statement of costs that includes a summary of costs incurred, an identification of involved staff, and the amount of time spent by involved staff members on the project. A general statement of work performed will be provided upon request. Itemized statements shall be prepared quarterly. Pursuant to WAC 173-340-550(4), failure to pay Ecology's costs within ninety (90) days of receipt of the itemized statement of costs will result in interest charges at the rate of twelve percent (12%) per annum, compounded monthly.

Pursuant to RCW 70.105D.055, Ecology has authority to recover unreimbursed remedial action costs by filing a lien against real property subject to the remedial actions.

# C. Implementation of Remedial Action

If Ecology determines that the PLPs have failed without good cause to implement the remedial action, in whole or in part, Ecology may, after notice to the PLPs, perform any or all portions of the remedial action that remain incomplete. If Ecology performs all or portions of the remedial action because of the PLPs failure to comply with its obligations under this Order, the PLPs shall reimburse Ecology for the costs of doing such work in accordance with Section VIII.B (Remedial Action Costs), provided that the PLPs are not obligated under this Section to reimburse Ecology for costs incurred for work inconsistent with or beyond the scope of this Order.

Except where necessary to abate an emergency situation, the PLPs shall not

Agreed Order No. DE 6000 Page 10 of 21

perform any remedial actions at the Site outside those remedial actions required by this Order, unless Ecology concurs, in writing, with such additional remedial actions.

#### D. **Designated Project Coordinators**

The project coordinator for Ecology is:

Donna Ortiz de Anaya Washington Department of Ecology Northwest Regional Office Toxics Cleanup Program 3190 160<sup>th</sup> Avenue SE Bellevue, Washington 98008 Telephone: (425) 649-7231

FAX: (425) 649-7161

Email: dort461@ecy.wa.gov

The project coordinator for the PLPs is:

Laura Tesch **ERM** 915 118<sup>th</sup> Avenue SE, Suite 130 Bellevue, WA 98005 Telephone: (425) 462-8591

FAX: (425) 455-3573

Email: Laura.Tesch@erm.com

www.erm.com

Each project coordinator shall be responsible for overseeing the implementation of this Order. Ecology's project coordinator will be Ecology's designated representative for the Site. To the maximum extent possible, communications between Ecology and the PLPs, and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order shall be directed through the project coordinators. The project coordinators may designate, in writing, working level staff contacts for all or portions of the implementation of the work to be performed required by this Order.

Any party may change its respective project coordinator. Written notification shall be given to the other party at least ten (10) calendar days prior to the change.

#### E. Performance

All geologic and hydrogeologic work performed pursuant to this Order shall be under the supervision and direction of a geologist licensed in the State of Washington or under the direct supervision of an engineer registered in the State of Washington, except as otherwise provided for by Chapters 18.220 and 18.43 RCW.

All engineering work performed pursuant to this Order shall be under the direct supervision of a professional engineer registered in the State of Washington, except as otherwise provided for by RCW 18.43.130.

All construction work performed pursuant to this Order shall be under the direct supervision of a professional engineer or a qualified technician under the direct supervision of a professional engineer. The professional engineer must be registered in the State of Washington, except as otherwise provided for by RCW 18.43.130.

Any documents submitted containing geologic, hydrologic or engineering work shall be under the seal of an appropriately licensed professional as required by Chapter 18.220 RCW or RCW 18.43.130.

The PLPs shall notify Ecology in writing of the identity of any engineer(s) and geologist(s), contractor(s) and subcontractor(s), and others to be used in carrying out the terms of this Order, in advance of their involvement at the Site.

# F. Access

Ecology or any Ecology authorized representative shall have the full authority to enter and freely move about all property at the Site that the PLPs either own, control, or have access rights to at all reasonable times for the purposes of, *inter alia*: inspecting records, operation logs, and contracts related to the work being performed pursuant to this Order; reviewing the PLPs progress in carrying out the terms of this Order; conducting such tests or collecting such samples as Ecology may deem necessary; using a camera, sound recording, or other documentary type equipment to record work done pursuant to this Order; and verifying the data submitted to Ecology by the PLPs. The PLPs shall make all reasonable efforts to secure access rights for those properties within the Site not owned or controlled by Glacier Northwest, Inc. where remedial activities or investigations will be performed pursuant to this Order. Ecology or any Ecology authorized representative shall give reasonable notice before entering any Site property owned or controlled by Glacier Northwest, Inc. unless an emergency prevents such notice. All persons who access the Site pursuant to this Section shall comply with any applicable Health and Safety Plan(s). Ecology employees and their representatives shall not be required to sign any

liability release or waiver as a condition of Site property access.

# G. Sampling, Data Submittal, and Availability

With respect to the implementation of this Order, the PLPs shall make the results of all sampling, laboratory reports, and/or test results generated by it or on its behalf, including data generated prior to the effective date of this order, available to Ecology. Pursuant to WAC 173-340-840(5), all sampling data shall be submitted to Ecology in both printed and electronic formats in accordance with Section VII. (Work to be Performed), Ecology's Toxics Cleanup Program Policy 840 (Data Submittal Requirements), and/or any subsequent procedures specified by Ecology for data submittal.

If requested by Ecology, the PLPs shall allow Ecology and/or its authorized representative to take split or duplicate samples of any samples collected by the PLPs pursuant to implementation of this Order. The PLPs shall notify Ecology fourteen (14) days in advance of any sample collection or work activity at the Site. Ecology shall, upon request, allow the PLPs and/or their authorized representatives to take split or duplicate samples of any samples collected by Ecology pursuant to the implementation of this Order, provided that doing so does not interfere with Ecology's sampling. Without limitation on Ecology's rights under Section VIII.F (Access), Ecology shall notify the PLPs fourteen (14) days prior to any sample collection activity unless an emergency prevents such notice.

In accordance with WAC 173-340-830(2)(a), all hazardous substance analyses shall be conducted by a laboratory accredited under Chapter 173-50 WAC for the specific analyses to be conducted, unless otherwise approved by Ecology.

# H. Public Participation

A Public Participation Plan is required for this Site. Ecology shall review any existing Public Participation Plan to determine its continued appropriateness and whether it requires amendment, or if no plan exists, Ecology shall develop a Public Participation Plan alone or in conjunction with the PLPs.

Ecology shall maintain the responsibility for public participation at the Site. However, the PLPs shall cooperate with Ecology, and shall:

- 1. If agreed to by Ecology, develop appropriate mailing lists and prepare drafts of public notices and fact sheets at important stages of the remedial action, such as the submission of work plans, remedial investigation/feasibility study reports, cleanup action plans, and engineering design reports. As appropriate, Ecology will edit, finalize, and distribute such fact sheets, and prepare and distribute public notices of Ecology's presentations and meetings.
- 2. Notify Ecology's project coordinator prior to the preparation of all press releases and fact sheets, and before major meetings with the interested public and local governments. Likewise, Ecology shall notify the PLPs prior to the issuance of all press releases and fact sheets, and before major meetings with the interested public and local governments. For all press releases, fact sheets, meetings, and other outreach efforts by the PLPs that do not receive prior Ecology approval, the PLPs shall clearly indicate to their audience that the press release, fact sheet, meeting, or other outreach effort was not sponsored or endorsed by Ecology.
- 3. When requested by Ecology, participate in public presentations on the progress of the remedial action at the Site. Participation may be through attendance at public meetings to assist in answering questions or as a presenter.
- 4. When requested by Ecology, arrange and/or continue information repositories to be located at the following locations:
  - a. South Park Branch of Seattle Public Library 8604 Eighth Ave. S. at Cloverdale St. Seattle, WA 98108 Telephone: (206) 615-1688
  - Ecology's Northwest Regional Office-Central Files 3190 160<sup>th</sup> Avenue SE Bellevue, WA 98008 Telephone: (425) 649-7190

At a minimum, copies of all public notices, fact sheets, and press releases; all quality assured monitoring data; remedial action plans and reports, supplemental remedial planning documents, and all other similar documents relating to performance of the remedial action required by this Order shall be promptly placed in these repositories.

#### I. Retention of Records

During the pendency of this Order, and for ten (10) years from the date of completion of

work performed pursuant to this Order, the PLPs shall preserve all records, reports, documents, and underlying data in its possession relevant to the implementation of this Order and shall insert a similar record retention requirement into all contracts with project contractors and subcontractors. Upon request of Ecology, the PLPs shall make all records available to Ecology and allow access for review within a reasonable time.

# J. Resolution of Disputes

- 1. In the event a dispute arises as to an approval, disapproval, proposed change, or other decision or action by Ecology's project coordinator, or an itemized billing statement under Section VIII.B (Remedial Action Costs), the Parties shall utilize the dispute resolution procedure set forth below.
  - a. Upon receipt of Ecology's project coordinator's written decision or the itemized billing statement, the PLPs have fourteen (14) days within which to notify Ecology's project coordinator in writing of its objection to the decision or itemized statement.
    - The PLPs shall include in the written objection sufficient detail to allow Ecology to evaluate the merits of the dispute.
    - ii. Such detail shall include the specific Ecology determination or direction or itemized statement in dispute and shall include specific argument(s) documenting the basis for invoking the dispute resolution procedure.
    - iii. Clarification of Ecology directions or determinations shall not be handled through the dispute resolution procedure. The Ecology Project Coordinator will make such clarifications in a manner and time they deem appropriate to expedite to the maximum extent practicable the work performed under this order.
  - b. The Parties' project coordinators shall then confer in an effort to resolve the dispute. If the project coordinators cannot resolve the dispute within fourteen (14) days, Ecology's project coordinator shall issue a written decision.
    - c. The PLPs may then request regional management review of the decision.

This request shall be submitted in writing to the Northwest Region Toxics Cleanup Section Manager within seven (7) days of receipt of Ecology's project coordinator's written decision.

- d. The Section Manager shall conduct a review of the dispute and shall endeavor to issue a written decision regarding the dispute within thirty (30) days of the PLPs' request for review. The Section Manager's decision shall be Ecology's final decision on the disputed matter.
- 2. The Parties agree to only utilize the dispute resolution process in good faith and agree to expedite, to the extent possible, the dispute resolution process whenever it is used.
- Implementation of these dispute resolution procedures shall not provide a basis for delay of any activities required in this Order, unless Ecology agrees in writing to a schedule extension.

# K. Extension of Schedule

- 1. An extension of schedule shall be granted only when a request for an extension is submitted in a timely fashion, generally at least thirty (30) days prior to expiration of the deadline for which the extension is requested, and good cause exists for granting the extension. All extensions shall be requested in writing. The request shall specify:
  - a. The deadline that is sought to be extended;
  - b. The length of the extension sought;
  - c. The reason(s) for the extension; and
  - d. Any related deadline or schedule that would be affected if the extension were granted.
- 2. The burden shall be on the PLPs to demonstrate to the satisfaction of Ecology that the request for such extension has been submitted in a timely fashion and that good cause exists for granting the extension. Good cause may include, but may not be limited to:
  - a. Circumstances beyond the reasonable control and despite the due diligence of the PLPs including delays caused by unrelated third parties or Ecology, such as (but not limited to) delays by Ecology in reviewing, approving, or modifying

documents submitted by the PLPs;

- b. Acts of God, including fire, flood, blizzard, extreme temperatures, storm, or other unavoidable casualty; or
  - c. Endangerment as described in Section VIII.M (Endangerment).

However, neither increased costs of performance of the terms of this Order nor changed economic circumstances shall be considered circumstances beyond the reasonable control of the PLPs.

- 3. Ecology shall act upon any written request for extension in a timely fashion. Ecology shall give the PLPs written notification of any extensions granted pursuant to this Order. A requested extension shall not be effective until approved by Ecology. Unless the extension is a substantial change, it shall not be necessary to amend this Order pursuant to Section VIII.L (Amendment of Order) when a schedule extension is granted.
- 4. An extension shall only be granted for such period of time as Ecology determines is reasonable under the circumstances. Ecology may grant schedule extensions exceeding ninety (90) days only as a result of:
  - a. Delays in the issuance of a necessary permit which was applied for in a timely manner;
    - b. Other circumstances deemed exceptional or extraordinary by Ecology; or
    - c. Endangerment as described in Section VIII.M (Endangerment).

# L. Amendment of Order

The project coordinators may verbally agree to minor changes to the work to be performed without formally amending this Order. Minor changes will be documented in writing by Ecology within seven (7) days of verbal agreement.

Except as provided in Section VIII.N (Reservation of Rights), substantial changes to the work to be performed shall require formal amendment of this Order. This Order may only be formally amended by the written consent of both Ecology and the PLPs. The PLPs shall submit a written request for amendment to Ecology for approval. Ecology shall indicate its approval or disapproval in writing and in a timely manner after the written request for amendment is

received. If the amendment to this Order represents a substantial change, Ecology will provide public notice and opportunity to comment. Reasons for the disapproval of a proposed amendment to this Order shall be stated in writing. If Ecology does not agree to a proposed amendment, the disagreement may be addressed through the dispute resolution procedures described in Section VIII.J (Resolution of Disputes).

# M. Endangerment

In the event Ecology determines that any activity being performed at the Site is creating or has the potential to create a danger to human health or the environment on or surrounding the Site, Ecology may direct the PLPs to cease such activities for such period of time as it deems necessary to abate the danger. The PLPs shall immediately comply with such direction.

In the event the PLPs determine that any activity being performed at the Site is creating or has the potential to create a danger to human health or the environment, the PLPs may cease such activities. The PLPs shall notify Ecology's project coordinator as soon as possible, but no later than twenty-four (24) hours after making such determination or ceasing such activities. Upon Ecology's direction the PLPs shall provide Ecology with documentation of the basis for the determination or cessation of such activities. If Ecology disagrees with the PLPs cessation of activities, it may direct the PLPs to resume such activities.

If Ecology concurs with or orders a work stoppage pursuant to Section VIII.M (Endangerment), the PLPs obligations with respect to the ceased activities shall be suspended until Ecology determines the danger is abated, and the time for performance of such activities, as well as the time for any other work dependent upon such activities, shall be extended in accordance with Section VIII.K (Extension of Schedule) for such period of time as Ecology determines is reasonable under the circumstances.

Nothing in this Order shall limit the authority of Ecology, its employees, agents, or contractors to take or require appropriate action in the event of an emergency.

# N. Reservation of Rights

This Order is not a settlement under Chapter 70.105D RCW. Ecology's signature on this Order in no way constitutes a covenant not to sue or a compromise of any of Ecology's rights or

authority. Ecology will not, however, bring an action against the PLPs to recover remedial action costs paid to and received by Ecology under this Order. In addition, Ecology will not take additional enforcement actions against the PLPs regarding remedial actions required by this Order, provided the PLPs comply with this Order.

Ecology nevertheless reserves its rights under Chapter 70.105D RCW, including the right to require additional or different remedial actions at the Site should it deem such actions necessary to protect human health and the environment, and to issue orders requiring such remedial actions. Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances at the Site.

By entering into this Agreed Order, PLPs do not admit any liability for the Site. Although the PLPs are committing to performing the work required by this Order under the terms of this Order, the PLPS expressly reserve all rights available under law, including but not limited to the right to seek cost recovery or contribution against third parties, and the right to assert any defenses in the event of enforcement.

# O. Transfer of Interest in Property

No voluntary conveyance or relinquishment of title, easement, leasehold, or other interest in any portion of the Site shall be consummated by the PLPs without provision for continued implementation of all requirements of this Order and implementation of any remedial actions found to be necessary as a result of this Order.

Prior to the PLPs transfer of any interest in all or any portion of the Site, and during the effective period of this Order, the PLPs shall provide a copy of this Order to any prospective purchaser, lessee, transferee, assignee, or other successor in said interest; and, at least thirty (30) days prior to any transfer, the PLPs shall notify Ecology of said transfer. Upon transfer of any interest, the PLPs shall restrict uses and activities to those consistent with this Order and notify all transferees of the restrictions on the use of the property.

# P. Compliance with Applicable Laws

1. All actions carried out by the PLPs pursuant to this Order shall be done in

accordance with all applicable federal, state, and local requirements, including requirements to obtain necessary permits, except as provided in RCW 70.105D.090. Federal requirements that apply include the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or federal Superfund Law, and National Pollution Discharge Elimination System (NPDES). State requirements that apply include the Sediment Management Standards (WAC 173-204).

2. Pursuant to RCW 70.105D.090(1), the PLPs are exempt from the procedural requirements of Chapters 70.94, 70.95, 70.105, 77.55, 90.48, and 90.58 RCW and of any laws requiring or authorizing local government permits or approvals. However, the PLPs shall comply with the substantive requirements of such permits or approvals. At this time, no state or local permits or approvals have been identified as being applicable but procedurally exempt under this Section.

The PLPs have a continuing obligation to determine whether additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Order. In the event either Ecology or any PLP determines that additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Order, it shall promptly notify the other parties of its determination. Ecology shall determine whether Ecology or the PLPs shall be responsible to contact the appropriate state and/or local agencies. If Ecology so requires, the PLPs shall promptly consult with the appropriate state and/or local agencies and provide Ecology with written documentation from those agencies of the substantive requirements those agencies believe are applicable to the remedial action. Ecology shall make the final determination on the additional substantive requirements that must be met by the PLPs and on how the PLPs must meet those requirements. Ecology shall inform the PLPs in writing of these requirements. Once established by Ecology, the additional requirements shall be enforceable requirements of this Order. The PLPs shall not begin or continue the remedial action potentially subject to the additional requirements until Ecology makes its final determination.

3. Pursuant to RCW 70.105D.090(2), in the event Ecology determines that the

exemption from complying with the procedural requirements of the laws referenced in RCW 70.105D.090(1) would result in the loss of approval from a federal agency that is necessary for the State to administer any federal law, the exemption shall not apply and the PLPs shall comply with both the procedural and substantive requirements of the laws referenced in RCW 70.105D.090(1), including any requirements to obtain permits.

# Q. Indemnification

The PLPs agree to indemnify and save and hold the State of Washington, its employees, and agents harmless from any and all claims or causes of action for death or injuries to persons or for loss or damage to property to the extent arising from or on account of acts or omissions of the PLPs, its officers, employees, agents, or contractors in entering into and implementing this Order. However, the PLPs shall not indemnify the State of Washington nor save nor hold its employees and agents harmless from any claims or causes of action to the extent arising out of the negligent acts or omissions of the State of Washington, or the employees or agents of the State, in entering into or implementing this Order.

#### IX. SATISFACTION OF ORDER

The provisions of this Order shall be deemed satisfied upon the PLPs receipt of written notification from Ecology that the PLPs have completed the remedial activity required by this Order, as amended by any modifications, and that the PLPs have complied with all other provisions of this Agreed Order.

# X. ENFORCEMENT

Pursuant to RCW 70.105D,050, this Order may be enforced as follows:

- A. The Attorney General may bring an action to enforce this Order in a state or federal court.
- B. The Attorney General may seek, by filing an action, if necessary, to recover amounts spent by Ecology for investigative and remedial actions and orders related to the Site.
- C. In the event the PLPs refuse, without sufficient cause, to comply with any term of this Order, the PLPs will be liable for:
  - a. Up to three (3) times the amount of any costs incurred by the State of

Agreed Order No. DE 6000 Page 21 of 21

Washington as a result of its refusal to comply; and

- b. Civil penalties of up to twenty-five thousand dollars (\$25,000) per day for each day it refuses to comply.
- D. This Order is not appealable to the Washington Pollution Control Hearings Board. This Order may be reviewed only as provided under RCW 70.105D.060.

Effective date of this Order:	
GLACIER NORTHWEST, INC.	STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY
Scott Isaacson	Robert W. Warren, P. Hg., MBA
Vice President and General Counsel	Section Manager
5975 East Marginal Way South	Toxics Cleanup Program
Seattle, WA 98134	Northwest Regional Office
Telephone: (206) 764-3000	3190 160 <sup>th</sup> Avenue SE

Bellevue, WA 98008

Telephone: (425) 649-7054

REICHHOLD, INC.

Roger Willis Chief Financial Officer P. O. Box 13582 Research Triangle Park, NC 27709-3582 Telephone: (919) 990-7500

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- b. Civil penalties of up to twenty-five thousand dollars (\$25,000) per day for each day it refuses to comply.
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Effective date of this Order:
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GLACIER NORTHWEST, INC.

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY

Mark Leatham
Vice President
5075 Fast Marginal

5975 East Marginal Way South

Seattle, WA 98134

Telephone: (206) 764-3000

Robert W. Warren, P. Hg., MBA Section Manager Toxics Cleanup Program Northwest Regional Office 3190 160<sup>th</sup> Avenue SE Bellevue, WA 98008 Telephone: (425) 649-7054

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# GLACIER NORTHWEST, INC.

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY

Scott Isaacson Vice President and General Counsel 5975 East Marginal Way South Seattle, WA 98134 Telephone: (206) 764-3000 Robert W. Warren, P. Hg., MBA Section Manager Toxics Cleanup Program Northwest Regional Office 3190 160<sup>th</sup> Avenue SE Bellevue, WA 98008 Telephone: (425) 649-7054

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# DRAFT EXHIBIT B – SCOPE OF WORK (SOW)

#### **PURPOSE**

The Scope of Work (SOW) under this Agreed Order (AO) involves preparing a Remedial Investigation (RI), and Feasibility Study (FS) and a Draft Cleanup Action Plan (DCAP) to provide for the selection of a cleanup alternative. The purpose of the RI/FS and DCAP for the Glacier Northwest, Inc. 5900 West Marginal Way Southwest Site (the Site) is to provide sufficient data, analysis, and evaluations to enable Ecology to select a cleanup alternative for the Site. The Potentially Liable Persons (PLPs) shall complete a Phase II RI/FS that meets the requirements of Chapter 173-340 WAC.

The PLPs and Ecology will work cooperatively to support public participation in the scoping and implementation of the work performed under the Agreed Order in accordance with Section VIII.H of the Agreed Order. All work identified below shall be performed in accordance with the schedule in Exhibit C.

The SOW is divided into six major tasks as follows:

- Task 1. Summary of Existing Information and Data Gaps Report and RI/FS
- Project Plans (Work Plan; SAP; QAPP; HSP)
- Task 2. Remedial Investigation, as appropriate
- Task 3. Interim Action Work Plan (if required)
- Task 4. Feasibility Study
- Task 5. Draft Cleanup Action Plan (DCAP), as appropriate
- Task 6. Progress Reports

# TASK 1: SUMMARY OF EXISTING INFORMATION AND DATA GAPS REPORT AND RI/FS PROJECT PLANS

# Task 1.1 Summary of Existing Information and Data Gaps Report

Several independent investigations and remedial actions have been undertaken by Reichhold and Glacier at the Site to identify and remediate contaminated soil and groundwater. Previous characterization and remedial activities are summarized in the Remedial Activities Summary Report (RASR) (April 2008), prepared by Shaw Environmental.

The purpose of the <u>Summary of Existing Information and Identification of Data Gaps</u> (Data Gaps Report) is to prepare a list of data gaps that need to be addressed as part of the RI and to identify contaminants of concern (COCs) for the Site. The report should be

comprehensive and well organized and display information from all of the past reports with new and newly reported information. The Data Gaps Report shall clearly display gaps or areas where further investigation is necessary. The Data Gaps Report will be prepared and provide the following information:

- Compile existing information regarding site history, site operations and descriptions of hazardous substances used at the Site;
- Description of all structures (including utility and storm drains) with available drawings or maps;
- All groundwater monitoring data not previously summarized in reports should be compiled with those already submitted to Ecology;
- A description of previous independent remedial actions taken at the Site;
- An evaluation of the exposure pathways for known and suspected discharges from operations, which shall include:
  - o Direct discharges
  - o Stormwater discharges from all operations
  - o Preferential subsurface pathways
  - o Groundwater discharges, seeps and interflow
  - Soil erosion
  - Historical spills, dumping, leaks, housekeeping, and management practices
  - Underground storage tanks (USTs), underground piping, and similar structures;
- Development of a Preliminary Conceptual Site Model (CSM) that includes the characterization of contaminant sources, types, concentrations and distribution of hazardous substances, potentially contaminated media, and actual and potential exposure pathways and receptors;
- Development of data gaps; and
- Recommendations for the RI.

The PLPs shall prepare two (2) paper copies and one electronic copy each in Word (.doc) and Adobe (.pdf) formats of the Draft Data Gaps Report for submittal to Ecology for review and comment. After addressing Ecology's comments on the Draft Data Gaps Report and after Ecology approval, the PLPs shall prepare ten (10) paper copies and one electronic copy each in Word (.doc) and Adobe (.pdf) formats of the final Data Gaps Report for submittal to Ecology and the appropriate document repositories.

# Task 1.2 RI/FS Project Plans - Work Plan, SAP, QAPP, HSP

# RI/FS Work Plan

The conclusions of the Data Gaps Report will be used in developing the RI/FS Work Plan for the Site. To plan and manage the RI/FS, the project tasks shall be summarized in a RI/FS Work Plan (Work Plan) that will be developed by the PLPs and submitted to Ecology. The Work Plan may include the following:

 Description and schedule of all RI/FS tasks, subtasks and interim and final deliverables;

- Summary of results of Data Gaps Report;
- A project management plan which describes the project management strategy for implementing and reporting on RI/FS activities including an outline for the responsibility and authority of all organizations and key personnel involved in conducting the RI/FS;
- Description of general facility information, site history and conditions including all hazardous substances used at the Site, past field investigations including data collection and analysis of soils, groundwater, seeps, surface water and sediments;
- A description of existing conditions including geology and groundwater system characteristics, land use, natural resources and ecological receptors, hazardous substances sources etc., in compliance with WAC 173-340-350 and WAC 173-204-560;
- Description of the Conceptual Site Model (CSM) that includes the characterization of potential and existing contaminant sources, types, concentrations and spatial distribution of hazardous substances, potentially and contaminated media, and actual and potential exposure pathways and receptors and risk pathway analysis;
- Sampling and analysis of soil, groundwater, seeps and sediments at the Site and adjacent areas of the Duwamish Waterway;
- Sampling and analysis methods of stormwater and catch basin sediments to
  evaluate whether the stormwater system is a source of contamination from
  operations to Glacier Bay and the Duwamish Waterway and sediments;
- A description of the groundwater investigation technical approach including hydrologic investigation 72 hour tidal study to determine the tidally influenced flow characteristics, discharge behavior, and potential baseflow loading of contaminants of concern to the Lower Duwamish Waterway, as well as the groundwater quality investigation;
- A description of the soil investigation technical approach;
- A Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) in compliance with WAC 173-340-820
- A Health and Safety Plan (HSP) prepared in accordance with WAC-173-340-810;
- A draft outline of final RI/FS reports, including types of data evaluation, figures, and tables that will be included; and,
- Description of the risk evaluation to be completed for selected Site COCs as part of the RI;
- Identify likely applicable state and federal laws as required under WAC 173-340-350;
- Interim data reports and updates.
- Procedures for remedial alternatives development, screening and detailed analysis in compliance with WAC 173-340-350(8) and WAC 173-340-357;
- Procedures for selection of a preferred remedial alternative following WAC 173-340-360;

The purpose of the SAP is to describe the sample collection handling, and analysis procedures to be used in the RI sampling program, such that the information obtained

will meet the data needs identified in the Work Plan. The SAP will identify the proposed number, location and depth of soil borings, groundwater monitoring wells, soil, groundwater, stormwater, seep, catch basin and sediment samples, approximate depths, and include 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 SAP must not be implemented until approved by Ecology. The plan shall provide 14 days advanced notice to Ecology prior to sampling initiation whenever possible. During active sampling at the site, notify Ecology at least one business day in advance when sampling is cancelled or moved to a different day for changes due to weather or other circumstances. Method of notification shall be included in the SAP. Ecology may obtain split samples.

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) and Sediment Sampling and Analysis Plan Appendix (February 2008). These documents can be found at <a href="http://www.ecy.wa.gov/pubs/wac173204.pdf">http://www.ecy.wa.gov/pubs/wac173204.pdf</a> and <a href="http://www.ecy.wa.gov/biblio/0309043.html">http://www.ecy.wa.gov/biblio/0309043.html</a> respectively. Examples of completed QAPPs can be found at <a href="http://www.ecy.wa.gov/biblio/qapp.html">http://www.ecy.wa.gov/biblio/qapp.html</a>. Laboratories must meet the accreditation standards established in Chapter 173-50 WAC. Data quality objectives will reflect the criteria or threshold values used for the source control evaluation.

The Health and Safety Plan (HSP) for RI activities shall be prepared in accordance with WAC-173-340-810. The HSP should identify specific monitoring and management responsibilities and activities to ensure the protection of human health during the conduct of activities associated with the RI. Per WAC 173-340-810(2), Ecology will review and provide comment on the HSP.

Field sampling and analysis will be completed in accordance with the SAP and QAPP. Deviation(s) from the approved SAP and QAPP must be communicated to Ecology as provided for in the approved RI/FS Work Plan.

The Work Plan shall not be implemented until approved by Ecology. Once approved by Ecology, the PLPs will implement the Work Plan according to the schedule contained in Exhibit C unless schedules contained or revised in the Work Plan are approved by Ecology, in which case the revised schedules shall govern.

The PLPs shall coordinate with Ecology throughout the development of the RI/FS and DCAP and shall keep Ecology informed of changes to the Work Plan and other project plans and of issues and problems as they develop. Changes to the Work Plan will be addressed in accordance with Section VIII.L of the AO.

The PLPs shall prepare two (2) copies of the Draft RI/FS Work Plan and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for review and comment. After addressing Ecology's comments on the draft Work Plan and after Ecology approval, the PLPs shall prepare ten (10) copies of the final Work Plan and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for distribution.

# TASK 2. REMEDIAL INVESTIGATION

The PLPs shall conduct a RI that meets the requirements of WAC 173-340-350(7) and WAC 173-204-560 according to the Work Plan as approved by Ecology and the schedule contained in Exhibit C. The RI will determine the nature and extent of contamination exceeding MTCA cleanup levels, maximum contaminant levels, and other regulatory requirements. The RI must provide sufficient data and information to adequately characterize the Site for the purpose of developing cleanup action alternatives [WAC 173-340-350 (7)]. If the data collected during this investigation is insufficient to select the final remedy for the Site, an additional phase of investigation shall be conducted to supplement existing information.

# The RI Report will include:

- Presentation of data collected during the RI;
- An update to the CSM that includes the characterization of potential and existing contaminant sources, types, concentrations and distribution of hazardous substances, potentially contaminated media, and actual and potential exposure pathways and receptors;
- An update to the description of potential contaminant migration pathways;
- Risk evaluation for selected Site COCs; and,
- Recommendations for COCs and pathways to be evaluated in the FS.

The PLPs shall provide submittals and updates of validated data and all field data to Ecology as new Site data and information becomes available. Reporting shall be via the progress reports. Laboratory analysis data shall also be provided in electronic format as it becomes available and has been validated.

The PLPs or their contractors shall submit all new sampling data generated under this RI and any other data they collect for entry directly into Ecology's 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 submitted for entry into the EIM database.

The PLPs shall compile the results of the RI into a Draft RI report. The PLPs shall prepare two (2) copies of the 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 addressing Ecology's comments on the draft report, the PLPs shall prepare ten (10) copies of a Final RI report and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for distribution and public comment. Survey data for monitoring locations and lab data will be submitted in electronic format, and GIS maps of contaminant distribution shall also be provided for both the draft and final reports.

#### TASK 3. INTERIM ACTION WORK PLANS

During Site investigations, remedial actions might be identified that if taken will reduce or eliminate sources of contamination to the Lower Duwamish Waterway. Ecology will determine if the remedial actions identified should be implemented prior to completion of the RI/FS and/or DCAP. Remedial actions at the Site implemented prior to completion of the RI/FS will be considered interim actions and will be implemented in accordance with WAC 173-340-430 and Section VI.E of the Agreed Order.

When required by Ecology, or if proposed by the PLPs and approved by Ecology, the PLPs will implement interim actions at the Site. Based upon information in the 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.

If an interim action is to be performed by the PLP, the PLPs will prepare and submit for Ecology review a draft Interim Action Work Plan (IAWP) with detail commensurate with the work to be performed. The 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 (CMP);
- · Health & Safety Plan; and,
- SAP/QAPP.

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

- Soil removal;
- Groundwater remediation;
- Repair, replacement or closure of storm water piping or other structures from existing and historical operations;

- Performance and/or confirmation sampling; and,
- Construction of an interim treatment facility.

Once approved by Ecology, the PLPs will implement the interim action according to the schedule contained in the IAWP.

The PLPs shall prepare two (2) copies of the draft IAWP and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for review and comment. After addressing Ecology's comments on the draft IAWP and after Ecology approval, the PLPs shall prepare ten (10) copies of the final IAWP and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology.

#### TASK 4. FEASIBILITY STUDY

# Task 4.1 Feasibility Study

The PLPs shall use the information obtained in the RI to prepare a FS that meets the requirements of WAC 173-340-350(8) according to the approved RI/FS Work Plan and schedule (Exhibit C).

The Draft FS will evaluate remedial alternatives for Site cleanup, consistent with MTCA requirements to ensure protection of human health and the environment by eliminating, reducing, or otherwise controlling risk posed through each complete exposure pathway.

The FS will provide an 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 a preferred remedial Cleanup Action, and WAC 173-204-560(4).

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 report.

The PLPs shall prepare two (2) copies of the Draft FS report and submit them, including one electronic copy in Word (.doc) and Adobe (.pdf) formats, to Ecology for review and comment.

After addressing Ecology's comments on the preliminary draft report and after Ecology approval, the PLPs shall prepare ten (10) copies of the Draft Final FS report and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for distribution and public comment.

# Task 4.2 SEPA Checklist

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 (EIS). 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 4.3 Final FS and Responsiveness Summary

The PLPs shall support Ecology in presenting the Final RI and Draft Final FS reports and SEPA evaluations at one public meeting or hearing. 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, the PLPs shall prepare a Draft Responsiveness Summary that addresses public comments and prepare a second Draft Final FS report that addresses public comments. The PLPs shall prepare two (2) copies of the Draft Responsiveness Summary and second Draft Final FS report and submit them to Ecology for review and comment, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for distribution and public comment.

After addressing Ecology's comments, the PLPs shall prepare ten (10) copies of the Final Responsiveness Summary and Final FS report and submit them to Ecology for distribution, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats.

# TASK 5: PREPARE A DRAFT CLEANUP ACTION PLAN

Upon Ecology approval of the final RI and FS report, the PLPs shall prepare a draft Cleanup Action Plan (DCAP) in accordance with WAC 173-340-380 that provides a proposed remedial action to address the contamination present on the Site.

The PLPs will submit a DCAP for Ecology's review and approval. The 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 DCAP and submit them, including one electronic copy each in Word (.doc) and Adobe (.pdf) formats, to Ecology for review and comment.

After receiving Ecology's comments on the DCAP, if any, the PLPs shall revise the DCAP to address Ecology's comments and submit ten (10) copies including one electronic copy each in Word (.doc) and Adobe (.pdf) formats.

# TASK 6. PROGRESS REPORTS

The PLPs shall submit progress reports monthly. Progress reports shall be submitted to Ecology until satisfaction of the AO in accordance with Section IX of the AO. Progress Reports shall be submitted to the Ecology project coordinator by the 15<sup>th</sup> of the month following the reporting month. Beginning with the first full month after the Agreed Order is executed. Ecology expects monthly reports and may allow quarterly reports when there is less work. If this day is a weekend or holiday, deliverables will be submitted to Ecology on the next business day. At a minimum, progress reports shall contain the following information regarding the preceding reporting period:

- A description of the actions which have been taken to comply with the AO during the previous reporting period,
- Summaries of sampling and testing reports and other data reports received by the PLPs,
- Summaries of deviations from approved work plans,
- Summaries of contacts with representatives of the local community, public interest groups, press, and federal, state, or tribal governments,
- Summaries of problems or anticipated problems in meeting the schedule or objectives set forth in the SOW and Work Plan,
- Summaries of solutions developed and implemented or planned to address any actual or anticipated problems or delays,
- Changes in key personnel, and
- A description of work planned for the next reporting period.

# DRAFT EXHIBIT C – SCHEDULE OF DELIVERABLES

The schedule for deliverables described in Exhibit B of this AO is presented below. If at any time during the Formal RI/FS/DCAP process unanticipated conditions or changed circumstances are discovered which might result in a schedule delay, the PLPs shall bring such information to the attention of Ecology. Ecology will determine whether a schedule extension is warranted under the AO.

Any completion times that fall on a holiday or weekend will be extended to the next

working day.

RI/FS Deliverables	Completion Times
Draft Supplemental Data Gaps Report	90 calendar days following effective date of the agreed order
Final Supplemental Data Gaps Report	45 calendar days following receipt of Ecology's review comments on the draft plans
Work Plan and SAP Outline with Sampling	45 Days after completing Final
locations, parameters for each media	Supplemental Data Gaps Report
Draft Remedial Investigation / Feasibility Study Work Plan (including Quality Assurance Project Plan [QAPP], Revised Draft Sampling and Analysis Plan [SAP], and Health and Safety Plan [HSP])	90 calendar days after completing Final Supplemental Data Gaps Report
Final Remedial Investigation/Feasibility	45 calendar days following Ecology's
Study Work Plan	approval of the Draft RI/FS Work Plan
Remedial Investigation Sampling Completed	12 months following Ecology's approval of the final RI/FS Work Plan
Submit Validated Data to Ecology	60 days following sampling completed
Draft RI Report	120 days following receipt of all validated data from RI Sampling
Final RI Report	60 calendar days following receipt of Ecology's review comments on the draft report
Draft FS Report	120 days following completion of the Final RI Report-
Draft Final FS Report	60 calendar days following receipt of Ecology's review comments
2 <sup>nd</sup> Draft Final FS Report	60 calendar days following completion of the public comment period
Draft Responsiveness Summary and Final	60 calendar days following public comment
Feasibility Study	period
Final Responsiveness Summary	30 calendar days following receipt of

Exhibit C: Schedule Glacier Northwest, Inc.

	Ecology's review comments
Draft Cleanup Action Plan (DCAP)	90 calendar days following completion of
, , , , , , , , , , , , , , , , , , ,	the Final FS Report
Progress Reports	15 <sup>th</sup> of every month beginning after the
- <i>"</i>	completion of the first full month after the
	effective date of the AO