

**STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY**

IN THE MATTER OF REMEDIAL
ACTION BY:
**SHELL OIL PRODUCTS US PUGET
SOUND REFINERY**

AGREED ORDER FOR

**INTERIM ACTION – OILY WATER
SEWER (SWMU 1)**

TO: John White
Refinery General Manager
Shell Oil Products US
Puget Sound Refinery
P.O. Box 622
8505 South Texas Road
Anacortes, WA 98221

No. DE 16298

Table of Contents

I	INTRODUCTION	3
II.	JURISDICTION	4
III.	PARTIES BOUND	4
IV.	DEFINITIONS	4
V.	FINDINGS OF FACT	7
VI.	ECOLOGY DETERMINATIONS	9
VII.	WORK TO BE PERFORMED	10
VIII.	TERMS AND CONDITIONS	16
	A. Remedial Action Costs	16
	B. Designated Project Coordinators	17
	C. Performance	18
	D. Access	18
	E. Sampling, Data Submittal, and Availability	19
	F. Public Participation	19
	G. Retention of Records	20
	H. Resolution of Disputes	20
	I. Extension of Schedule	22
	J. Amendment of Order	23
	K. Endangerment	23
	L. Reservation of Rights	24
	M. Transfer of Interest in Property	25

N. Compliance with Applicable Laws..... 25

O. Financial Assurance..... 27

P. Indemnification..... 28

IX. SATISFACTION AND TERMINATION OF ORDER..... 28

X. ENFORCEMENT..... 29

EXHIBIT A..... 30

EXHIBIT B..... 31

EXHIBIT C..... 32

EXHIBIT D..... 33

EXHIBIT E..... 34

EXHIBIT F..... 36

I INTRODUCTION

The mutual objective of the State of Washington, Department of Ecology (Ecology) and Equilon Enterprises LLC d/b/a Shell Oil Products US (Shell) under this Agreed Order is to provide for remedial action at a facility where there has been a release or threatened release of hazardous substances. Ecology and Shell are entering into this Agreed Order (Order) to address soil or groundwater contamination resulting from releases from the Oily Water Sewer (OWS) at the Puget Sound Refinery. The action requires an assessment of whether or not releases of hazardous substances from the OWS have caused soil or groundwater contamination and the development and implementation of interim actions to address releases by requiring remediation of contaminated soil, where accessible, that exceed applicable MTCA cleanup standards. The action requires an assessment of whether or not groundwater was impacted by releases of hazardous substances from the OWS in both accessible and inaccessible areas and includes requirements to remediate contaminated groundwater that exceeds applicable MTCA cleanup standards. Where impacts to groundwater have occurred or inaccessible contamination will remain in place, this action also requires groundwater monitoring to ensure the contamination does not migrate. This Order is not intended to address soil or groundwater contamination that is not related to releases from the OWS. The interim action does not establish final cleanup standards.

This Order requires Shell to conduct an interim action at the Oily Water Sewer (OWS) that includes the inspection of all major trunk lines for releases or threatened releases, addressing the cause of the releases or threatened releases, and implementing interim remedial actions if necessary, consistent with the requirements of the Model Toxics Control Act (MTCA), RCW 70.105D, and its implementing regulations at WAC 173-340, in order to ensure that there is no threat to human health due to direct contact exposure and to minimize the migration of contaminants. The interim action at the OWS also includes tracking and reporting of releases and financial assurance. Ecology believes the actions required by this Order are in the public interest.

After the full implementation of this Order, Ecology will evaluate whether it is necessary to repeat the investigation, response, and reporting process during the next permit cycle.

II. JURISDICTION

This Order is issued pursuant to the authority of the Model Toxics Control Act (MTCA), RCW 70.105D.050(1). This Order also satisfies the corrective action requirements of WAC 173-303-646 through -64630.

III. PARTIES BOUND

This 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 the Order. Shell agrees to undertake all actions required by the terms and conditions of this Order. No change in ownership or corporate status shall alter Shell's responsibility under this Order. Shell 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 RCW 70.105D and WAC 173-340 shall control the meanings of the terms used in this Order.

A. Order: Refers to this Order and each of the exhibits to this Order. All exhibits are integral and enforceable parts of this Order.

B. Cleanup Action Plan (CAP): Refers to the document issued by Ecology under WAC 173-340-380, which selects final Facility-specific corrective measures and specifies cleanup standards (cleanup levels, points of compliance, and other requirements for the corrective measures).

C. Cleanup Standards: Refers to the standards promulgated under RCW 70.105D.030(2)(e) and includes: (1) hazardous substance concentrations (cleanup levels) that protect human health and the environment, (2) the location at the Facility where those cleanup levels must be attained (points of compliance), and (3) additional regulatory requirements that apply to a cleanup because of the type of action and/or the location of the Facility.

D. Corrective Action: Refers to any activities including investigations, studies, characterizations, and corrective measures, including actions taken pursuant to RCW 70.105D and WAC 173-340, undertaken in whole or in part to fulfill the requirements of WAC 173-303-64620.

E. Corrective Measure: Refers to any measure or action to control, prevent, or mitigate release(s) and/or threatened release(s) of dangerous constituents (including dangerous waste and hazardous substances) reviewed and approved by Ecology for the Facility, with final corrective measures (cleanup actions as defined by WAC 173-340) set forth in a Facility-specific CAP prepared in compliance with the requirements of WAC 173-340, including WAC 173-340-360. Corrective measures may include interim actions as defined by WAC 173-340. Interim actions will not necessarily be set forth in a Facility specific CAP.

F. Dangerous Constituent or Dangerous Waste Constituent: Refers to any constituent identified in WAC 173-303-9905 or 40 C.F.R. part 264, appendix IX; any constituent that caused a waste to be listed or designated as dangerous under the provisions of WAC 173 303; and any constituent defined as a hazardous substance under RCW 70.105D.020(13).

G. Dangerous Waste: Refers to any solid waste designated in WAC 173-303-070 through - 100 as dangerous or extremely hazardous or mixed waste. Dangerous wastes are considered hazardous substances under RCW 70.105D.020(13).

H. Dangerous Waste Management Facility: For purposes of corrective action, used interchangeably in this document with the term “Facility.”

I. Facility: Refers to the Shell Puget Sound Refinery, Anacortes; all property contiguous to the Shell Puget Sound Refinery also controlled by Shell; and all property, regardless of control, affected by release(s) or threatened release(s) of hazardous substances from the Shell Puget Sound Refinery, including dangerous wastes and dangerous constituents, at and from these areas. “Facility” also includes the definition found in RCW 70.105D.020(8). The terms “Facility” and “Site” are used interchangeably in this Order.

J. Feasibility Study (FS): Refers to the investigation and evaluation of potential corrective measures performed in accordance with the FS requirements of WAC 173-340-350 and which is undertaken in whole or in part to fulfill the corrective action requirements of WAC 173 303-64620.

K. Final Remedy: The remedial action that will be constructed/implemented for a deferred area at Facility closure to meet MTCA cleanup standards at the point of compliance.

L. Hazardous Substance: Means any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) and (6), or any dangerous or extremely dangerous waste as designated by rule under chapter 70.105 RCW; any hazardous substance as defined in RCW 70.105.010(14) or any hazardous substance as defined by rule under chapter 70.105 RCW; any substance that, on the effective date of this section, is a hazardous substance under section 101(14) of the federal cleanup law, 42 U.S.C., Sec. 9601(14); petroleum or petroleum products; and any substance or category of substances, including solid waste decomposition products, determined by the director by rule to present a threat to human health or the environment if released into the environment.

M. Oily Water Sewer(OWS): Refers to the underground piping system which convey process wastewater, stormwater (from process areas), and fire water to the refinery's wastewater treatment system. For purposes of corrective action under this Order, refers to the major trunk lines of the OWS. The major trunk lines of the OWS are shown on the map in Exhibit A. The Oily Water Sewer is also referred to as SWMU 1.

N. Parties: Refers to Ecology and Shell.

O. Potentially Liable Person (PLP): Refers to Shell.

P. Permit or Permitting Requirement: Unless otherwise specified, refers to the requirements of WAC 173-303 for applying for, obtaining, maintaining, modifying, and terminating Dangerous Waste Management Facility permits.

Q. RCRA: Refers to the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901–6992k.

R. RCRA Facility Assessment (RFA): Refers to the EPA conducted investigation of release(s) and threatened release(s) at the Dangerous Waste Management Facility and the information contained in the report RCRA Facility Assessment, EPA 1988 (RFA Report). The RFA Report is incorporated into this Order by reference as if fully set forth herein.

S. Release: Refers to any intentional or unintentional spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of dangerous waste or dangerous constituents into the environment.

It also includes the abandonment or discarding of barrels, containers, and other receptacles containing dangerous waste or dangerous constituents, and includes the definition of “release” in RCW 70.105D.020(32).

T. Remedial Investigation (RI): Refers to a facility-wide investigation and characterization performed in accordance with the requirements of WAC 173-340, which includes the substantive requirements for a RCRA facility investigation, undertaken in whole or in part to fulfill the corrective action requirements of WAC 173-303-64620.

U. Solid Waste Management Unit (SWMU): Refers to any discernible location at the Dangerous Waste Management Facility where solid wastes have been placed at any time, irrespective of whether the location was intended for the management of solid or dangerous waste. Such locations include any area at the Dangerous Waste Management Facility at which solid wastes, including spills, have been routinely and systematically released, and include regulated units as defined by WAC 173-303.

V. FINDINGS OF FACT

Ecology makes the following Findings of Fact, without any express or implied admissions of such facts by Shell.

A. The Facility is generally located on March Point two miles east of Anacortes, Washington in Skagit County and consists of approximately 550 acres, is bounded on the north by North Texas Road, on the south by South Texas Road, on the west by the Fidalgo Bay, and on the east by Padilla Bay. A diagram of the Facility is attached (Exhibit B).

B. Texaco Refining and Marketing, Inc. (Texaco) owned and operated the Puget Sound Refinery as a Dangerous Waste Management Facility on or after November 19, 1980, the date which subjects facilities to RCRA permitting requirements, including interim status requirements pursuant to RCRA, 42 U.S.C. § 6925, and implementing regulations thereunder, and including authorized state regulations promulgated in WAC 173-303.

C. In 1980, Texaco notified EPA of its dangerous waste management activities.

In the notification, Texaco identified itself as managing the following dangerous wastes: API separator sludge, slop oil emulsion solids, Dissolved Air Floatation (DAF) Float, heat exchanger bundle cleaning sludge, and miscellaneous oily wastes.

D. Pursuant to the 1980 notification, Texaco was issued identification number WAD009276197 by EPA.

E. In 1982, Texaco submitted Part A of the RCRA permit application to EPA. In the Part A application, Texaco identified itself as managing the following dangerous wastes at the East and West Land Treatment Fields: API separator sludge, slop oil emulsion solids, Dissolved Air Floatation (DAF) Float, heat exchanger bundle cleaning sludge, and miscellaneous oily wastes.

F. In 1988, EPA performed an RFA at the Dangerous Waste Management Facility. The purpose of an RFA is to identify those areas at the Dangerous Waste Management Facility where release(s) of hazardous substances, as defined in RCW 70.105D.020(13), may have occurred or may be occurring. In the RFA report, EPA concluded that there was a potential for releases to soil and groundwater from the Oily Water Sewer (SWMU 1).

G. On March 31, 1989, EPA and Ecology issued a Permit for the Land Treatment of Dangerous Waste to Texaco. The permit identified a number of SWMUs at the refinery.

H. In 1997, Shell Oil Company and Texaco combined their refining and marketing operations. The joint business, Equilon Enterprises LLC d/b/a Shell Oil Products US, owned both refineries on March Point outside of Anacortes. Texaco sold its interest to Shell Oil Company in 1998 and the Shell Puget Sound Refinery has continued to be owned and operated by Shell Oil Products US.

I. The Shell Puget Sound Refinery was included as a RCRA corrective action facility under the U.S. Environmental Protection Agency's (USEPA) RCRA Corrective Action 2020 Initiative. The refinery's Oily Water Sewer (OWS) was identified as a SWMU subject to corrective action.

J. The OWS was constructed in 1957. It consists of underground piping, drain hubs, manholes, hatches, and other access points.

K. Based on site history and previous cleanup actions, releases or threatened releases of hazardous substances from the OWS include Total Petroleum Hydrocarbons - gasoline and diesel range (TPH-G and TPH-D); Benzene, Toluene, Ethylbenzene, and Xylene (BTEX); polycyclic aromatic hydrocarbons (PAHs), and metals.

L. Hazardous substances might continue to be released from the OWS into the environment, including: surface water drainage areas; groundwater beneath and beyond the Dangerous Waste Management Facility; air; human work areas; and floral and faunal habitats.

VI. ECOLOGY DETERMINATIONS

Ecology makes the following determinations, without any express or implied admissions of such determinations (and underlying facts) by Shell.

A. Shell is a person within the meaning of RCW 70.105D.020(24).

B. Shell is the owner and operator of a Dangerous Waste Management Facility that has operated, is operating, or should have been operating under interim status or a final facility permit, subject to RCRA, 42 U.S.C. §§ 6924 and 6925, and regulations promulgated thereunder, including authorized state regulations in WAC 173-303. Shell is also an “owner or operator” as defined by RCW 70.105D.020(22) of a “facility” as defined by RCW 70.105D.020(8).

C. Certain waste and constituents found at the Facility are dangerous wastes and/or dangerous constituents as defined by WAC 173-303 and in Section IV (Definitions) of this Order.

D. These dangerous wastes and dangerous constituents are considered hazardous substances within the meaning of RCW 70.105D.020(13).

E. Based on all factors known to Ecology, a “release” or “threatened release” of “hazardous substance(s)” as defined in RCW 70.105D.020(32) and (13), respectively, has occurred at the Facility and presents a potential threat to human health and the environment.

F. Based upon credible evidence, Ecology issued a PLP status letter to Shell dated July 18, 2018, pursuant to RCW 70.105D.040, .020(26), and WAC 173-340-500.

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 a determination that Shell is a PLP under RCW 70.105D.040 and notified Shell of this determination by letter dated September 27, 2018.

G. Pursuant to RCW 70.105D.030(l) and .050(1), Ecology may require 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.

H. 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 plan. An interim action is necessary at the Site to investigate the integrity of the OWS, address the cause of any releases or threatened releases, and to provide for the remediation of any contaminated soil that exceeds applicable MTCA cleanup standards to reduce exposure pathways for waste constituents. Based on these circumstances, Ecology has determined that an interim action is warranted under WAC 173-340-430(1)(a).

VII. WORK TO BE PERFORMED

Based on the Findings of Fact and Ecology Determinations, it is hereby ordered that Shell take the following investigation, remedial, and reporting actions and that these actions be conducted in accordance with WAC 173-340 unless otherwise specifically provided for herein.

A. Investigation and Response Plan – Prepare a plan to investigate the OWS and develop a plan to respond to any releases or threatened releases from the OWS that are discovered during the investigation.

The Investigation and Response Plan shall be submitted within six (6) months of the effective date of this Order. Shell shall implement the Investigation and Response Plan upon Ecology's approval of the plan. The Investigation and Response Plan shall include:

1. A proposed schedule and map showing the segments of the OWS that will be inspected each year.
2. The procedures that will be followed to inspect the internal integrity of all major trunk lines of the OWS (as depicted on the map in Exhibit A) over a 10-year cycle.
3. The method(s) that will be used to assess the internal integrity of the major trunk lines of the OWS. The integrity assessment must include hydrostatic testing, camera, use of tracers, a combination of these methods, or an equivalent method approved by Ecology capable of assessing the integrity of the system and identifying areas where releases may have occurred or are ongoing. The method(s) used to assess sewer integrity shall be appropriate for the type of pipe and shall follow standard industry protocols and good engineering practices.
4. Where the integrity testing identifies potential leaks in the OWS, procedures for determining whether a release to the environment has occurred.
5. Implementation of measures to correct the cause of the release or threatened release.
6. Procedures for reporting any releases of hazardous substances from the OWS that are discovered in accordance with WAC 173-340-300(2), including providing written notification to Ecology within 90 days of discovery, the location and circumstances of the release, and any remedial actions planned, completed, or underway, to the extent known. Shell may refer to the work plan required in Section VII.B. in the report.
7. Procedures for determining the nature and extent of soil contamination related to releases from the OWS in accordance with WAC 173-340-350(6) and (7) and Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*, 2016, Publication No. 10-09-057 and the proposed schedule for implementing these procedures. Ecology may later approve changes to the schedule for individual releases.
8. Methods for assessing whether or not groundwater has been impacted including, but not limited to, the shallow uppermost aquifer. Groundwater quality shall be compared with the groundwater cleanup standards in WAC 173-340-720.

9. Procedures for implementation of a groundwater monitoring program when an impact to groundwater from an OWS release has been identified.

10. Procedures for determining the nature and extent of groundwater contamination from an OWS release in accordance with WAC 173-340-350(7) and Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*, 2016, Publication No. 10-09-057 and the proposed schedule for implementing these procedures. Ecology may later approve changes to the schedule for individual releases.

11. Provisions for submittal of a work plan to Ecology within 60 days of completing the site characterization and before initiating one of the presumptive interim actions referenced in Section VII.B. or within 120 days of completing the site characterization and before initiating an interim action, as provided in Section VII.B.

12. Measures to assess and prevent the risk of migration of soil and groundwater contamination in inaccessible areas.

13. Procedures for documenting inspection dates, findings, the location of a release, the cause of a release or threatened release, corrective actions or interim measures taken or planned, and areas where soil or groundwater contamination is left in place.

B. Implementing Interim Actions – Should data obtained under the Investigation and Response Plan show that a release or releases of hazardous substances above applicable MTCA cleanup standards from the OWS has occurred, Shell shall implement an Interim Action to address the release or releases to the extent areas are accessible. Exhibit C identifies model remedies developed by Ecology for sites with petroleum contaminated soils. Exhibit D identifies model remedies developed by Ecology for sites with petroleum impacts to groundwater. The model remedies identified in Exhibits C and D may be implemented as presumptive interim actions under this Order.

Shell must submit a work plan within 60 days of completing the site characterization and before initiating one of the presumptive interim actions in Exhibits C or D. The work plan for a presumptive interim action must include the results of the site characterization, procedures for remediation of contaminated soil and contaminated groundwater, the presumptive interim action Shell intends to

implement, and the schedule for implementing the presumptive interim action. If Shell follows one of the presumptive interim actions in Exhibits C or D, Ecology pre-approval of the interim action and the work plan for this action is not necessary, subject to the reservation in Section VII.E.

If Shell chooses not to follow one of the presumptive interim actions in Exhibits C or D, Shell must submit a work plan to Ecology for review and approval within 120 days of completing the site characterization and before initiating an interim action. The work plan must provide the information required by WAC 173-340-430(7), including details regarding the interim action that will be implemented for the release including site overview (preliminary conceptual site model, site description, and site characterization), sampling and analysis plan, evaluation of cleanup standards, description of interim action, proposed schedule for implementing the interim action, compliance monitoring, and description of the reporting and documentation required during the interim action.

C. Annual Progress Report – Shell shall submit an annual progress report to Ecology by April 1st of each year following implementation of the Investigation and Response Plan. The report shall include:

1. Any deviations from the Investigation and Response Plan.
2. The findings of the sewer assessment including an assessment of the general condition of the OWS system components, the location and description of any problems identified and their cause, and a description of actions taken or planned to repair or maintain system components based on the results of the testing.
3. Information on the nature and extent of releases identified including the characteristics of the release, sampling results, how soil and groundwater quality was evaluated, and information on the extent of soil and groundwater impacts.
4. Description of the corrective actions or interim measures taken or planned to remediate soil or groundwater, including the volume and disposition of contaminated soil removed, and measures taken to monitor or remediate groundwater.
5. Areas that were determined to be inaccessible and where contaminated soil or groundwater was left in place.

6. A discussion of the geology/hydrogeology in the area of any releases and how these characteristics may influence the migration of contaminants.

7. Measures to assess and prevent the risk of migration of contamination until a final remedy is implemented, including the elements of a groundwater monitoring program (number and location of wells, parameters monitored, frequency of monitoring).

8. A review of areas that were previously determined to be inaccessible to determine if they have become accessible in the last year, together with proposed timing and approach for remediation of the area(s). Shell shall submit a work plan for Ecology review and approval prior to initiating remedial action for a previously inaccessible area.

D. 10-Year Review – No later than 180 days prior to the date 10 calendar years from the effective date of this Order, Shell shall submit a report that provides information on soil and groundwater contamination related to releases from the OWS in areas that have been determined to be inaccessible. Shell must also provide substantive responses to each of the following EPA criteria in the reports to justify a remedy deferral for these areas.

1. There are safety and/or physical limitations that cannot be overcome by engineering or scheduling considerations.

2. The deferred operating area is not an operating hazardous waste unit/area.

3. Human exposures are under control and migration of contaminated groundwater is under control and will remain under control.

4. There is no ongoing release contributing to the contamination, the contamination is not being allowed to migrate outside of the operating footprint, and there is no off-site contamination from the release.

5. The extent of contamination has been delineated, a remedial action for the deferred area has been identified, and financial assurance is in place. Shell shall provide estimated costs for construction/implementation, operation, and maintenance of the identified remedial actions for the deferred areas in the 10-year report. Shell shall provide financial assurance for these areas following Ecology's approval of the estimated costs in accordance with VIII.O. (Financial Assurance) of this Order.

6. Necessary institutional controls are in place to prevent unacceptable exposures to the contamination and ensure protection of human health and the environment. Under this Order, institutional controls are measures undertaken to limit or prohibit activities that may: interfere with the integrity of an interim action; may result in exposure to hazardous substances; or may contribute to migration of contaminated groundwater. These controls include administrative controls such as training or safety precautions, fencing, maintenance of ground cover or other barriers, and dust control.

7. A deferral is only for a specified period of time and does not extend beyond the active life of the critical process or integral component that is the basis for the deferral. Ecology has determined that the specified period of time for a deferral is 10 years, at which time the deferral will be re-evaluated and extended as appropriate.

E. Final Remedy and Additional Actions – Following submission of the 10-year review report, Ecology and Shell will confer regarding whether it is necessary or otherwise appropriate to develop and implement a final cleanup action (corrective action) for all or part of the Facility, including any soil and groundwater contamination remaining in deferred areas of the Facility. Such actions may include developing a remedial investigation report, feasibility study report, and cleanup action plan for all or part of the Facility. Such actions may also include determining whether any interim actions implemented can constitute cleanup actions for all or part of the Facility if they are subsequently shown to comply with WAC 173-340-350 through 173-340-390. This Order may be formally amended by agreement of both Parties as set forth in Section VIII.J. to provide a scope of work and schedule for such actions as are agreed to by the Parties, or the Parties may, but are not required to, agree to enter into a separate order or orders for such work. Notwithstanding any other provision of this Order, Ecology retains its authority under law to require additional or different remedial actions at the Facility, including both interim actions and cleanup actions, should it determine such actions necessary to protect human health and the environment, and to issue orders requiring such remedial actions. Ecology also reserves its authority to require the submission of additional information after reviewing notifications of releases, interim action plans, annual progress reports, 10-year review reports, or any other available information. Shell reserves its rights and defenses under law.

F. Shell shall submit deliverables on the schedule provided herein and set forth in this Order and in Exhibit E. All plans or other deliverables submitted by Shell for Ecology's review and approval under this Order shall, upon Ecology's approval, become integral and enforceable parts of this Order.

H. If Ecology determines that Shell has failed to make sufficient progress or failed to implement the remedial action, in whole or in part, Ecology may, after written notice to Shell, perform any or all portions of the remedial actions required under this Order or at Ecology's discretion allow Shell an opportunity to correct. In an emergency, Ecology is not required to provide notice to Shell, or an opportunity for dispute resolution. Shell shall reimburse Ecology for the costs of doing such work in accordance with Section VIII.A. (Remedial Action Costs). Ecology reserves the right to enforce requirements of this Order under Section X. (Enforcement).

VIII. TERMS AND CONDITIONS

A. Remedial Action Costs

Shell 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 Facility under RCW 70.105D, 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).

Shell shall pay the required amount within thirty (30) 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.

In addition to other available relief, pursuant to RCW 19.16.500, Ecology may utilize a collection agency and/or, pursuant to RCW 70.105D.055, file a lien against real property subject to the remedial actions to recover unreimbursed remedial action costs.

B. Designated Project Coordinators

The project coordinator for Ecology is:

Greg Gould
Industrial Section
PO Box 47600
Olympia, WA 98504-7600
360-407-6934
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The project coordinator for Shell is:

Gary Barklind
Shell Oil Products US,
Puget Sound Refinery
P.O. Box 622
8505 South Texas Road
Anacortes, WA 98221
360-293-0868
gary.barklind@shell.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 Facility. To the maximum extent possible, communications between Ecology and Shell, 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.

C. Performance

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

All engineering work performed pursuant to this Order shall be under the direct supervision of a professional engineer registered by 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 by 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 RCW 18.43 and 18.220.

D. Access

Ecology or any Ecology authorized representative shall have access to enter and freely move about all property at the Facility that Shell either owns, controls, or has 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 Shell's 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 Shell.

Shell shall make all reasonable efforts to secure access rights for those properties within the Facility not owned or controlled by Shell where remedial activities or investigations will be performed pursuant to this Order. Ecology or any Ecology authorized representative shall give reasonable notice consistent with WAC 173-340-800(1) before entering any Facility property owned or controlled by Shell unless an emergency prevents such notice.

All persons who access the Facility 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 Facility property access.

E. Sampling, Data Submittal, and Availability

With respect to the implementation of this Order, Shell shall make the results of all sampling, laboratory reports, and/or test results generated by it or on its behalf 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 – Exhibit F), and/or any subsequent procedures specified by Ecology for data submittal. Electronic data shall be submitted to Ecology's EIM system within 60 days after receiving validated data.

If requested by Ecology, Shell shall allow Ecology and/or its authorized representative to take split or duplicate samples of any samples collected by Shell pursuant to implementation of this Order. Shell shall notify Ecology seven (7) days in advance of any sample collection related to this Order.

Ecology shall, upon request, allow Shell and/or its authorized representative 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.D. (Access), Ecology shall notify Shell 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 WAC 173-50 for the specific analyses to be conducted, unless otherwise approved by Ecology.

F. Public Participation

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

1. When requested by Ecology, participate in public presentations on the progress of the interim action at the Facility. Participation may be through attendance at public meetings to assisting in answering questions, or as a presenter.

2. When requested by Ecology, arrange for information repositories to be located at the following locations:

- a. Anacortes Public Library
1220 10th Street
Anacortes, WA 98221
- b. Ecology's Headquarters Office
Industrial Section
303 Desmond Drive SE
Lacey, WA 98503

At a minimum, copies of all public notices, fact sheets, and documents relating to public comment periods shall be promptly placed in these repositories.

G. Retention of Records

During the pendency of this Order, and for ten (10) years from the date of completion of all work performed pursuant to this Order, Shell 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, Shell shall make all records available to Ecology and allow access for review within a reasonable time.

Nothing in this Order is intended to waive any right Shell may have under applicable law to limit disclosure of documents protected by the attorney work-product privilege and/or the attorney-client privilege. If Shell withholds any requested records based on an assertion of privilege, Shell shall provide Ecology with a privilege log specifying the records withheld and the applicable privilege. No Facility-related data collected pursuant to this Order shall be considered privileged.

H. Resolution of Disputes

1. In the event that Shell elects to invoke dispute resolution Shell must utilize the procedure set forth below.

a. Upon the triggering event (e.g., receipt of Ecology's project coordinator's written decision or an itemized billing statement), Shell has fourteen (14) calendar days within which to notify Ecology's project coordinator in writing of its dispute ("Informal Dispute Notice").

b. The Parties' project coordinators shall then confer in an effort to resolve the dispute informally. The parties shall informally confer for up to fourteen (14) calendar days from receipt of the Informal Dispute Notice.

If the project coordinators cannot resolve the dispute within those 14 calendar days, then within seven (7) calendar days Ecology's project coordinator shall issue a written decision ("Informal Dispute Decision") stating: the nature of the dispute; Shell's position with regards to the dispute; Ecology's position with regard to the dispute; and the extent of resolution reached by informal discussion.

c. Shell may then request management review of the dispute. This request ("Formal Dispute Notice") must be submitted in writing to the Industrial Section Manager within seven (7) calendar days of receipt of Ecology's Informal Dispute Decision. The Formal Dispute Notice shall include a written statement of dispute setting forth: the nature of the dispute; the disputing Party's position with respect to the dispute; and the information relied upon to support its position.

d. The Industrial Section Manager shall conduct a review of the dispute and shall issue a written decision regarding the dispute ("Decision on Dispute") within thirty (30) calendar days of receipt of the Formal Dispute Notice. The Decision on Dispute 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.

3. 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.

4. In case of a dispute, failure to either proceed with the work required by this Order or timely invoke dispute resolution may result in Ecology's determination that insufficient progress is being made in preparation of a deliverable, and may result in Ecology undertaking the work under Section VII.G. (Work to be Performed) or initiating enforcement under Section X. (Enforcement).

I. Extension of Schedule

1. Shell's request for 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 Shell 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 Shell 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 Shell;
- b. Acts of God, including fire, flood, blizzard, extreme temperatures, storm, or other unavoidable casualty; or
- c. Endangerment as described in Section VIII.K. (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 Shell.

3. Ecology shall act upon any written request for extension in a timely fashion. Ecology shall give Shell 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.J. (Amendment of Order) when a schedule extension is granted.

4. At Shell's request, 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.K. (Endangerment).

J. 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.L. (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 Shell.

Ecology will provide its written consent to a formal amendment only after public notice and opportunity to comment on the formal amendment.

When requesting a change to the Order, Shell 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 is received. If Ecology determined that the change is substantial, then the Order must be formally amended. 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.H. (Resolution of Disputes).

K. Endangerment

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

In the event Shell determines that any activity being performed under this Order is creating or has the potential to create a danger to human health or the environment, Shell may cease such activities. Shell 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, Shell shall provide Ecology with documentation of the basis for the determination or cessation of such activities. If Ecology disagrees with Shell's cessation of activities, it may direct Shell to resume such activities.

If Ecology concurs with or orders a work stoppage pursuant to this section, Shell's 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.I. (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.

L. Reservation of Rights

This Order is not a settlement under RCW 70.105D. 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 Shell to recover remedial action costs paid to and received by Ecology under this Order. In addition, subject to the authorities reserved in Section VII.E, Ecology will not take additional enforcement actions against Shell regarding remedial actions required by this Order, provided Shell complies with this Order.

Ecology 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 Facility.

By entering into this Order, Shell does not admit to any liability for the Facility. Although Shell is committing to conducting the work required by this Order under the terms of this Order,

Shell expressly reserves 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 to liability in the event of enforcement.

M. Transfer of Interest in Property

No voluntary conveyance or relinquishment of title, easement, leasehold, or other interest in any portion of the Facility shall be consummated by Shell 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 Shell's transfer of any interest in all or any portion of the Facility, and during the effective period of this Order, Shell shall provide a copy of this Order to the prospective purchaser(s), lessee, transferee, assignee, or other successor in said interest; and, at least thirty (30) days prior to any transfer, Shell shall notify Ecology of said transfer. Upon transfer of any interest, Shell shall notify all transferees of the restrictions on the activities and uses of the property under this Order and incorporate any such use restrictions into the transfer documents.

N. Compliance with Applicable Laws

1. All actions carried out by Shell 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. The permits or specific federal, state, or local requirements that the agency has determined are applicable and that are known at the time of entry of this Order include the State Environmental Policy Act (SEPA). Other approvals and permits could also include a Grading Permit from Skagit County; an NPDES Construction Stormwater General Permit from Ecology; a Critical Areas Review from Skagit County; a Clean Water Act (CWA) Section 401 Water Quality Certification from Ecology;

A Hydraulic Project Approval (HPA) from the Washington State Department of Fish and Wildlife; and a CWA Section 404 Nationwide and/or Individual Wetland Permit from the U.S. Army Corps of Engineers. Shell has a continuing obligation to identify additional applicable federal, state, and local requirements which apply to actions carried out pursuant to this Order, and to comply with those requirements.

As additional federal, state, and local requirements are identified by Ecology or Shell, Ecology will document in writing if they are applicable to actions carried out pursuant to this Order, and Shell must implement those requirements.

2. Pursuant to RCW 70.105D.090(1), Shell is exempt from the procedural requirements of RCW 70.94, 70.95, 77.55, 90.48, and 90.58 and of any laws requiring or authorizing local government permits or approvals. However, Shell 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.

Shell has 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 Shell 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 party of its determination. Ecology shall determine whether Ecology or Shell shall be responsible to contact the appropriate state and/or local agencies. If Ecology so requires, Shell 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 Shell and on how Shell must meet those requirements. Ecology shall inform Shell in writing of these requirements. Once established by Ecology, the additional requirements shall be enforceable requirements of this Order. Shell 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 Shell 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.

O. Financial Assurance

1. Financial assurance for corrective action is required by WAC 173-303-64620. Ecology's Financial Assurance Officer shall determine when Shell's actions and submissions meet the requirements of WAC 173-303-64620.

2. The Ecology Financial Assurance Officer's contact information is:

Financial Assurance Officer
Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600
Phone: (360) 407-6754
Fax: (360) 407-6715

3. Shell shall maintain sufficient and adequate financial assurance mechanisms to cover all costs associated with the remedial actions identified for deferred areas at the Site as provided in Section VII.D. (10-Year Review).

a. Shell shall submit to Ecology for review and approval an estimate of the costs under this Order for the construction/implementation, operation, and maintenance of the identified remedial actions for the deferred areas at the Site, including institutional controls, compliance monitoring, and corrective measures in the 10-year Review Report. Within sixty (60) days after Ecology approves the aforementioned cost estimate, Shell shall provide proof of financial assurance sufficient to cover all such costs in a form acceptable to Ecology.

b. Shell shall adjust the financial assurance coverage and provide Ecology's project coordinator with documentation of the updated financial assurance for:

i. Inflation, annually, within thirty (30) days of the anniversary date of the entry of this Order; or if applicable, the modified anniversary date established in accordance with this section, or if applicable, ninety (90) days after the close of Shell's fiscal year if the financial test or corporate guarantee is used.

ii. Changes in cost estimates, within thirty (30) days of issuance of Ecology's approval of a modification or revision to the Investigation and Response Plan that result in increases to the cost or expected duration of remedial actions.

Any adjustments for inflation since the most recent preceding anniversary date shall be made concurrent with adjustments for changes in cost estimates. The issuance of Ecology's approval of a revised or modified Investigation and Response Plan will revise the anniversary date established under this section to become the date of issuance of such revised or modified Investigation and Response Plan.

P. Indemnification

Shell agrees to indemnify and save and hold the State of Washington, its employees, and agents harmless from any and all claims or causes of action (1) for death or injuries to persons, or (2) for loss or damage to property to the extent arising from or on account of acts or omissions of Shell, its officers, employees, agents, or contractors in entering into and implementing this Order. However, Shell 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 AND TERMINATION OF ORDER

Upon completing implementation of the approved Investigation and Response Plan, any Interim Actions required under Section VII.B., and any deferred interim remedial action for previously inaccessible areas, Shell may submit a request in writing to Ecology for a determination that this Order has been fully satisfied. The provisions of this Order shall be deemed satisfied, and the Order will terminate, upon Shell's receipt of written notification from Ecology that Shell has completed the remedial actions required by this Order, as amended by any modifications, and that Shell has complied with all other provisions of this 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 Facility.
- C. A liable party who refuses, without sufficient cause, to comply with any term of this Order will be liable for:
 - 1. Up to three (3) times the amount of any costs incurred by the State of Washington as a result of its refusal to comply; and
 - 2. 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: **November 1, 2021**

SHELL OIL PRODUCTS US
PUGET SOUND REFINERY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

 10-11-21

John White
Refinery General Manager
Shell Oil Puget Sound Refinery



James DeMay, P.E.
Industrial Section Manager
Solid Waste Management Program

EXHIBIT A

Map of Oily Water Sewer Major Trunk Lines

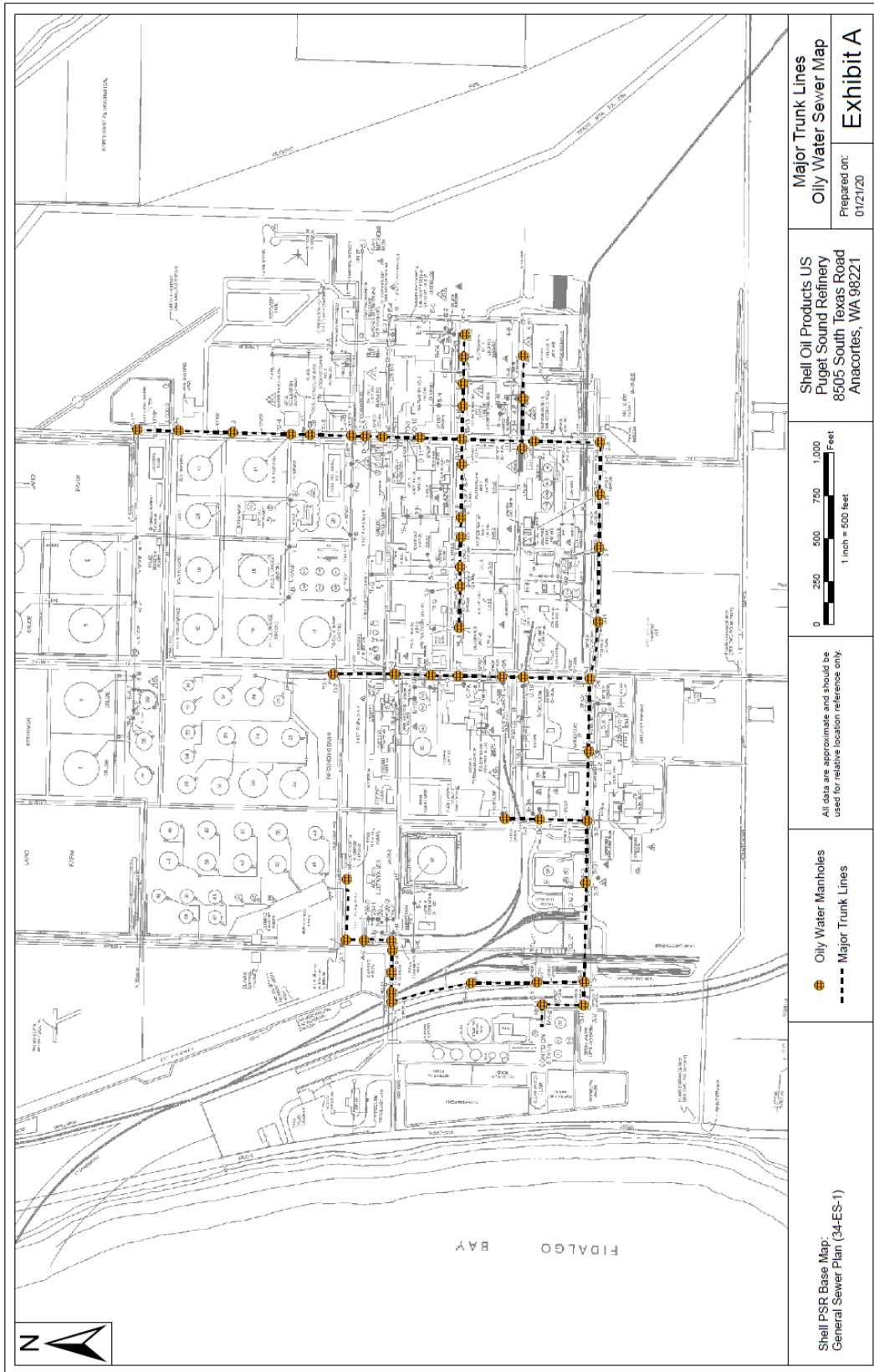


EXHIBIT B Facility Diagram

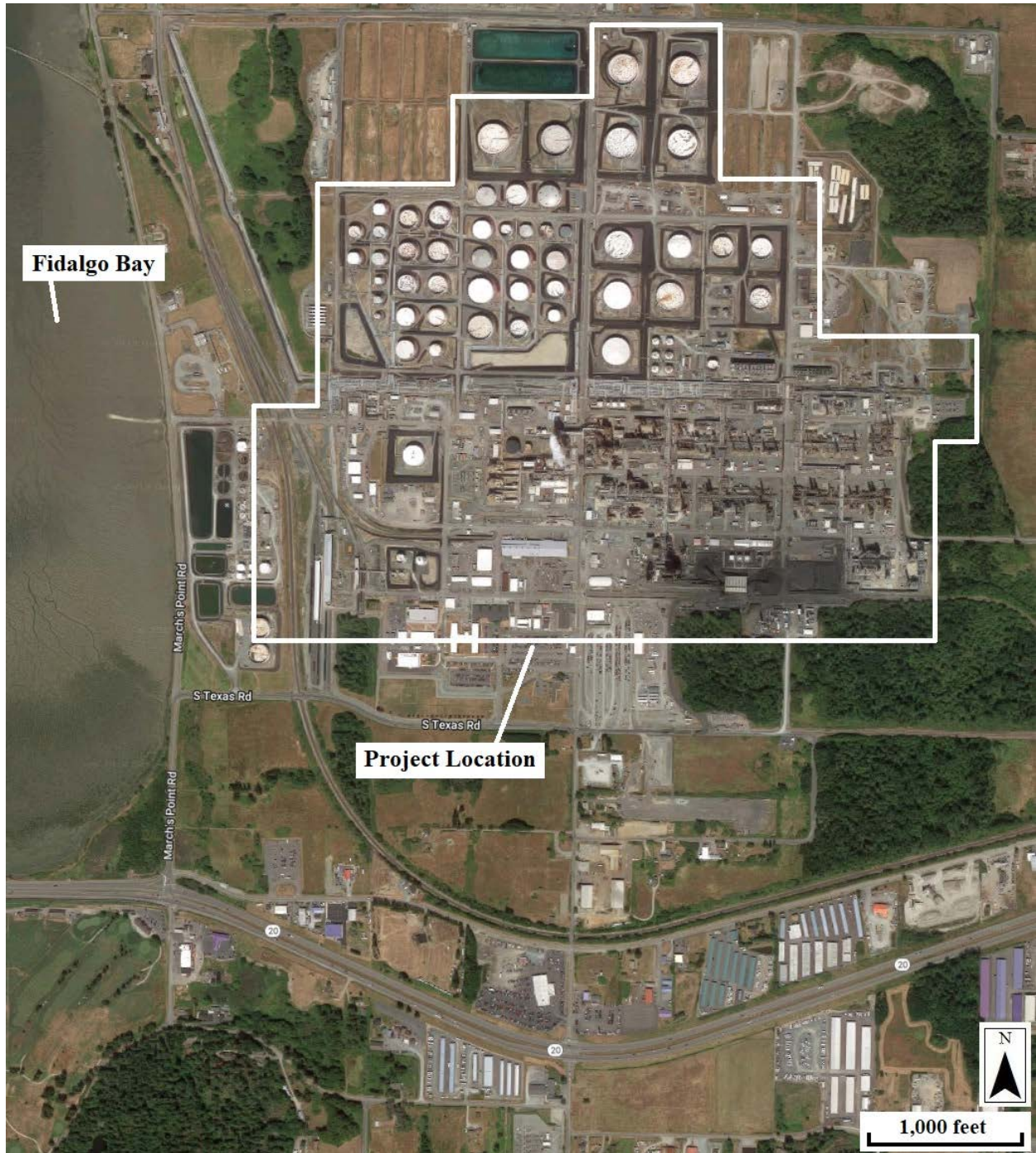


EXHIBIT C

Presumptive Interim Actions for Petroleum Contaminated Soils

Soil cleanup levels must address direct contact, the soil to groundwater pathway, terrestrial ecological receptors, and vapor intrusion. The following presumptive interim actions apply to releases where source removal, including free product, and contaminated soil will be removed to the greatest degree practicable.

The following presumptive interim actions do not apply to releases with contaminated soil below the water table or releases with petroleum contamination detected above the practical quantitation limits in groundwater (see Table 7.3 in Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*). For these situations, refer to Exhibit D – Presumptive Interim Actions for Petroleum Impacted Groundwater.

Presumptive Interim Action 1. – This presumptive interim action is for situations where complete removal of the contaminated soil will take place and there was only one contaminant in the petroleum release. In these situations, Method A industrial soil cleanup levels may be used. Following excavation of the contaminated soil, confirmation testing must be performed to document that Method A cleanup levels have been met in the remaining soil.

Presumptive Interim Action 2. – This presumptive interim action is for situations where complete removal of the contaminated soil will take place and there was more than one contaminant in the petroleum release. In these situations, Method C industrial soil cleanup levels may be used. Following excavation of the contaminated soil, confirmation testing must be performed to document that Method C cleanup levels have been met in the remaining soil.

Presumptive Interim Action 3. – This presumptive interim action is for situations where complete removal of the contaminated soil is not possible due to the presence of one or more structural impediments (e.g., buildings, utility lines, or roadways) or due to safety concerns related to working in close proximity to utility lines/product piping systems or geotechnical conditions. In these situations, contaminated soil must be removed to the greatest degree practicable. Following excavation of the contaminated soil, confirmation testing must be performed to document that Method A or Method C industrial soil cleanup levels (for one contaminant in the release or for more than one contaminant in the release) have been met in the remaining soil.

Any existing structures must remain in place and be adequately maintained so they continue to serve as a barrier to water migration through the contaminated soil, unless written approval from Ecology is granted to implement modifications.

When determining cleanup standards, use the provisions in:

- WAC 173-340-720 (groundwater cleanup standards);
- WAC 173-340-745 (soil cleanup standards for industrial properties); and
- The applicable provisions in Chapters 8 and 9 of Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*.

EXHIBIT D

Presumptive Interim Actions for Petroleum Impacts to Groundwater

The primary remedy for the each of the presumptive interim actions identified below consists of source removal, including free product and contaminated soil to the maximum extent practicable. This remedy can be combined with any of the following remedial actions:

- Soil vapor extraction;
- Groundwater removal and treatment;
- Air sparging;
- Chemical/biological treatment; or
- Natural attenuation

Soil cleanup levels must address direct contact, the soil to groundwater pathway, terrestrial ecological receptors, and vapor intrusion.

Presumptive Interim Action 1. – This presumptive interim action is for situations where following remediation, the site of the release meets Method A soil cleanup levels for industrial properties and Method A cleanup levels for groundwater. Sufficient confirmation sampling and post-remedial monitoring is required to document compliance with these cleanup levels.

Presumptive Interim Action 2. – This presumptive interim action is for situations where following remediation, the site of the release meets Method A soil cleanup levels for industrial properties. Groundwater monitoring confirms that there are no off-property exceedances but sampling data at the release site indicates that the Method A cleanup levels for groundwater are not met. Sufficient confirmation sampling is required to document compliance with the soil cleanup levels. Post-remedial monitoring is required to document that the plume is stable or receding.

Presumptive Interim Action 3. – This presumptive interim action is for situations where following remediation, the site of the release meets Method C soil cleanup levels for industrial properties and Method A cleanup levels for groundwater. Sufficient confirmation sampling and post-remedial monitoring is required to document compliance with these cleanup levels.

Presumptive Interim Action 4. – This presumptive interim action is for situations where following remediation, the site of the release meets Method C soil cleanup levels for industrial properties. Groundwater monitoring confirms that there are no off-property exceedances but sampling data at the release site indicates that the Method A cleanup levels for groundwater are not met. Sufficient confirmation sampling is required to document compliance with the soil cleanup levels. Post-remedial monitoring is required to document that the plume is stable or receding.

Presumptive Interim Action 5. – This presumptive interim action is for situations where the remedial action is not sufficient to fully comply with the Method A or Method C soil cleanup levels due to the presence of one or more structural impediments (e.g., buildings, utility lines, or roadways) or due to safety concerns related to working in close proximity to utility lines/product piping systems or geotechnical conditions. Sufficient monitoring data must be collected to confirm that the Method A groundwater cleanup levels have been met.

Any existing structures must remain in place and be adequately maintained so they continue to serve as a barrier to water migration through the contaminated soil, unless written approval from Ecology is granted to implement modifications.

Presumptive Interim Action 6. – This presumptive interim action is for situations where the remedial action is not sufficient to fully comply with the Method A or Method C soil cleanup levels due to the presence of one or more structural impediments (e.g., buildings, utility lines, or roadways) or due to safety concerns related to working in close proximity to utility lines/product piping systems or geotechnical conditions. Groundwater monitoring confirms that there are no off-property exceedances but sampling data at the release site indicates that the Method A cleanup levels for groundwater are not met. Sufficient confirmation sampling is required to document compliance with the soil cleanup levels. Post-remedial monitoring is required to document that the plume is stable or receding.

Any existing structures must remain in place and be adequately maintained so they continue to serve as a barrier to water migration through the contaminated soil, unless written approval from Ecology is granted to implement modifications.

When determining cleanup standards, use the provisions in:

- WAC 173-340-745 (soil cleanup standards for industrial properties); and
- The applicable provisions in Chapters 8 and 9 of Ecology’s *Guidance for Remediation of Petroleum Contaminated Sites*.

EXHIBIT E

Schedule of Deliverables

Due dates for select deliverables in Sections VII. and VIII. of the Agreed Order

<i>Item #</i>	<i>Deliverable</i>	<i>Due Date</i>
VII.A.	Investigation and Response Plan	Within six (6) months of effective date of Agreed Order
VII.B.	Work Plan	Within 60 days of completing site characterization and before initiating a presumptive interim action or within 120 days of completing site characterization and before initiating another interim action

<i>Item #</i>	<i>Deliverable</i>	<i>Due Date</i>
VII.C.	Annual Progress Report	By April 1 st of each year following implementation of Investigation and Response Plan
VII.D.	10-Year Report	Within 180 days prior to date ten (10) calendar years from the effective date of Agreed Order
VIII.E.	Electronic data submittal to Ecology's EIM system	Within sixty (60) days of receiving validated data
VIII.O.	Proof of financial assurance coverage	Within sixty (60) days after Ecology's final approval of Shell's cost estimate

EXHIBIT F

Ecology Toxics Cleanup Program Policy 840 – Data Submittal Requirements



<p>Toxics Cleanup</p> <p>Policy 840: Data Submittal Requirements</p>
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Established: August 1, 2005

Revised: April 12, 2016

Contact: Policy & Technical Support Unit, Headquarters

Purpose: This Policy provides guidance on the submission of environmental monitoring data generated or collected during the investigation or cleanup of contaminated sites under the Model Toxics Control Act.

References: WAC 173-340-840(5)
Chapter 173-204 WAC
Environmental Information Management System Database
Sediment Cleanup Users Manual II

Attachments: A - Model Grant and Permit Condition

Disclaimer: This Policy is intended solely for the guidance of Ecology staff. It is not intended, and cannot be relied on, to create rights, substantive or procedural, enforceable by any party in litigation with the state of Washington. Ecology may act at variance with this Policy depending on site-specific circumstances, or modify or withdraw this Policy at any time.

Approved by:

James J. Pendowski, Program Manager
Toxics Cleanup Program

Accommodation Requests: To request ADA accommodation, including materials in a format for the visually impaired, call Ecology’s Toxics Cleanup Program at 360-407-7170. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

Purpose and Applicability

The investigation and cleanup of contaminated sites generate a large volume of environmental monitoring data that need to be properly managed to facilitate regulatory decisions. The data also need to be accessible by Ecology staff, site owners, consultants, and the general public.

This Policy describes the requirements for submitting environmental monitoring data generated or collected during the investigation and cleanup of contaminated sites under Chapter 70.105D RCW, Model Toxics Control Act (MTCA).

This Policy applies to Ecology staff and any person who investigates or cleans up contaminated sites and submits related environmental sampling data to Ecology, including potentially liable persons, Voluntary Cleanup Program (VCP) customers, prospective purchasers, government agencies, and Ecology contractors.

- 1. Unless otherwise specified by Ecology, all environmental monitoring data generated during contaminated site investigations and cleanups are required to be submitted to Ecology in both written format and electronically through EIM.**
-

Environmental monitoring data include biological, chemical, physical, and radiological data generated during site investigations and cleanups under the Model Toxics Control Act Cleanup Regulation (Chapter 173-340 WAC) and the Sediment Management Standards (Chapter 173-204 WAC).

The Environmental Information Management System (EIM) is a searchable database that contains data collected by Ecology (or by environmental contractors on behalf of Ecology), and by Ecology grant recipients, local governments, the regulated community, and volunteers.

Under this Policy, data are considered to be “environmental monitoring data” if generated or collected during:

- a. Site investigations and cleanups conducted under an order, agreed order or consent decree, permit, grant, loan, contract, interagency agreement, memorandum of understanding; or
- b. An independent remedial action.

Under this Policy, data are not considered to be environmental monitoring data if generated or collected for the following studies. This means that entering data into EIM, while encouraged, is optional for:

- a. Non site-specific studies;
- b. Site hazard assessments that result in no further action; and
- c. All initial site investigations.

2. Orders, agreed orders, consent decrees, or permits must include a condition that site-specific environmental sampling data be submitted in compliance with this Policy.

For those reports prepared and submitted for review under an order, agreed order, consent decree, or permit, the environmental sampling data must be entered into EIM at the time of report submittal. If reports for such work do not include documentation that data was submitted in compliance with this Policy, the reports shall be deemed incomplete and a notice will be provided to the submitter.

Generally, Ecology should not review such reports until that documentation is provided. The assistant attorney general assigned to the site should be consulted for an appropriate response when Ecology's review is delayed due to failure of data entry into EIM.

3. Site-specific environmental sampling data must be entered into EIM before Ecology will review independent remedial action reports under the Voluntary Cleanup Program.

For independent remedial action reports prepared and submitted under Ecology's Voluntary Cleanup Program (VCP), environmental sampling data must be entered into EIM at the time any report is submitted requesting an opinion on the sufficiency of the action under the VCP.

However, Ecology may establish an alternate deadline for entering data into EIM if this Policy creates undue hardship on the VCP customer and Ecology does not need the data in EIM to begin the review.¹ But in no case will Ecology issue a No Further Action (NFA) opinion letter under the VCP—either for the whole site or a property located within the site—until the data has been entered into EIM.

If sampling data has not been entered into EIM, Ecology may still review the report for the limited purpose of determining whether it contains sufficient information to provide an opinion. If the report is incomplete, Ecology may also respond to the VCP customer's request for an opinion by issuing an administrative letter rejecting the report and requesting additional information.

¹ For example, when a site has multiple groundwater sampling events over time, it may be more efficient to enter the data into EIM at one time after monitoring is completed, rather than for each monitoring event. Another example would be where a VCP consultant is using EIM for the first time and needs additional time to learn how to use the system.

4. Grants, contracts, interagency agreements or memoranda of understanding issued after the effective date of this Policy must include a condition that site- specific data be submitted in compliance with this Policy.

Reports on such work will not be accepted as complete until the data have been submitted in compliance with this Policy. If a payment or transfer of funds is involved in the transaction, the relevant payment or transfer shall be withheld until this requirement has been met. Attachment A contains example language to include in these documents.

5. Data generated during upland investigations and cleanups must be submitted electronically using Ecology's EIM.

The Environmental Information Management System is Ecology's main database for environmental monitoring data. Proper submission of data through this system meets the requirement of submitting such data in an electronic format.

Additional information about EIM, including instructions for data submittal, can be found on Ecology's EIM website at <http://www.ecy.wa.gov/eim/>. The Toxic Cleanup Program's (TCP) EIM Coordinator can also provide technical assistance to site managers and consultants who use EIM.

6. Data generated during sediment investigations and cleanups must be submitted electronically using Ecology's EIM.

Effective March 1, 2008, EIM is Ecology's data management system for sediment-related data. Proper submission of data through EIM meets the requirement of submitting such data in an electronic format. Electronic data must be submitted to Ecology simultaneously with the accompanying report.

For additional information on sediment sampling and analysis plan requirements, see Ecology's *Sediment Cleanup Users Manual (SCUM II)* Publication No. 12-09-057, available at: <https://fortress.wa.gov/ecy/publications/summarypages/1209057.html>

The Sediment Data Coordinator in TCP's Aquatic Land Cleanup Unit (ALCU) can also provide technical assistance with EIM.

7. Data submitted electronically using EIM must be checked by the Toxics Cleanup Program's EIM Coordinator before the data will be officially loaded into EIM.

Normally, TCP's EIM Coordinator will receive a notice that data have been submitted through EIM. Upon receipt of the notice, the EIM Coordinator should notify the Cleanup Project Manager. The EIM Coordinator then reviews the submittal for quality control and officially loads the data into the system.

Attachment A

Model Grant and Permit Condition

The following condition is to be inserted in grants, loans, contracts, interagency agreements, and memoranda of understandings where site-specific environmental monitoring data is expected to be generated:

All sampling data shall be submitted to Ecology in both printed and electronic formats in accordance with WAC 173-340-840(5) and Ecology Toxics Cleanup Program Policy 840: Data Submittal Requirements.

Electronic submittal of data is not required for site hazard assessments that result in no further action and initial site investigations. (FOR GRANTS, AND LOANS ADD: Failure to properly submit sampling data will result in Ecology withholding payment and could jeopardize future funding.)