ORDINANCE O-4767

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF KIRKLAND, WASHINGTON GRANTING OLYMPIC PIPE LINE COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY, ITS SUCCESSORS AND ASSIGNS, A NONEXCLUSIVE FRANCHISE TO CONSTRUCT, OPERATE, MAINTAIN, REMOVE, REPLACE, AND REPAIR EXISTING PIPELINE FACILITIES, TOGETHER WITH EQUIPMENT AND APPURTENANCES THERETO, FOR THE TRANSPORTATION OF PETROLEUM PRODUCTS WITHIN AND THROUGH THE FRANCHISE AREA OF THE CITY OF KIRKLAND.

WHEREAS, Olympic Pipe Line Company (hereinafter "Company") entered into a nonexclusive 10-year Franchise Agreement with the City of Kirkland (hereinafter "City") effective June 1, 2011 via Ordinance O-4298, to operate and maintain an existing petroleum pipeline through certain public rights of way and property within the City; and

WHEREAS, the Company has applied for a 10-year extension of this nonexclusive franchise; and

WHEREAS, the City Council finds that it is in the public interest to renew its franchise with Olympic Pipe Line for another 10-year period with an effective date of June 1, 2021; and

WHEREAS, RCW 35A.47.040 authorizes the City to grant nonexclusive franchises for the use of City rights-of-way, streets, public ways, or other ways.

NOW, THEREFORE, the City Council of the City of Kirkland do ordain as follows:

Section 1. Definitions. For the purposes of this Franchise and all exhibits attached hereto, the following terms, phrases, words and their derivations shall have the meaning given herein.

When not inconsistent with the context, words used in the present tense include the future, words in the plural include the singular, and words in the singular include the plural. Words not defined shall be given their common and ordinary meaning.

1.1 Construct or Construction shall mean removing, replacing, and repairing existing pipeline(s) and/or Facilities and may include, but is not limited to, digging and/or excavating for the purposes of removing, replacing, and repairing existing pipeline(s) and/or Facilities.

1.2 Effective Date shall mean June 1, 2021.

1.3 Environmental Laws shall include the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq.; the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 et seq.; the Hazardous Materials Transportation Act, 49 U.S.C. § 1801 et seq.; the Federal Water Pollution Control Act, 33 U.S.C. § 1257 et seq.; the Clean Air Act, 42 U.S.C. § 7401 et seq.; the Toxic Substances Control Act, 15 U.S.C. § 2601 et seq.; the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. § 136 et seq.; the Occupational Safety and Health Act, 29 U.S.C. § 651 et seq.; the Washington Hazardous Waste Management Act, Chapter 70.105 RCW; and the Washington Model Toxics Control Act, Chapter 70.105D RCW all as amended from time to time; and any other valid and applicable federal, state, or local statute, code, or ordinance or valid and applicable federal or state administrative rule, regulation, ordinance, order, decree, or other valid and applicable governmental authority as now or at any time hereafter in effect pertaining to the protection of human health or the environment.

1.4 Facilities shall mean the Company's pipeline system, lines, valves, mains, and appurtenances used to transport or distribute the Company's Petroleum Product(s), existing as of the effective date of this Franchise or as those components may be modified or improved consistent with the terms of this Franchise.

1.5 Franchise shall mean this Franchise and any amendments, exhibits, or appendices to this Franchise.

1.6 Franchise Area means the Right-of-Way within the jurisdictional boundaries of the City restricted to the geographical area depicted in Exhibit A to this Ordinance, including any areas annexed by the City (but excluding properties upon which the Company holds a private easement, license, or other property interest for its Facilities) during the term of this Franchise, in which case the annexed area shall become subject to the terms of this Franchise.

1.7 Hazardous Substance means any hazardous, toxic, or dangerous substance, material, waste, pollutant, or contaminant, including all substances designated under the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq.; the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 et seq.; the Hazardous Materials Transportation Act, 49 U.S.C. § 1801 et seq.; the Federal Water Pollution Control Act, 33 U.S.C. § 1257 et seq.; the Clean Air Act, 42 U.S.C. § 7401 et seq.; the Toxic Substances Control Act, 15 U.S.C. § 2601 et seq.; the Federal Insecticide, Fungicide, Rodenticide Act, 7 U.S.C. § 136 et seq.; the Washington Hazardous

Waste management Act, Chapter 70.105 RCW; and the Washington Model Toxics Control Act, Chapter 70.105D, RCW; all as amended from time to time; and any other federal, state, or local statute, code or ordinance or lawful rule, regulation, order, decree, or other governmental authority as now or at any time hereafter in effect. The term shall specifically include Petroleum and Petroleum Products. The term shall also be interpreted to include any substance which, after release into the environment, will or may reasonably be anticipated to cause death, disease, behavior abnormalities, cancer, or genetic abnormalities.

1.8 Improve or Improvements shall mean modifications to, but not a change in the nature of, the existing pipeline(s) or Facilities as required and necessary for safe operation.

1.9 Maintenance or Maintain shall mean examining, testing, inspecting, repairing, and replacing the existing pipeline and/or facilities or any part thereof as required and necessary for safe operation.

1.10 Petroleum or Petroleum Products shall include, but is not limited to, motor gasoline, diesel fuel, and aviation jet fuel, and shall exclude natural gas.

1.11 Pipeline Corridor shall mean the pipeline pathway through the jurisdictional boundaries of the City in which the pipeline(s) and or Facilities of the Company are located, including any Rights-of-Way, , Public Ways, Other Ways, and/or easement over and through private property.

1.12 Public Ways shall mean any highway, street, alley, utility easement (unless their use is otherwise restricted for other users), or other public Rights-of-way for motor vehicle or other use under the jurisdiction and control of the City.

1.13 Operate or Operations shall mean the use of the Company's pipeline(s) and/or Facilities for the transportation, distribution and handling of Petroleum or Petroleum Products within and through the Franchise Area.

1.14 Other Ways means the highways, streets, alleys, utility easements or other Rights-of-Way within the City as encompassed by RCW 47.24.020 and 47.52.090.

1.15 Rights-of-Way means the surface and the space above and below streets, roadways, highways, avenues, courts, lanes, alleys, sidewalks, easements, Rights-of-Way and similar property, Public Ways or Other Ways and areas located within the Franchise Area.

Section 2. Purpose. The City grants this nonexclusive Franchise to Company to operate and maintain its existing Facilities as a liquid petroleum product delivery system for Company's business. This Franchise is granted subject to the police powers, land use authority and franchise authority of the City and is conditioned upon the terms and conditions contained herein and Company's compliance with any applicable federal, state or local regulatory programs that currently exist or may hereafter be enacted by any federal, state or local regulatory agencies with jurisdiction over the Company. The purpose of this Franchise is to delineate the conditions relating to Company's use of the Franchise Area and to create a foundation for the parties to work cooperatively in the public's best interests after this Ordinance becomes effective. By granting this Franchise, the City is not assuming any risks or liabilities therefrom, which shall be solely and separately borne by Company.

Furthermore, this Franchise is granted upon the express condition that it shall not in any manner prevent the City from granting other or further franchises in, under, on, across, over, through, along or below any Rights-of-Ways, Public Ways, and Other Ways. This and other franchises shall, in no way, prevent or prohibit the City from using any of its Rights-of-Ways, Public Ways, and Other Ways or affect its jurisdiction over them or any part of them, and the City hereby retains full power to make all changes, relocations, repairs, maintenance, establishments, improvements, dedications or vacations of same as the City may seem fit, including the dedication, establishment, maintenance and improvement of all new Rights-of-Way, streets, avenues, thoroughfares, and Public Ways, or Other Ways.

Section 3. Rights Conveyed.

3.1 Pursuant to the laws of the State of Washington including, but not limited to, RCW 35A.47.040 and RCW 80.32.010, the City hereby grants, under the terms and conditions contained herein, to Company, a corporation organized and existing under and by virtue of the laws of the State of Delaware, and which is authorized to transact business within the State of Washington, and its successors and assigns (subject to and as provided for in Section 5), the right, privilege, authority and Franchise to Construct, Operate, Maintain and Improve its Facilities, together with all equipment and appurtenances as may be necessary thereto, for the transportation and handling of any Petroleum or Petroleum Products, within the existing Pipeline Corridor passing through the Franchise Area, such lands being more particularly described in Attachment 1 which is attached hereto and expressly incorporated herein by this reference.

3.2 This Franchise is only intended to convey a limited right and interest as to that Right-of-Way in which the City has an actual interest. It is not a warranty of title or interest in the City's Right-of Way.

None of the rights granted herein shall affect the City's jurisdiction over its property, streets, or Rights-of-Way.

3.3 The limited rights and privileges granted under this Franchise shall not convey any right to Company to install any new pipeline(s) and/ or Facilities without the express written consent of the City.

3.4 The Company acknowledges and warrants by acceptance of the rights and privileges granted herein, that it has carefully read and fully comprehends the terms and conditions of this Franchise and is willing to and does accept all reasonable risks of the meaning of the provisions, terms and conditions herein. The Company further acknowledges and states that it has fully studied and considered the requirements and provisions of this Franchise, and believes that the same are consistent with all local, state and federal laws and regulations currently in effect, including the Federal Pipeline Safety Act (49 U.S.C. 60101 *et seq.*) and the Pipeline Safety Code of Federal Regulations (Title 49 CFR Part 186-199). If in the future the Company becomes aware that a provision of this franchise may be unlawful or invalid, it will not use such potential invalidity to unilaterally ignore or avoid such provision. Instead, the Company will promptly advise the City of the potential invalidity or illegality, and the parties will meet within thirty (30) days and endeavor jointly to cure the invalidity or illegality.

Section 4. Term.

4.1 Each of the provisions of this Franchise shall become effective upon Company's acceptance of the terms and conditions of this Franchise and shall remain in effect for ten (10) years thereafter. At any time not more than three (3) years nor less than one-hundred-eighty (180) days before the expiration of the Franchise term, the Company may make a written request and the City may consider, at its sole discretion, renewing this Franchise for an additional ten (10) year renewal period unless either party expresses its intention in writing to terminate this Franchise at the conclusion of the ten (10) year term.

4.2 The effective date of this Franchise shall be June 1, 2021.

4.3 If the parties fail to formally renew or terminate the Franchise prior to the expiration of its term or any extension thereof, the Franchise shall be extended on a year-to-year basis (or such term as the parties may mutually agree) until a renewed Franchise is executed.

Section 5. Assignment and Transfer of Franchise.

5.1 This Franchise shall not be sold, assigned, transferred, leased or disposed of, either in whole or in part, nor shall title thereto, either legal or equitable, pass to or vest in any person or entity without

the prior written consent of the City' s Council, acting by ordinance or resolution, which consent shall not be unreasonably withheld. Such consent shall not be deemed to waive any rights of the City to subsequently enforce non-compliance issues relating to this Franchise that existed at or before the time of the City's consent.

5.2 If such consent is given by the City then the Company shall, within thirty (30) days, file with the City a written instrument evidencing such sale, assignment or transfer of ownership, whereby the assignee(s) or transferee(s) shall agree to accept and be bound by all of the provisions of this Franchise.

Section 6. Compliance with Laws and Standards. Company shall, in carrying out any authorized activities under the privileges granted herein, comply with all valid and applicable local, state and federal laws, including, but not limited to, Title 49 Code of Federal Regulations, Part 195 Transportation of Hazardous Liquids, environmental laws, and any laws or regulations that may be subsequently enacted by any governmental entity with jurisdiction over Company and/or the Facilities.

Section 7. Construction on or within Rights-of Way, Public Properties, Public Ways, and Other Ways.

7.1 This Section 7 shall apply to all Construction and/or Maintenance done by Company in the Franchise Area.

7.2 Except in the event of an emergency, Company shall first obtain all required permits from the City to perform maintenance or construction work on Company's Facilities within the Franchise Area. The permit application shall contain detailed plans and specifications showing the position, depth and location of all such Facilities in relation to existing City Rights-of-Ways, Public Ways, and Other Ways, or other City property, hereinafter collectively referred to as the "Plans." The Plans shall specify the class and type of material and equipment to be used, manner of excavation, construction, installation, backfill, erection of temporary structures and facilities, erection of permanent structures and facilities, traffic control, traffic turnouts and road obstructions, and all other necessary information. The Company shall file as-built plans and, when available, maps in GIS format with the City showing the final location of the facilities. Such work shall only commence upon the issuance of required permits, and payment of the associated fees, which permits shall not be unreasonably withheld or delayed after submission of a complete application. Except in the event of an emergency, the Company shall provide the City with at least seventy two (72) hours written notice prior to any construction or maintenance on the Company Facilities within the Franchise Area.

7.3 In the event of an emergency requiring immediate action by Company for the protection of the pipeline(s) or Facilities, the City's property or the property, life, health or safety of any individual, the Company may take action immediately to correct the dangerous condition without first obtaining any required permit so long as: (1) the Company notifies the City Fire Department through the dispatch system of the emergency; and (2) the Company informs the City permitting authority of the nature, location, and extent of the emergency, and the work to be performed, prior to commencing the work if such notification is practical, or where such prior notification is not practical, the Company shall notify the City permitting authority on the next business day; and (3) such permit is obtained by the Company as soon as practicable following cessation of the emergency.

7.4 Before undertaking any of the work, installation, improvements, construction, repair, relocation, or maintenance authorized by this Franchise, as a condition precedent to the issuance of any permits by the City, the Company shall, upon the request of the City, furnish a bond executed by the Company and a corporate surety authorized to operate a surety business in the State of Washington, in such sum as may be set and approved by the City as sufficient to ensure performance of the Company's obligations under this Franchise. The bond shall be conditioned so that the Company shall observe all the covenants, terms and conditions and shall faithfully perform all of the obligations of this Franchise, and to repair or replace any defective work or materials discovered in the City's road, streets, or property

7.5 All work done hereunder by Company or upon Company's direction or on Company's behalf, including any work performed by contractors or subcontractors, shall be undertaken and completed in a workmanlike manner and in accordance with the descriptions, plans and specifications provided to the City. The Company's activities (including work done at the direction of the Company, or by its contractors or subcontractors) shall be conducted in such a manner as to avoid damage or interference with other utilities, drains or other structures, and not unreasonably interfere with public travel, park uses or other municipal uses, and the free use of adjoining property and so as to provide safety for persons and property. The Company's Construction and/ or Maintenance shall be in compliance with all valid and applicable laws and regulations and specifications of governmental agencies with jurisdiction.

7.6 In case of damage caused by the Company, its agents or employees or by the Facilities of the Company to Rights-of-Way, Public Ways, or Other Ways, the Company agrees to repair the damage at its own cost and expense. The Company shall, upon discovery of any such damage, immediately notify the City. The City will inspect the damage, and set a time limit for completion of the repair. If the City discovers

damage caused by the Company to Rights-of-Way, Public Ways, or Other Ways, the City shall give the Company notice of the damage and set a time limit in which the Company must repair the damage. In the event the Company does not make the repair as required in this section, the City may repair the damage at the company's expense.

7.7 The Company shall place and maintain line markers pursuant to federal regulations within and along the Pipeline Corridor. Additionally, Company agrees to continue its voluntary practice of placing continuous markers underground, when and where appropriate, indicating the pipeline's location each time Company digs to the pipeline, or such other 'industry best practices' as may from time to time be developed as a method of alerting excavators of the presence of the pipeline.

7.8 The Company shall continuously be a member of the State of Washington one number locator service under (RCW 19.122), or approved equivalent, and shall comply with all such applicable rules and regulations

7.9 The Company's Facilities shall be located and maintained within the Franchise Area so as not to interfere with the free passage of pedestrian and/or vehicle traffic therein, or with the reasonable ingress or egress to the properties abutting the Franchise Area as they exist at the time of installation of the Facilities.

7.10. The Company shall, after installation, construction, relocation, maintenance, removal or repair of any of Company Facilities with the Franchise Area, restore the surface of the Franchise Area and any other City property within the Franchise Area which may be disturbed or damaged by such work, to at least the same condition as it was immediately prior to any such work. The City shall have final approval of the condition of the Franchise Area after restoration pursuant to the provisions of applicable City codes, ordinances, regulations, standards and procedures, as now exist or as may be hereafter amended or superseded, provided that such provisions are not in conflict or inconsistent with the express terms and conditions of this Franchise.

7.11. The City will require the Company to post an appropriate bond, as determined by the City, to ensure satisfactory restoration of the Franchise Area following the completion of the Company's work therein. In lieu of separate bonds for routine individual projects involving work in the Franchise Area, the Company may satisfy the City's bond requirement of this Section by posting an approved indemnity bond with the City pursuant to KMC 19.12.095.

7.12. All survey monuments which are disturbed or displaced by the Company in its performance of any work under this Franchise shall be referenced and restored by the Company, as per WAC 332-120, as from time to time amended, and all pertinent federal, state and local standards and specifications.

7.13 The Company and the City shall each exercise all best reasonable efforts to coordinate any construction work that either may undertake within the Franchise Areas so as to promote the orderly and expeditious performance and completion of such work as a whole. Such efforts shall include, at a minimum, reasonable and diligent efforts to keep the other party and other utilities within the Franchise Areas informed of its intent to undertake such construction work. The Company and the City shall further exercise best reasonable efforts to minimize any delay or hindrance to any construction work undertaken by themselves or utilities with the Franchise Area.

Section 8. Abandonment or Removal of Facilities.

8.1 The Company shall notify the City of any abandoned Facilities or cessation of use of any of its Facilities within sixty (60) days after such abandonment or cessation of use.

8.2 In the event of abandonment or Company's permanent cessation of use of its Facilities, or any portion thereof within the Franchised Area, the Company shall, within one hundred and eighty days (180) after the abandonment or permanent cessation of use, remove the Facilities at the Company's sole cost and expense. However, with the express written consent of the City, which shall not be unreasonably withheld, the Company may, at Company's sole cost and expense, secure the Facilities in such a manner as to cause it to be as safe as is reasonably possible, by removing all Petroleum Products, purging vapors, displacing the contents of the line with an appropriate inert material and sealing the pipe ends with a suitable end closure, all in compliance with valid and applicable regulations, and abandon them in place provided that portions of the Facilities which are above ground shall be removed at Company's sole cost and expense.

8.3 In the event of the removal of all or a portion of the Facilities, Company shall restore the Franchise Area as nearly as possible to a condition that existed prior to installation of Company's Facilities. Such property restoration work shall be done at Company's sole cost and expense and to the City's reasonable satisfaction. If Company fails to remove or secure the Facilities and fails to restore the premises or take such other mutually agreed upon action, the City may, after reasonable notice to Company, remove the Facilities, restore the premises or take such other action as is reasonably necessary at Company's expense and the City shall not be liable therefor. This remedy shall not be deemed to be exclusive and shall not prevent the

City from seeking a judicial order directing that the Facilities be removed.

8.4 The City shall not charge the Company franchise fees for pipelines or pipeline segments abandoned or removed in compliance with this Section. However, the City's consent to the abandonment of Facilities in place shall not relieve the Company of the obligation and/or costs to remove, alter or re-secure such Facilities in the future in the event it is reasonably determined, as adjudged in the sole discretion of the City, that removal, alteration or re-securing the facilities is necessary or advisable for the health, safety, necessity and/or convenience of the public, in which case the Company shall perform such work at no cost to the City.

8.5 The parties expressly agree that the provisions of this Section 8 shall survive the expiration, revocation or termination of this Franchise.

Section 9. Operations and Maintenance - Inspection and Testing.

9.1 The Company shall Operate and Maintain its Facilities in full compliance with the applicable provisions of Title 49, Code of Federal Regulations, Part 195, and WAC 480-75-420, as now enacted or hereafter amended, all environmental laws, and any other current or future laws or regulations that are applicable to Company's Facilities, enacted by any governmental entity with jurisdiction over Company or Company's Facilities.

9.2 The City shall use reasonable efforts to inform all excavators subject to a City grading and/or right-of-way permit working within 100 feet of the Company's Facilities of their responsibility to notify the Company at least 48 hours prior to the start of any work and to ensure compliance with the requirements of the State of Washington one number locator service law (RCW 19.122). If the Company becomes aware that a third party conducts any excavation or other significant work that may affect the Facilities, the Company shall conduct such inspections and/or testing as is necessary to determine that no direct or indirect damage was done to the Facilities and that the work did not abnormally load the Company's Facilities or impair the effectiveness of the Company's cathodic protection system. Upon written request, the Company shall report to the City its inspection and findings in person.

9.3 At City's request, the Company shall provide, at its sole cost and expense, a briefing by qualified testing experts to explain the inspection results and Franchisee's proposed corrective action(s) in reference to 9.2. Said qualified testing expert may be an employee or representative of the Company.

Section 10. Encroachment Management.

10.1 The Company shall maintain a written program to prevent damage to its Facilities from excavation activities, as required by applicable state and federal guidelines.

10.2 The Company and the City shall comply with applicable and valid federal, state and local requirements regarding encroachment management, including RCW 19.122 (one-call system).

10.3 The Company shall regularly inspect the surface conditions on or adjacent to the Pipeline Corridor, as required by applicable state and federal regulations.

Section 11. Leaks, Spills and Emergency Response.

11.1 The Company warrants that it will maintain an Emergency Response Plan that is in compliance with the applicable requirements of local, State, and federal agencies with jurisdiction. The general public may obtain a copy of the Emergency Response Plan by contacting either Olympic Pipe Line or the Washington State Department of Ecology directly. Upon written request by either party, the parties agree to meet periodically to review the Emergency Response Plan and procedure.

The Company's emergency plans and procedures shall designate the Company's responsible local emergency officials and a direct 24 hour emergency contact number for control center operator. The Company shall, after being notified of an emergency, cooperate with the City and make every effort to respond as soon as possible to protect the public's health, safety and welfare.

11.2 The Company shall cooperate with the City and respond to protect public health and safety in the event of a pipeline emergency. The Company warrants that it will at all times have available, on the county level, sufficient emergency response equipment and materials to immediately and fully respond to any spill, leak, rupture or other release of Petroleum Products or Hazardous Substances from Company's pipeline(s) and/or Facilities and that Company shall be solely responsible for all reasonably necessary costs incurred by any agency in responding appropriately to any spill, leak, rupture or other release of Petroleum Products or Hazardous Substances from Company's pipeline(s) and/or Facilities, including, but not limited to, detection and removal of any contaminants from, earth or water, all remediation costs, equipment replacement, and staffing costs, except for any spill, leak, or other release that results from the sole negligence or willful misconduct of the city or its contractors. Any such costs shall be considered extraordinary costs that shall not be borne by the City and shall not be considered administrative expenses of the City. Nothing in this Section shall be

construed as limiting the Company's right to seek recovery from third parties.

11.3 Leaks, spills, ruptures and other emergencies shall be investigated and reported as required by applicable state and local regulations and the City shall be notified according to Section 7.3 of this franchise.

Section 12. Required Relocation of Facilities

12.1 In the event that the City undertakes or approves the construction of, or changes to the grade or location of, any water, sewer or storm drainage line, street, sidewalk, or any other Improvement Project and the City determines that the Improvement Project reasonably requires changes to or the relocation of Company's Facilities, then Company shall make such changes or relocations as required herein at Company's sole cost, expense and risk.

12.2 The City shall provide the Company reasonable written notice of any Improvement Project in the interest of public health, safety, welfare, necessity and/or convenience that requires changes to or the relocation of Company's Facilities. The City will endeavor, where practical, to provide the Company at least 360 days prior written notice, or such additional time as may reasonably be required, of such Improvement Project. However, nothing in this Section shall be construed as to relieve Company of its duty and obligation to relocate its Facilities to accommodate any Improvement Project undertaken by the City after written notice of any Improvement Project.

12.3 The City shall further provide the Company with copies of pertinent portions of the final plans and specifications for such Improvement Project so that the Company may make the required changes to or relocate its facilities to accommodate such Improvement Project.

12.4 The Company may, after receipt of written notice requiring changes to or relocation of its Facilities under Section 12.2, submit to the City, within ninety 90 days, written alternatives to such relocation. The City shall evaluate such alternatives and advise the Company in writing if one or more of the alternatives are suitable to accommodate the Improvement Project that would otherwise necessitate changes to or relocation of the Facilities. If so requested by the City, the Company shall submit additional information to assist the City in making such evaluation including actual field verification of the location(s) of the Company's underground Facilities within the Improvement Project area by excavating (e.g., pot holing), at no expense to the City. The City shall give each alternative proposed by the Company full and fair consideration but retains sole discretion to

decide whether to utilize its original plan or an alternative proposed by the Company.

12.5 If any portion of the Company's Facilities that has been required by the City to be relocated under the provisions of this section is subsequently required to be relocated again within five (5) years of the original relocation, the City will bear the entire cost of the subsequent relocation.

12.6 The Company shall not be required to relocate its Facilities at its expense for the benefit of private developers or third party projects. However in the event the City reasonably determines and notifies the Company that the primary purpose for requiring such changes to or relocation of the Company's facilities by a third party is to cause or facilitate the construction of an Improvement Project consistent with the City Capital Investment Plan; Transportation Improvement Program; or the Transportation Facilities Program, or other similar plan, then the Company shall change or otherwise relocate its Facilities in accordance with Section 12.1 at Company's sole cost, expense and risk.

12.7 The City shall work cooperatively with the Company in determining a viable and practical route within which the Company may relocate its facilities under Section 12.1, in order to minimize costs while meeting the City's project timelines and objectives. The City's requirements with regard to the required changes or relocation (i.e. depth of cover, distance from other utilities, etc.) must not be unreasonable and must be consistent with applicable federal and state requirements however, nothing in this section shall be construed as to limit the City's police power, land use authority, franchise authority or the City's authority to regulate the time, place and manner of Company's use of the Public Rights-of-Way, Public Ways and Other Ways.

12.8 Upon receipt of the City's reasonable notice, plans and specifications per Section 12.1, the Company shall take all necessary and prudent measures to complete relocation of such facilities so as to accommodate the Improvement Project at least ten (10) calendar days prior to commencement of the Improvement Project or such other time as the parties may agree in writing.

12.9 The City shall take reasonable steps to cooperate with the Company on any effort by the Company to apply for and obtain any local, state or federal funds that may be available for the relocation of the Company's Facilities provided however that the Company's application for any such funds shall not delay the City Improvement Project. To the extent such funds are made available, the Company may apply funds towards the costs incurred to relocate the Company's Facilities.

Section 13. Violations, Remedies and Termination.

13.1 The Company shall be in compliance with the terms of this Franchise at all times. The City reserves the right to apply any of the following remedies, alone or in combination, in the event Company violates any material provision of this Franchise. The remedies provided for in this Franchise are cumulative and not exclusive; the exercise of one remedy shall not prevent the exercise of another, or any rights of the City at law or equity.

13.2 The City may terminate this Franchise if the Company materially breaches or otherwise fails to perform, comply with or otherwise observe any of the terms of this Franchise, and fails to cure or make reasonable effort to cure such breach within thirty (30) calendar days of receipt of written notice thereof, or, if not reasonably curable within thirty (30) calendar days, within such other reasonable period of time as the parties may agree upon.

13.3 Either party may invoke the Dispute Resolution clause contained in Section 14 of this Franchise as it deems necessary with regard to termination.

13.4 If the Company's right to operate its Facilities within the Franchise Area is ultimately terminated, the Company shall comply with the terms of this Franchise, regarding removal and/or abandonment and restoration of the Facilities and with all directives of applicable federal and state agencies with jurisdiction.

Section 14. Dispute Resolution

14.1 In the event of a dispute between the City and the Company arising by reason of this Franchise, or any obligation hereunder, the dispute shall first be referred to the representatives designated by the City and the Company to have oversight over the administration of this Franchise. Said officers or representatives shall meet within thirty (30) calendar days of either party's request for said meeting, and the parties shall make a good faith effort to attempt to achieve a resolution of the dispute.

14.2 In the event that the parties are unable to resolve the dispute under the procedure set forth in Section 14.1, then the parties hereby agree that the matter shall be referred to mediation. The parties shall endeavor to select a mediator acceptable to both sides. If the parties cannot reach agreement, then each party shall secure the services of a mediator, who will in turn work together to mutually agree upon a third mediator to assist the parties in resolving their differences. Any expenses incidental to mediation shall be borne equally by the parties.

14.3 If either party is dissatisfied with the outcome of the mediation, that party may then pursue any available judicial remedies, provided, that if the party seeking judicial redress does not substantially prevail in the judicial action, it shall pay the other party's reasonable legal fees and costs incurred in the judicial action.

14.4 Subject to state and federal regulation, the Company shall be permitted to continuously operate its Facilities during dispute resolution.

Section 15. Indemnification

15.1 General Indemnification. Except for environmental matters, which are covered by a separate indemnification in Section 15.2 below, the Company shall indemnify, defend and hold harmless the City, it agents, officers or employees, from any and all liability, loss, damage, cost, expense, and any claim whatsoever, including reasonable attorneys' and experts' fees incurred by the City in defense thereof, whether at law or in equity, arising out of or related to, directly or indirectly, the construction, operation, use, location, testing, repair, maintenance, removal, abandonment or damage to the Company's Facilities, or from the existence of the Company's pipeline and other appurtenant facilities, and of the products contained in, transferred through, released or escaped from said pipeline and appurtenant facilities, from any and all causes whatsoever, except the City's sole negligence and except for a violation by the City of its obligations, if any, under RCW 19.122 (One-Call regulations). If any action or proceeding is brought against the City by reason of the pipeline or its appurtenant facilities, the Company shall defend the City at the Company's complete expense, provided that, for uninsured actions or proceedings, defense attorneys shall be approved by the City, which approval shall not be unreasonably withheld.

15.2 Environmental Indemnification. The Company shall indemnify, defend and hold harmless the City, it agents, officers or employees, from and against any and all liability, loss, damage, expense, actions and claims (except to the extent such liability, loss, damage, expense, actions and claims result from the City's noncompliance with RCW 19.122) either at law or in equity, including, but not limited to, costs and reasonable attorneys' and experts' fees incurred by the City in defense thereof, arising from (a) Company's violation of any environmental laws applicable to the Facilities or (b) from any release of a hazardous substance on or from the Facilities. This indemnity includes but is not limited to (a) liability for a governmental agency's costs of removal or remedial action for hazardous substances; (b) damages to natural resources caused by hazardous substances, including the reasonable costs of assessing such damages; (c) liability for any other person's costs of responding to hazardous substances; (d) liability for any costs of investigation, abatement, correction,

cleanup, fines, penalties, or other damages arising under any environmental laws; and (e) liability for personal injury, property damage, or economic loss arising under any statutory or common-law theory.

15.3 The Company agrees that its obligations under this Section 15 extend to any claim, demand, and/or cause of action brought by, or on behalf of, any of its employees or agents. For this purpose, the Company, by mutual negotiation, hereby waives, as respects the City only, any immunity that would otherwise be available against such claims under the Industrial Insurance provisions of RCW Title 51.

Section 16. Insurance.

16.1 The Franchisee shall procure and maintain for the duration of the Franchise, insurance, or provide self-insurance, against all claims for injuries to persons or damages to property which may arise from or in connection with the exercise of the rights, privileges and authority granted hereunder to the Franchisee, its agents, representatives or employees. The Franchisee shall provide an insurance certificate, together with an endorsement naming the City, its officers, elected officials, agents, employees, representatives, consultants and volunteers as additional insured, to the City upon the Franchisee's acceptance of this Franchise, and such insurance certificate shall evidence the following minimum coverages:

A. Commercial general liability insurance including coverage for premises - operations, explosions and collapse hazard, underground hazard and products completed hazard, with limits not less than:

$100,000,000 per occurrence and in the aggregate for bodily injury or death to each person; and in the aggregate for property damage resulting from any one accident; and in the aggregate for general liability;

B. Automobile liability for owned, non-owned and hired vehicles with a limit of $1,000,000 for each person and $1,000,000 for each accident;

C. Worker's compensation within statutory limits and employer's liability insurance with limits of not less than $2,000,000;

D. Pollution Legal Liability, to be in effect throughout the ten (10) year term of this Franchise, with a limit not less than $50,000,000 per occurrence and in the aggregate to the extent such coverage is reasonably available in the marketplace.

16.2 If coverage is purchased on a "claims made" basis, then the Company warrants continuation of coverage, either through policy renewals or the purchase of an extended discovery period, if such extended coverage is available, for not less than three (3) years from the date of termination of this Franchise and/or conversion from a "claims made" form to an "occurrence" coverage form.

16.3 Any deductibles shall be the sole responsibility of the Company. The insurance certificate required by this Section shall contain a clause stating that coverage shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the aggregate limits of the insurer's liability.

16.4 The Company's insurance shall be primary insurance with respect to the City, its officers, officials, employees, agents, consultants, and volunteers. Any insurance maintained by the City, its officers, officials, employees, consultants, agents, and volunteers shall be in excess of the Company's insurance and shall not contribute with it.

16.5 In addition to the coverage requirements set forth in this Section, the certificate of insurance shall provide that:

> **"The above described policies will not be canceled before the expiration date thereof, without the issuing company giving thirty (30) days written notice to the certificate holder."**

In the event of cancellation or a decision not to renew, the Company shall obtain and furnish to the City evidence of self-insurance or replacement insurance policies meeting the requirements of this Section before the cancellation date.

16.6 The Company shall furnish the City with certificates of insurance evidencing the coverage required by this Section upon acceptance of this Franchise. The certificates and endorsements shall be signed by a person authorized by the insurer to bind coverage on its behalf and must be received and approved by the City prior to the commencement of any work.

16.7 The indemnity and insurance provisions herein under Sections 15 and 16 shall survive the termination of this Franchise and shall continue for as long as the Company's Facilities shall remain in or on the Franchise Area or until the parties execute a new Franchise agreement that modifies or terminates these indemnity or insurance provisions.

Section 17. Annual Franchise Fee.

17.1 In consideration for granting this Franchise and for the use of the Franchise Area, there is hereby established an annual fee of Eight Thousand Sixty-three Dollars and Fifty Cents ($8,063.50; 2021 fee amount).

17.2 The annual fee shall increase each year throughout the term of this Franchise and any renewal terms by three percent (3%).

17.3 Each annual payment shall cover the next twelve (12) month period and shall be paid not later than the anniversary date of the Effective Date of this Franchise. Interest shall accrue on any late payment at the rate of twelve percent (12%) per annum. Such interest shall be in addition to any applicable penalties for late payment. Any partial payment shall first be applied to any penalties, then interest, then to principal.

17.4 The Franchise fee set forth in Section 17.1 does not include, and the Company agrees that it is responsible for, payments associated with the City's administrative expenses including but not limited to the City's expenses incurred in reviewing, inspecting, licensing, permitting or granting any other approvals necessary for the Company to operate and maintain its Facilities or for any inspection or enforcement costs thereunder (i.e., customary permitting fees). Additionally, the foregoing annual fee does not include any generally applicable taxes that the City may legally levy. The Company shall bear the cost of publication of this Ordinance.

Section 18. Legal Relations.

18.1 The Company accepts any privileges granted hereunder by the City to the Franchise Area in an "as is" condition. The Company agrees that the City has never made any representations, implied or express warranties or guarantees as to the suitability, security or safety of the location of the Company's Facilities or the Facilities themselves or possible hazards or dangers arising from other uses or users of the Rights-of Way, Public Ways and Other Ways including by the City, the general public or other utilities. As between the City and the Company, the Company shall remain solely and separately liable for the function, testing, maintenance, replacement and/or repair of the Facilities or other activities permitted hereunder.

18.2 The Company hereby waives its Workers Compensation immunity under Title 51 RCW in any cases involving the City and affirms that the City and the Company have specifically negotiated this provision, to the extent it may apply.

18.3 This Franchise Ordinance shall not create any duty of the City or any of its officials, employees or agents and no liability shall arise from any action or failure to act by the City or any of its officials, employees or agents in the exercise of powers reserved herein. Further, this Ordinance is not intended to acknowledge, create, imply or expand any duty or liability of the City with respect to any function in the exercise of its police power or for any other purpose. Any duty that may be deemed to be created in the City hereunder shall be deemed a duty to the general public and not to any specific party, group or entity.

18.4 This Franchise shall be governed by, and construed in accordance with, the laws of the State of Washington.

Section 19. Company's Acceptance. The City may void this Franchise Ordinance if the Company fails to file its unconditional acceptance of this Franchise within thirty (30) calendar days from the final passage of same by the City Council. The Company shall file its unconditional written acceptance with the City Clerk of the City of Kirkland.

Section 20. Notice.

20.1 All notices, demands, requests, consents and approvals which may, or are required to be given by any party to any other party hereunder, shall be in writing and shall be deemed to have been duly given if delivered personally, sent by facsimile, sent by a nationally recognized overnight delivery service, or if mailed or deposited in the United States mail and sent by registered or certified mail, return receipt requested, postage prepaid to:

City:
City of Kirkland
123 Fifth Avenue
Kirkland, WA 98033
Attn: Franchise Manager

With a copy to:
City of Kirkland
123 Fifth Avenue
Kirkland, WA 98033
Attn: Public Works Director; and
City Attorney

Company:
Olympic Pipe Line Company LLC
Attn: President & Right of Way Dept.
2319 Lind Avenue S.W.

Renton, Washington 98057

with copy to:
Doug Berry
Miller Nash Graham & Dunn LLP
Pier 70, 2801 Alaskan Way, Suite 300
Seattle, WA 98121

or to such other address as the foregoing parties hereto may from time-to-time designate in writing and deliver in a like manner. All notices shall be deemed complete upon actual receipt or refusal to accept delivery. Facsimile transmission of any signed original document and retransmission of any signed facsimile transmission shall be the same as delivery of an original document.

20.2 To ensure effective cooperation, the Company and the City shall each designate a representative responsible for communications between the Parties.

Section 21. Miscellaneous.

21.1 In the event that a court or agency of competent jurisdiction declares a material provision of this Franchise to be invalid, illegal or unenforceable, the parties shall negotiate in good faith and agree, to the maximum extent practicable in light of such determination, to such amendments or modifications as are appropriate actions so as to give effect to the intentions of the parties as reflected herein. If severance from this Franchise of the particular provision(s) determined to be invalid, illegal or unenforceable will fundamentally impair the value of this Franchise, either party may apply to a court of competent jurisdiction to reform or reconstitute the Franchise so as to recapture the original intent of said particular provision(s). All other provisions of the Franchise shall remain in effect at all times during which negotiations or a judicial action remains pending.

21.2 Whenever this Franchise sets forth a time for any act to be performed, such time shall be deemed to be of the essence, and any failure to perform within the allotted time may be considered a material violation of this Franchise.

21.3 In the event that the Company is prevented or delayed in the performance of any of its obligations under this Franchise by reason(s) beyond the reasonable control of the Company, then the Company's performance shall be excused during the Force Majeure

occurrence. Upon removal or termination of the Force Majeure occurrence the Company shall promptly perform the affected obligations in an orderly and expedited manner under this Franchise or procure a substitute for such obligation or performance that is satisfactory to the City. The Company shall not be excused by mere economic hardship nor by misfeasance or malfeasance of its directors, officers or employees.

21.4 The Section headings in this Franchise are for convenience only, and do not purport to and shall not be deemed to define, limit, or extend the scope or intent of the Section to which they pertain.

21.5 By entering into this Franchise, the parties expressly do not intend to create any obligation or liability, or promise any performance to, any third party, nor have the parties created for any third party any right to enforce this Franchise.

21.6 This Franchise and all of the terms and provisions shall be binding upon and inure to the benefit of the respective successors and assignees of the parties.

21.7 The parties each represent and warrant that they have full authority to enter into and to perform this Franchise, that they are not in default or violation of any permit, license, or similar requirement necessary to carry out the terms hereof, and that no further approval, permit, license, certification, or action by a governmental authority is required to execute and perform this Franchise, except such as may be routinely required and obtained in the ordinary course of business.

Section 22. This ordinance shall be in force and effect five days from and after its passage by the Kirkland City Council and publication pursuant to Section 1.08.017, Kirkland Municipal Code in the summary form attached to the original of this ordinance and by this reference approved by the City Council.

Passed by majority vote of the Kirkland City Council in open meeting this 19 day of October, 2021.

Signed in authentication thereof this 19 day of October, 2021.

Penny Sweet, Mayor

Attest:

Kathi Anderson, City Clerk

Approved as to Form:

Kevin Raymond, City Attorney

Publication Date: 10/25/2021

UNCONDITIONAL ACCEPTANCE BY OLYMPIC PIPE LINE COMPANY LLC: I, the undersigned official of Olympic Pipe Line Company LLC, am authorized to bind Olympic Pipe Line Company LLC and to unconditionally accept the terms and conditions of the foregoing Franchise (Ordinance No._____), which are hereby accepted by Olympic Pipe Line Company LLC this _____ day of_____2021.

OLYMPIC PIPE LINE COMPANY LLC

By:_____

Name:_____

Title:_____

Subscribed and sworn to before me this _____ day of _____, 2021.

_____
Print Name: _____
Notary Public in and for the State of Washington,
residing at _____
My commission expires _____

Received on behalf of the City this _____ day of _____, 2021.

Name:_____

Title:_____

PUBLICATION SUMMARY
OF ORDINANCE NO. 4767

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF KIRKLAND, WASHINGTON GRANTING OLYMPIC PIPE LINE COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY, ITS SUCCESSORS AND ASSIGNS, A NONEXCLUSIVE FRANCHISE TO CONSTRUCT, OPERATE, MAINTAIN, REMOVE, REPLACE, AND REPAIR EXISTING PIPELINE FACILITIES, TOGETHER WITH EQUIPMENT AND APPURTENANCES THERETO, FOR THE TRANSPORTATION OF PETROLEUM PRODUCTS WITHIN AND THROUGH THE FRANCHISE AREA OF THE CITY OF KIRKLAND.

SECTIONS 1 - 21. Provide for the grant of a franchise to Olympic Pipe Line Company of a franchise for the transportation of petroleum products for 10 years on specified terms and conditions.

SECTION 22. Authorizes publication of the ordinance by summary, which summary is approved by the City Council pursuant to Section 1.08.017 Kirkland Municipal Code and establishes the effective date as five days after publication of summary.

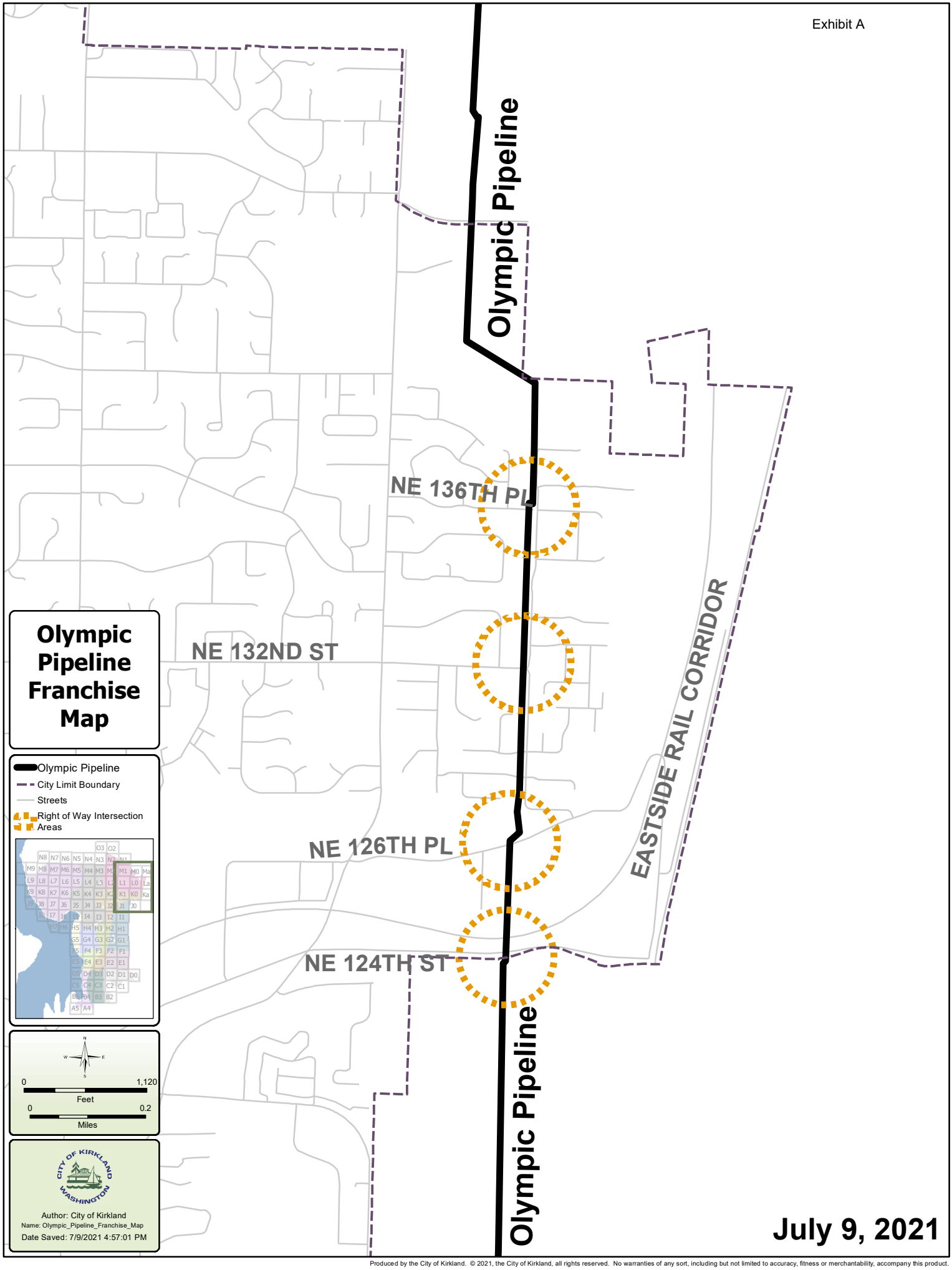
The full text of this Ordinance will be mailed without charge to any person upon request made to the City Clerk for the City of Kirkland. The Ordinance was passed by the Kirkland City Council at its meeting on the 19 day of October, 2021.

I certify that the foregoing is a summary of Ordinance 4767 approved by the Kirkland City Council for summary publication.

Kathi Anderson

Kathi Anderson, City Clerk

Exhibit A



FACILITY RESPONSE PLAN

BP Pipelines (North America)
U.S. Pipelines and Logistics

Northwest Pipelines District

Prepared for:

Northwest Pipelines
600 SW 39th Street, Suite 275
Renton, WA 98057

Copy # 29

SECTION 1 INTRODUCTION

Table of Contents

List of Figures

Figure 1.1: Record of Changes

This plan will be reviewed and updated at least annually or whenever necessary to reflect changes in procedures, response strategies, phone numbers, and regulatory mandates. These changes will be noted in the Record of Changes form. Plan review and modifications will be initiated and coordinated by the Environmental Coordinator. If no plan changes are necessary, a letter will be sent to agencies confirming that the existing plan is still accurate.

Change Number	Date of Change	Name of Person Authorizing the Change	Elements of the Plan That Were Changed	Description of Change
1	10/2002	Jim Clark	Changed portions of: Table of Contents Sections 1, 2, 3, 4, 6, and 7 Appendices A, B, C, D, E, F, and G	
2	6/2004	Jim Clark	Added Cherry Point Crude Pipe Line Changed portions of: Table of Contents Sections 1, 2, 3, 4, 5, and 7 Appendices B, C, and E	
3	12/2005	Shan Mathews	Changed portions of: Sections 1, 2, 3, 4, 6, and 7 Appendices B, C and D	Plan was updated to reflect changes in Olympic staff as well as to capture informal comments provided by Rebecca Post, Washington Department of Ecology (WDOE) Plan Coordinator
4	6/2007	Shan Mathews	Added Preamble Changed portions of: Table of Contents Sections 1, 2, 3, 4, 7 Appendices E and G	Plan was revised to reflect changes in Olympic staff as well as account for new regulatory requirements of WAC 173-182
5	5/2009	Shan Mathews	Removed Preamble Changed portions of: • Table of Contents	Plan was revised to reflect changes in Olympic staff and response equipment as well as to address comments provided by Dan McDonald, WDOE Plan Coordinator on 9/8/08

Change Number	Date of Change	Name of Person Authorizing the Change	Elements of the Plan That Were Changed	Description of Change
5	5/2009	Shan Mathews	• Sections 1, 2, 3, 4, 5, 6, 7 • Appendices A, B, E, F, G	
6	1/2010	Shan Mathews	Changed portions of: • Sections 1, 3, 4 • Appendices B, E	Plan was revised to reflect changes in Olympic staff and to address comments provided by Kelli Gustaf, WDOE Plan Coordinator on 12/23/09
7	11/2010	Shan Mathews	Changed portions of: • Sections 3, 4	Plan was revised to reflect changes in Olympic staff
8	3/2011	Shan Mathews	Changed portions of: • Table of Contents • Sections 1, 3 • Appendices A, E, G	Plan was revised to remove all references to RSPA
9	4/2011	Shan Mathews	Changed portions of Section 1	Added City of Kent to the distribution list
10	9/2011	Shan Mathews	Changed portions of: • Table of Contents • Sections 1, 2, 3, and 4 • Appendix C	Plan was revised to reflect changes in Reports from Outside Sources, Spill Report Form, Olympic staff, Olympic Incident Management Team, Olympic System Map, Block Valve and Facility Directions, and the addition of Notification Procedures for Report from Outside Sources.
11	11/2011	Shan Mathews	Changed portions of: • Table of Contents • Sections 1, 3, and 7 • Appendices E and G	Updated Figures 1.2, 3.5, and E.1 Corrected typos and formatting in 7.1 and G.3 Removed Figures 3.7 and 3.8
12	12/2012	Kelli Gustaf	Changed portions of: • Table of Contents • Section 1, 2, 3, 5 and 7 • Field Document	Plan was revised to reflect changes in Olympic staff. Updated Figure 1.2 and the Binding Agreement (Section 1.5). Updated notification forms in Section 3 and in the Field Document. Updated Figure 2.1 with new BP terminology. Updated Section 5.5, 5.6, and 5.8 to coordinate with the NWACP. Added nine Olympic Pipe Line Company Spill Response Trailers.

Change Number	Date of Change	Name of Person Authorizing the Change	Elements of the Plan That Were Changed	Description of Change
12	12/2012	Kelli Gustaf		into Section 7.
13	8/2013	Kelli Gustaf	Changed portions of: • Table of Contents • Section 1, 2, 3, 5 • Appendix C, G, H • Field Document	Plan was revised to account for new Washington State regulatory requirements of WAC 173-182. Updated WUTC emergency contact number. Updated Figure 1.2, 1.3 and 1.5. Updated Section 2.2.9 and 2.3 (spills to ground). Updated Figure 3.3. Update Section 5.6.1 (Dispersants). Added products handled and tank inventory and updated facility information in Appendix C. Updated Facility Information in Appendix C. Added Claims Plan in Appendix G. Updated Cross-Reference and moved it to Appendix H.
14	10/2013	Kelli Gustaf	Changed portions of: • Section 1; Figure 1.3 • Appendix D • Appendix E; Figure E.1, Section E.6	Update Cherry Point Crude Line Notifications. Added Butane Line to Section 1, Appendix D and E. Updated Spill History
15	12/2014	Kelli Gustaf	Annual Plan Review	Minor administrative changes. Updates will be reflected in March 2015 5-Year WDOE submittal.
16	03/2015	Kelli Gustaf	5-Year Submittal	Section 1: • Updated distribution list • Changed Spill Response Plan to Facility Response Plan Section 2: • Replaced Figure 2.1 with reporting guide from field document • Removed Figure 2.2 • Added “confirm product type” to sec 2.3 Section 3: • Added Butane Line (Sec 3.1) • Updated Figure 3.2 to match FD Updated Figure 3.3 with new personnel

Change Number	Date of Change	Name of Person Authorizing the Change	Elements of the Plan That Were Changed	Description of Change
16	03/2015	Kelli Gustaf	5-Year Submittal	Updated Section 5.5 to include procedures/forms to track and account for waste. Section 6: • Added GRP website • Added NW Wildlife Response Commitment • Updated Vulnerability Maps Section 7: • Added 2 command post locations between Olympia and Vancouver • Removed Waste and Alternative Technologies Section. The same information is in Section 5 Section 8: • Changed “Plan” to FRP Appendix A • Updated A.1 • Updated Figure A.3 with new AAR document • Updated QI Requirements • Removed Figures A.6, A.7, A.9 • Updated IMT Training Matrix Appendix B • Removed hyperlinks • Updated Letters of Intent Appendix C • Updated Figure C.7 • Updated Figure C.8 to include hazard classifications from Section E.6 • NW Pipelines Updated Figure D.3 and D.4 with new personnel

Change Number	Date of Change	Name of Person Authorizing the Change	Elements of the Plan That Were Changed	Description of Change
16	03/2015	Kelli Gustaf	5-Year Submittal	Appendix D • Replaced “Olympic District” with Appendix E • Added Renton Station and Allen Station reportable releases to Figure E.1 • Updated E.3.1 to include Incident Potential Worksheet (Figure E.2) • Update E.3 with the addition of the WRRL • Updated worst case volumes for DOT, WA, and OR • Removed Section E.6 and added it to Figure C.8 • Added trajectories • Updated Planning Standard Spreadsheets Appendix F • Reviewed and changed font Appendix G • Reviewed and changed font Appendix H • Updated all cross-references Appendix I • Updated definitions
17	08/2015	Terri Malone	Response to WDOE’s Evaluation	Table of Contents • Updated page numbers of Section 1 Section 1 • Updated Record of Changes • Page numbers for Figures 1.2 through Section 1.5 were changed as a result of the additional entry into the Record of Changes • Updated Section 1.5 - Binding Agreement to cover both the Olympic Pipe Line and BP Cherry Point Crude Line

Change Number	Date of Change	Name of Person Authorizing the Change	Elements of the Plan That Were Changed	Description of Change
18	09/2015	Kelli Gustaf	Response to WDOE's Evaluation	Table of Contents • Updated page numbers throughout entire FRP Section 1 • Figure 1.2 - Removed GRP distribution list • Figure 1.3b - Updated the Worst Case Discharge Volume for the Cherry Point Crude Line • Updated page numbers throughout the section Section 3 • Figure 3.4 - Minor personnel & contractor updates Section 4 • Section 4.6 - Added description of Alternate QIs • Figure 4.5 - Updated to reference the NWACP Section 5 • Section 5.6.2 - Updated reference to Sections 4617 and 9407 of the NWACP • Figures 5.7 and 5.8 - Inserted current information • Removed dated information and updated page numbers throughout the section Section 6 • Figure 6.2 - Added Cherry Point Crude Line to Vulnerability Analysis Index Map & Map 1 • Section 6.5 - Inserted current information • Section 6.7 - GRP reference updated Appendix D • Figure D.5 - Inserted Crude System Map • Updated page numbers throughout appendix Appendix E • Figure E.2 Added Planning Standard Spreadsheets and Bayview Alternate Planning Standard

Change Number	Date of Change	Name of Person Authorizing the Change	Elements of the Plan That Were Changed	Description of Change
18	09/2015	Kelli Gustaf	Response to WDOE's Evaluation	Appendix G Updated contractor information for claims administration support
19	02/2016	Kelli Gustaf	Response to WDOE's Evaluation	Section 1 • Updated Figure 1.1 • Updated Figure 1.2 • Updated Section 1.1 • Updated Section 1.5 - Binding Agreement with M. Horn Section 2 • Updated Figure 2.1 • Updated Section 2.3.5 • Updated Section 2.9 Section 3 • Updated Figure 3.2 • Updated Figure 3.4 Section 4 • Updated Section 4.3 • Updated Figure 4.4 Appendix D • Added Cherry Point PL Elevation Profile • Added Overview Map for Cherry Point PL Appendix E • Updated Appendix E.5 - added Planning Standard Spreadsheets
20	04/2016	Kelli Gustaf	Response to WDOE's Evaluation	Section 1 • Updated Figure 1.1 Section 6 • Updated Section 6.7

Change Number	Date of Change	Name of Person Authorizing the Change	Elements of the Plan That Were Changed	Description of Change
21	05/2016	Kelli Gustaf	USDOT - PHMSA Letter of Correction	Table of Contents Section 1 • Updated Figure 1.3
22	06/2017	Justin Ivy	Plan Review	Section 1 • Updated Figure 1.3
23	07/2017	Justin Ivy	Plan Review	Section 1 • Updated QI's Section 2 • Updated Communications and external Affairs • Updated Footers and Headers Section 3 • Updated individual (p.3-9) • Updated Claims Admin numbers • Updated NRC Section Section 7 • Removed two way radios/Unicator Appendix G • Removed reference to Performance Unit and Richmond terminal
24	11/2017	Justin Ivy	Plan updates per new WAC Rules	Section 2 • Air Monitoring Guidelines and Community Air Monitoring Plan Appendix D • Crude Line Discharge volume Appendix E • Spill volume calculations Appendix H • Cross Reference Matrix

Change Number	Date of Change	Name of Person Authorizing the Change	Elements of the Plan That Were Changed	Description of Change
25	04/2018	Justin Ivy	Plan updates per WDOE of Ecology Pipeline Contingency Plan Review Checklist Requirements	Section 2 • Air Monitoring and Community Air Monitoring Guidelines • Added CTEH Air Monitoring Equipment List Appendix D • Figure D.10 Appendix E • Spill volume calculations for Kalama, Toutle, and Stillaguamish Rivers Appendix H • Cross Reference Matrix
26	06/2019	Alexandria Crooks	Plan updates per Plan Review Checklist Requirements, Washington Department of Fish and Wildlife comments, and Olympic Pipe Line Company LLC. Staffing changes.	Section 3 • Figure 3.1 – Notification Flow Chart • Figure 3.2 – Spill Notification Form Figure 3.4 – Additional Notifications Section 4 • Figure 4.4 – Incident Management Team Organization Chart • Figure 4.5 - Incident Management Team Job Description Checklists Section 6 • Section 6.5 – Wildlife Protection and Rehabilitation • Section 6.6 – Considerations for Oiled Marine Mammals • Section 6.7 – Protection/Response Strategies Section 7 • Figure 7.1 – Locations of Spill Response Trailers • Section 7.1.4 Communications Equipment

Change Number	Date of Change	Name of Person Authorizing the Change	Elements of the Plan That Were Changed	Description of Change
26	06/2019	Alexandria Crooks	Plan updates per Plan Review Checklist Requirements, Washington Department of Fish and Wildlife comments, and Olympic Pipe Line Company LLC. Staffing changes.	Appendix D • Figure D.1 – Crude / Butane Pipeline Emergency Response Notification Flowchart • Figure D.2 – Initial Notification Log • Figure D.3 - Cherry Point Contact List
27	06/2020	Alexandria Crooks	Plan updates per Olympic Pipe Line Company LLC. Staffing changes	Section 1 • Figure 1.3A - Plan Information Summary – Olympic Pipeline • Figure 1.3B – Plan Information Summary - Crude Line • Figure 1.3C – Plan Information Summary - Butane Line Section 3 • Figure 3.1 – Notification Flow Chart • Figure 3.4 – Additional Notifications • Figure 3.6 – Spill Response Contractors Section 4 • Figure 4.4 - Incident Management Team Organization Chart Appendix D • Figure D.1 – Crude / Butane Pipeline Emergency Response Notification Flowchart • Figure D.3 – Cherry Point Contact List
28	11/2020	Alexandria Crooks	Plan correction per Pipeline and Hazardous Materials Safety Administration review	Section 1 • Figure 1.3B – Plan Information Summary - Crude Line
29	04/2021	Alexandria Crooks	Plan Update per Ecology Comments and Regulatory Updates and 5-Year Submittal	Section 1 • Figure 1.2 - Distribution List • Section 1.6 - Oregon State Submittal Agreement

29	04/2021	Alexandria Crooks	Plan Update per Ecology Comments and Regulatory Updates and 5-Year Submittal	Section 2 • Section 2.1 - Pipeline System Overview • Section 2.2.10 - Spills of Non-Floating Product • Section 2.9 - Personnel Accountability Section 3 • Figure 3.1 – Spill Notification Form • Figure 3.2 - Incident Management Team (IMT) Incident Potential Worksheet (IPW) • Figure 3.3 - Additional Notifications • Figure 3.5 - Spill Response Contractors Section 4 • Figure 4.4 - Incident Management Team Organization Chart • Figure 4.5 - Incident Management Team Roster Section 6 • Section 6.3 - Wildlife Response Plan • Section 6.4- Wildlife Response Purpose and Organization • Section 6.5 - Wildlife Response Organization • Section 6.6 - Initial Response Actions • Section 6.7 - Considerations for Oiled Marine Mammals • Section 6.8 - Post Emergency Phase Response Actions • Section 6.9 - Wildlife Response Resources Section 7 • Figure 7.2 - Spill Response Trailer Inventory Appendix A • Figure A.2 - Exercise Type and Frequency • Section A.2 - Training Program Appendix B

				• Section B.1 - Spill Response Contractors • Section B.1.2 - OSRO Evidence of Contracts Appendix D • Figure D.2 – Initial Notification Log Appendix E • Figure E.1 - Reportable Oil Spill History Record • Figures E-4 to Figure E-18 - Worst Case Discharge Planning Appendix F • Section F.3 - Contracted Resources for Shoreline Cleanup Appendix H • Figure H.1 - Washington Department of Ecology Cross-Reference Index • Figure H.3 - State of Oregon Department of Environmental Quality Cross-Reference Index Appendix I • Figure I.1 Acronyms

Figure 1.2: Distribution List

Organization	Location/Individual	Hard Copy	Electronic Copy
BP Pipelines NA	Tulsa Control Center		X
BP Pipelines NA	US Pipelines & Logistics (USPL) Department of Transportation (USDOT) Team		X
BP Pipelines NA	Cherry Point Meter Station		X
City of Bellevue	Franchise Manager		X
City of Kent	Franchise Manager		X
Clark County Emergency Services	Anna Pendergrass		X
Cowlitz County DEM	Ernie Schnabler, Director		X
King County DEM	Timothy Doyle, Director		X
Lewis County DEM	Steve Mansfield		X
Marine Spill Response Corporation (MSRC)	Chris Stadiem		X
Multnomah County Emergency Management	Chris Voss, Director		X
National Response Corporation Environmental Services Inc. (NRCES)	Sophie Todd		X
Olympic Pipe Line Company LLC	District Operations Manager	X	X
Olympic Pipe Line Company LLC	North Area Team Leader	X	X
Olympic Pipe Line Company LLC	Central Area Team Leader	X	X
Olympic Pipe Line Company LLC	South Area Team Leader	X	X
Olympic Pipe Line Company LLC	Environmental Coordinator	X	X
Olympic Pipe Line Company LLC	Renton Control Center	X	X
Olympic Pipe Line Company LLC	Renton Station Office (front desk)	X	X
Olympic Pipe Line Company LLC	Allen Pump Station		X
Olympic Pipe Line Company LLC	Anacortes Pump Station		X
Olympic Pipe Line Company LLC	Ferndale Pump Station		X
Olympic Pipe Line Company LLC	Woodinville Pump Station		X
Olympic Pipe Line Company LLC	Seattle Delivery Facility		X
Olympic Pipe Line Company LLC	Tacoma Pump Station		X
Olympic Pipe Line Company LLC	Tacoma Delivery Facility		X
Olympic Pipe Line Company LLC	Olympia Pump Station		X
Olympic Pipe Line Company LLC	Castle Rock Pump Station		X
Olympic Pipe Line Company LLC	Vancouver Delivery Facility		X
Olympic Pipe Line Company LLC	Portland Delivery Facility		X
Oregon Department of Environmental Quality (ODEQ)	Scott Smith	X	X
Pierce County DEM	Richard Schroedel		X
Skagit County Department of Emergency Management (DEM)	Mark Anderson, Director		X
Snohomish County DEM	Jason Biermann, Interim Director		X
The Response Group (TRG)	Lance Lindgren		
Thurston County DEM	Andrew Kinney		X
United States Coast Guard (USCG) Marine Safety Unit (MSU) Portland	Environmental Response		X

Organization	Location/Individual	Hard Copy	Electronic Copy
USCG Sector Puget Sound	Environmental Response		X
USDOT/Pipeline and Hazardous Materials Safety Administration (PHMSA)	John Hess, Emergency Support and Security		X
Washington Department of Ecology (WDOE)	Scott Zimmerman	X	X
Washington Department of Fish and Wildlife (WDFW)	Andy Carlson, Oil Spill Manager		X
Washington Emergency Management Division (WEMD)	Response Manager		X
Washington Utilities and Transportation Commission (WUTC)	Alan Rathbun, Director		X
Whatcom Unified Emergency Management	Local Emergency Planning Committee (LEPC) Coordinator		X

Figure 1.3: Plan Information Summary – Olympic Pipe Line

Owner:	Olympic Pipe Line Company LLC 2319 Lind Avenue SW Renton, WA 98055 Phone: (425) 235-7736	
Operator:	BP Pipelines North America 600 SW 39th Street, Suite 275 Renton, WA 98057 Phone: (425) 981-2510 Fax: (425) 981-2525	
Product Transported:	• Various grades of unleaded gasoline • Aviation turbine fuel (kerosene) • Diesel fuel • Refer to Appendix C.8 for product characteristics	
Qualified Individuals (QI):	• Terry Zimmerman - QI (219) 973-5985 • Dustin Lambert - Alternate QI (425) 351-9938 • Jeff Berry - Alternate QI (206) 510-0562 Refer to Figure 3.1 for a complete list of all QIs and alternates. For further information on QI's training and qualifications, refer to Section 4.6 and Appendix A in this Plan.	
Pipeline Description:	Olympic Pipe Line Operating System is comprised of over 400 miles of petroleum products pipelines, extending from refineries in Northwest Washington and continuing through the state (paralleling Puget Sound and the Interstate 5 Corridor), terminating near Portland, Oregon.	
Response Zone Consists of the Following Counties:	Clark, Cowlitz, King, Lewis, Pierce, Skagit, Snohomish, Thurston, Whatcom in Washington, and Multnomah in Oregon	
Worst Case Discharge	The USDOT worst case discharge is 27,500 barrels (bbls). See Appendix E for details.	
Delivery Facilities:	• Bayview • Renton • Seattle • Tacoma	• Spanaway (Tacoma Station) • Vancouver • Linnton (OR) • Portland (OR)
Pump Stations:	• Cherry Point • Ferndale • Anacortes (Shell and Tesoro) • Allen • Woodinville	• Renton • Tacoma • Rainier (Olympia Station) • Castle Rock
Refineries:	• BP Cherry Point Refinery • Phillips 66 Ferndale Refinery	• Tesoro Anacortes Refinery • Shell Puget Sound Refinery
Line Segments:	• 16" Cherry Point/Ferndale - Bayview Products Terminal • 16" Bayview Products Terminal - Allen Station • 16"/20" Allen Station - Renton Pump Station	

	• 12” Renton Pump Station • 14” Renton Pump Station - Portland Distribution Facility (DF) • 6”, 8”, 12” Lateral lines to Seattle DF, Seatac DF, Tacoma DF, Vancouver DF, and Portland DF. For more details, refer to Appendix C.
Statement of Significant and Substantial Harm:	The response zone in this system contains pipeline segments greater than 6 5/8 inches in outside diameter and/or longer than ten miles. Sections of the pipeline cross major waterways, have experienced a release of greater than 1,000 bbls, are within five miles of public drinking water intakes, or are within one mile of environmentally sensitive areas. Therefore, in accordance with 49 Code of Federal Regulations (CFR) 194.103(b), the entire response zone described in this Plan will be treated as if expected to cause significant and substantial harm. Refer to Figures C.1 and C.2 in Appendix C for delivery line segments.

Figure 1.4: Plan Information Summary – Crude Line

Owner:	BP West Coast Products Co. 4519 Grandview Road Blaine, WA 98230
Operator:	BP Pipelines North America 600 SW 39TH Street, Suite 275 Renton, WA 98057 Phone: (425) 235-7736 Fax: (425) 981-2525
Product Transported:	• Crude oil Refer to Appendix C.8 for product characteristics.
Qualified Individuals (QI):	• Terry Zimmerman - QI (219) 973-5985 • Dustin Lambert - Alternate QI (425) 351-9938 • Jeff Berry - Alternate QI (206) 510-0562 Refer to Figure 3.1 for a complete list of all QIs and alternates. For further information on QI's training and qualifications, refer to Section 4.6 and Appendix A in this Plan.
Pipeline Description:	The 24-inch bi-directional flow pipeline is approximately 5.3 miles long and supplies BP Cherry Point Refinery with raw crude oil for refining. The refinery receives light and heavy oil from the Trans Mountain Pipeline System owned and operated by Kinder Morgan. The refinery also receives or delivers crude to/from the Phillips 66 Ferndale Refinery.
Response Zone Consists of the Following Counties:	Whatcom County in Washington
Worst Case Discharge	The USDOT worst case discharge is 10,843 bbls. See Appendix D for details.
Delivery Facilities:	• None
Pump Stations:	• None
Refineries:	• BP Cherry Point Refinery • Phillips 66 Ferndale Refinery
Line Segments:	• 24" Lake Terrell Road - BP Cherry Point Refinery • For more details, refer to Appendix D.
Statement of Significant and Substantial Harm:	The response zone in this system contains pipeline segments greater than 6 5/8 inches in outside diameter and/or greater than ten miles. Sections of the pipeline cross major waterways, have experienced a release of greater than 1,000 bbls, are within five miles of public drinking water intakes, or are within one mile of environmentally sensitive areas. Therefore, in accordance with 49 CFR 194.103(b), the entire response zone described in this Plan will be treated as if expected to cause significant and substantial harm. Refer to Figures C.1 in Appendix C for delivery line segments.

Figure 1.5: Plan Information Summary – Butane Line

Owner:	BP West Coast Products Co. 4519 Grandview Road Blaine, WA 98230
Operator:	BP Pipelines North America 600 SW 39th Street, Suite 275 Renton, WA 98057 Phone: (425) 235-7736 Fax: (425) 981-2525
Product Transported:	• Butane Refer to Appendix C.8 for product characteristics.
Qualified Individuals (QI):	• Terry Zimmerman - QI (219) 973-5985 • Dustin Lambert - Alternate QI (425) 351-9938 • Jeff Berry - Alternate QI (206) 510-0562 Refer to Figure 3.1 for a complete list of all QIs and alternates. For further information on QI's training and qualifications, refer to Section 4.6 and Appendix A in this Plan.
Pipeline Description:	The 6-inch bi-directional Butane Pipeline originates at the BP Cherry Point Refinery and supplies the Chevron Ferndale Storage Terminal with butane for storage, rail, truck, and tanker ship delivery. The Chevron Ferndale Storage Terminal also ships and can receive butane from Phillips 66 Ferndale Refinery.
Response Zone Consists of the Following Counties:	Whatcom County in Washington
Delivery Facilities:	• Chevron Ferndale Storage Terminal
Pump Stations:	• None
Refineries:	• BP Cherry Point Refinery
Line Segments:	• 6" BP Cherry Point Refinery - Chevron Ferndale Storage Terminal For more details, refer to Appendix D.
Statement of Significant and Substantial Harm:	Not applicable

1.1 Purpose/Scope of Plan

This Facility Response Plan (FRP) provides guidelines to quickly, safely and effectively respond to a spill from the Olympic Pipe Line, the Cherry Point Crude Line, Butane Pipeline and associated facilities. Unless, superseded by a separate section within Appendix D for the Cherry Point Crude Line and Butane Pipeline, the materials in the plan applies to all three systems. The pipelines and associated facilities are operated by BP Pipelines North America herein referred to as "Company." For more information on this plan, contact the NW Pipelines Environmental Coordinator.

The FRP is meant to supplement responder's training and experience during an actual response. Since each response is different, the FRP may not always contain all the information needed to manage a spill. This FRP is designed to satisfy the requirements of the Oil Pollution Act of 1990 (OPA 90) and has been prepared in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 Code of Federal Regulations [CFR] 300), and the Northwest Area Contingency Plan (NWACP). Specifically, this Plan is intended to satisfy the requirements of:

- Pipeline and Hazardous Materials Safety Administration (PHMSA), United States Department of Transportation (USDOT) (49 CFR 194)
- Washington Administrative Code (WAC) 173-182
- Oregon Administrative Rule (OAR) 340-141

1.2 Plan Updating Procedures

The Environmental Coordinator (Response Plan Custodian) is responsible for all reviews, updates and distribution of the FRP.

- The FRP will be reviewed annually and following each incident or exercise, if necessary.
- The FRP shall be reviewed, modified as necessary and submitted to Oregon Department of Environmental Quality (ODEQ), Washington Department of Ecology (WDOE), and PHMSA for approval every five years following initial approval
- Submit changes to ODEQ, WDOE and PHMSA within 30 days of review
- WDOE and ODEQ shall be notified in writing within 24 hours of any changes in the availability of spill response personnel and equipment.

Changes in operating conditions that require significant changes in the FRP include:

- New pipeline construction or purchase
- Change in Worst Case Discharge volume
- Change in commodities transported
- Change in OSRO's
- Change in Qualified Individuals (QI)
- Changes in the NCP and/or NWACP that impact appropriateness of response equipment or strategies
- Change in response procedures
- Change in ownership
- Other changes that materially affect implementation of the plan

Plan revisions or amendments will be numbered sequentially and distributed to all plan holders on the Distribution List (Figure 1.2). The change number, date of change and change numbers shall be entered in the Record of Changes (Figure 1.1) by the plan holder.

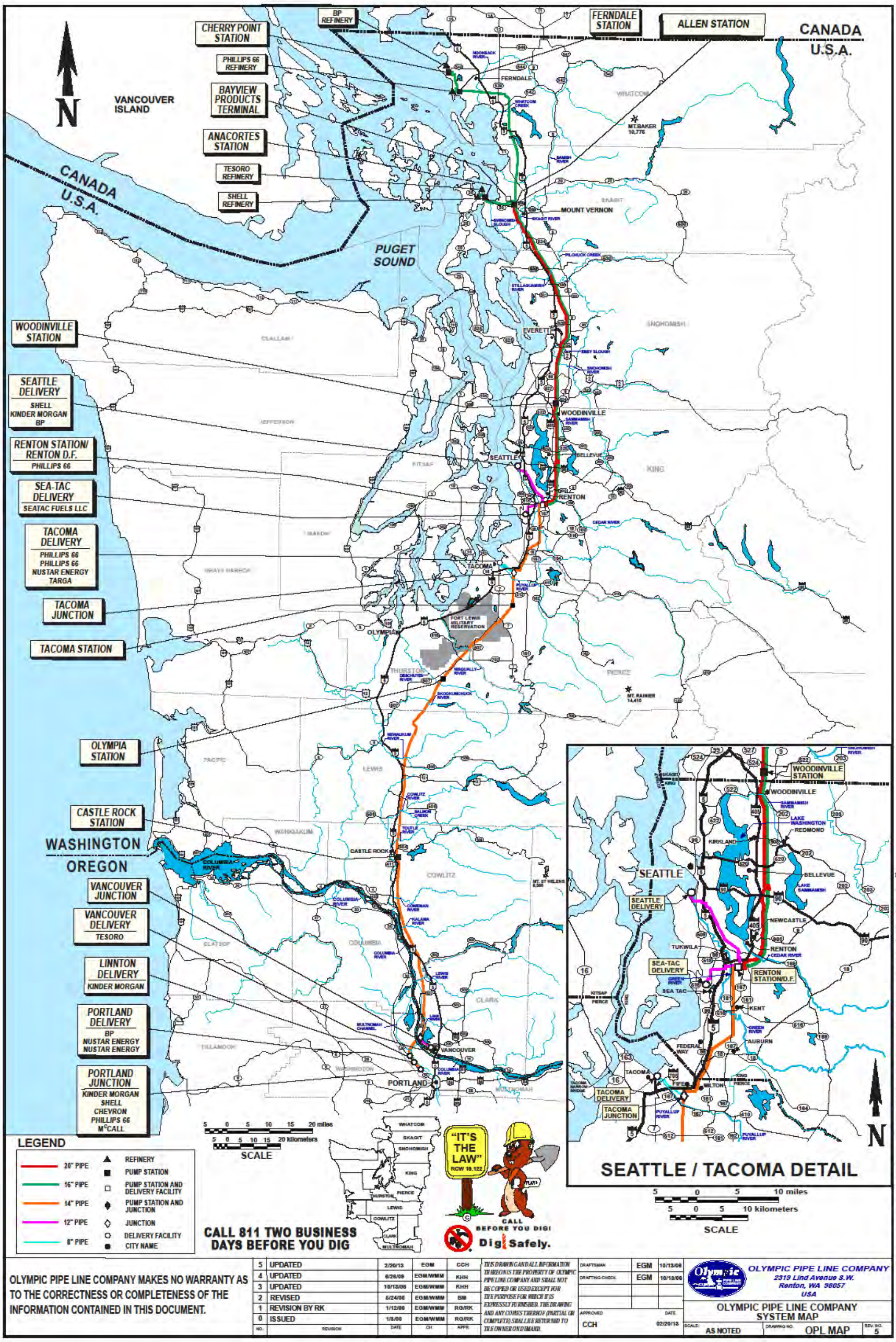
1.3 Plan Distribution

One copy of the FRP shall be maintained in a central location, accessible to the Incident Commander and/or designated members of the Incident Management Team. One copy of the FRP shall be placed at the front desk of the Olympic Pipe Line Company Renton Station office building (designated as the central command post). Copies of the FRP shall be maintained at the pipeline facilities listed in Figure 1.2.

A field document, outlining initial notification procedures and immediate response actions in the event of a product spill, shall be provided to all Company employees. The field document contains area-specific spill reporting requirements, notification numbers, spill detection procedures, and immediate spill response actions. Olympic Pipe Line Team Leaders and Field Specialists will keep a copy of the field document in their company vehicle.

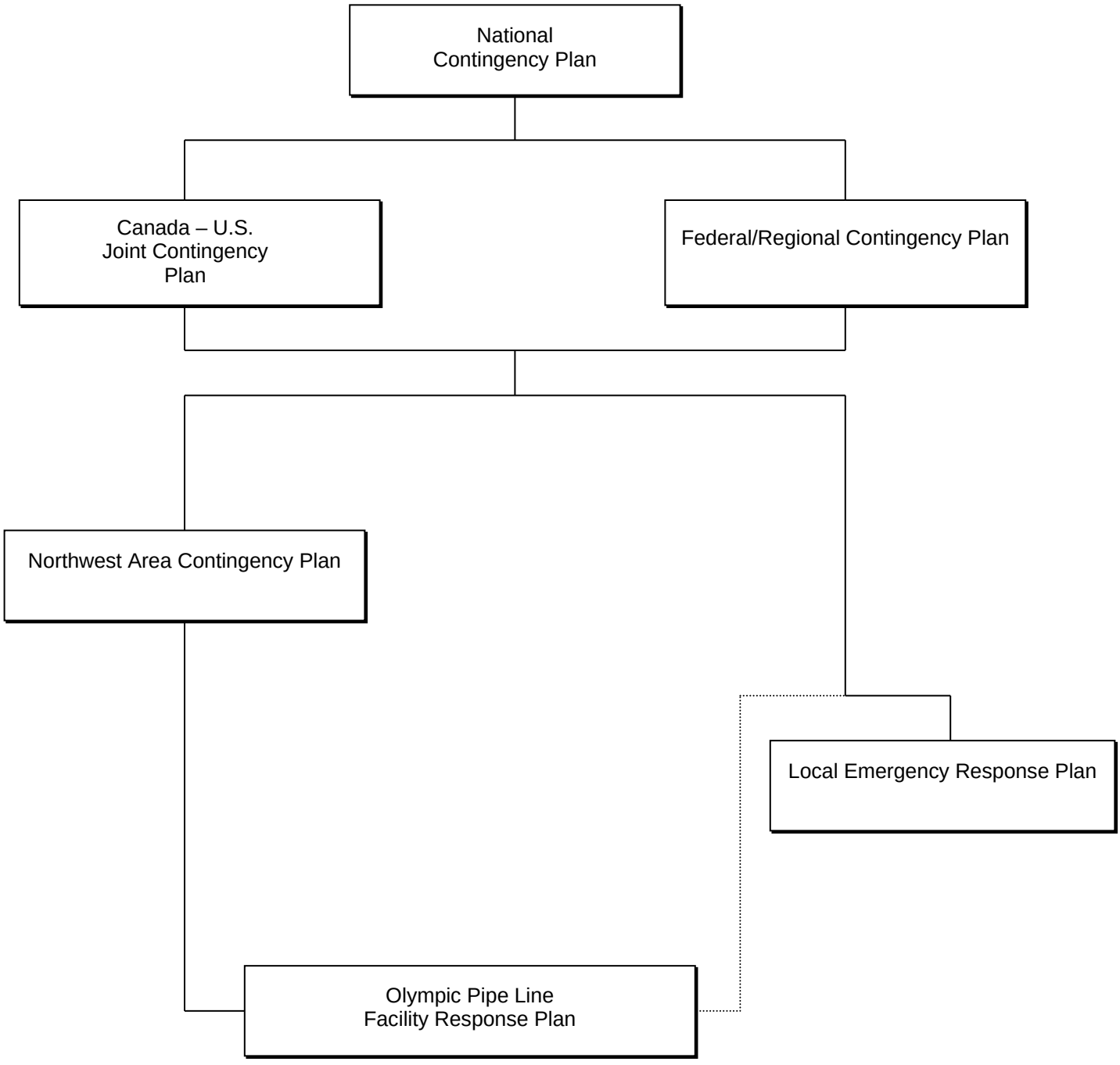
The Environmental Coordinator is responsible for distributing the FRP to authorized Plan Holders. If the individual holding this copy of the FRP is reassigned, this copy shall be transferred to that person's replacement. The Environmental Coordinator shall be notified upon future reassignments of FRPs.

Figure 1.6: System Overview



1.4 Interface with Other Plans

The Plan interfaces with the federal, state, and local plans outlined in the diagram below.



1.5 Certification of Adequate Resources

Washington State
Department of Ecology
Spill Prevention, Preparedness, and Response Program
P.O. Box 47600, Olympia, WA 98504-7600
Office Phone: (360) 407-7455
Fax: (360) 407-7288 or toll free 1-800-664-9184

Binding Agreement for WAC 173-182 and WAC 173-186

WAC 173-182-220 and WAC 173-186-210 require that each plan contain a written statement binding the contingency plan holder to its use. The binding agreement shall be signed by:

a) An authorized representative(s) of a nonprofit corporation established to provide oil spill contingency plan coverage;
b) An authorized owner, or operator, or a designee with authority to bind the owners and operators of the facilities or vessels covered by the plan;
c) An authorized resident agent of the vessel(s) submitting the plan;
d) An authorized representative(s) of a company contracted to the vessel or facility and approved by ecology to provide containment and clean-up services.

WAC 173-182-142 and WAC 173-186-140 classify the permanent loss of personnel designated as the binding agreement signatory as a significant change to the plan and require notification to Ecology within 24 hours.

Submitting Party Information

Company Name: Olympic Pipe Line Company LLC	
Contact Name: Terry Zimmerman	
Signing Authority as Described Above (A, B, C, or D): B	
Address: 600 SW 39th Street, Suite 275, Renton, Washington 98057	
Phone Number: (219) 973-5985	Fax Number:
Email: Terry.Zimmerman@bp.com	Website:

Additional Submitting Party Information (If Needed)

Company Name:	
Contact Name:	
Signing Authority as Described Above (A, B, C, or D):	
Address:	
Phone Number:	Fax Number:
Email:	Website:

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To request ADA accommodation including materials in a format for the visually impaired, call Ecology at 360-407-6831 or visit https://ecology.wa.gov/accessibility. People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.

Binding Agreement

I certify that I have reviewed and am familiar with the information submitted in this Plan and that the information in the contingency plan is accurate. I am authorized to submit the plan and commit to:

a) A safe and immediate response to spills and to substantial threats of spills that occur in, or could impact Washington waters or Washington's natural, cultural and economic resources;

b) Having an incident commander in the state within six hours after notification of a spill;

c) Implementation and use of the plan during a spill and substantial threat of a spill, and to the training of personnel to implement the plan;

d) Making necessary and appropriate expenditures in order to implement plan provisions; and

e) Working in unified command within the incident command system to ensure that all personnel and equipment resources necessary to the response will be called out to clean up the spill safely and to the maximum extent practicable.

Authorized Signature — Date: 5/13/2020

Terry Zimmerman
Print Name

District Operations Manager
Title

Authorized Signature — Date

Print Name

Title

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To request ADA accommodation including materials in a format for the visually impaired, call Ecology at 360-407-6831 or visit https://ecology.wa.gov/accessibility. People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.

1.6 Oregon State Submittal Agreement

In accordance with Oregon Rule 340-141-0140(1) Plan Content Requirements.

MANAGEMENT CERTIFICATION

This plan is approved for implementation as herein described. Manpower, equipment, and materials will be provided as required in accordance with this Plan. Olympic Pipe Line Company is dedicated to protection of the environment and commits to implement the necessary measures, as specified in the Plan, as necessary in a spill response emergency.

In addition to any Oil Spill Removal Organization and non-company resources listed in this Plan, the necessary personnel and equipment resources, owned or operated by the facility owner or operator, are available to respond to a discharge within appropriate response times.

This plan has been prepared in accordance to and is consistent to the National Contingency Plan and the applicable Area Contingency Plan(s) for the facilities covered by this plan.

CERTIFICATION SIGNATURE:

Terry Zinnecker — President

PRINTED NAME — TITLE

3-25-2021

DATE

SECTION 2 INITIAL RESPONSE ACTIONS

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2.1 Pipeline System Overview

Olympic Pipe Line Company LLC (Olympic) operates a petroleum liquids pipeline that originates at the Cherry Point Refinery in Whatcom County and ends at the Portland Delivery Facility in Portland, Oregon. The Olympic pipeline carries exclusively Group I, Group II and Group III refined petroleum products (i.e. gasoline, diesel and jet motor fuels). The Cherry Point crude operated by BP Pipelines North America (BP) line carries Group III oil and is described in Appendix D. The Butane line carries butane and is described in Appendix D.

Pipeline facilities include block valve sites, booster pump stations, mainline pump stations, junctions, terminals and delivery facilities. The location and description of the pipeline facilities can be found in Appendix C. The Olympic Geographic Response Plans sensitive receptors information in Section 6 and Olympics GIS layers on electronic mapping systems can be used to gather topographic details of the right-of-way (ROW).

Figure 2.1: Olympic Pipeline Incident Reporting Guide

To use this guide find your position and follow the steps which are listed in order of priority.

Field Operations Personnel:

- ☐ Assess your personal safety and move to a safe location if necessary.
- ☐ If this is an emergency and you need immediate assistance call 911.
- ☐ Call the Control Center – be prepared to give the Pipeline Controller the information needed to complete the Notification Checklist (i.e. your name, location, incident description, weather conditions, call-back number) as well as any support you feel you need. The Notification Checklist is on the following page.
- ☐ Your notifications are complete.
- ☐ Complete the Notification Checklist in the Field Document and turn it in to Health, Safety, Security, and Environment (HSSE).

Control Center Personnel:

- ☐ If the call is from a third party get their name, location and call back number and as much information as you can about the type of concern that is being reported. Decide if the pipeline must be shut down immediately. Dispatch an Operations and Maintenance (O&M) Specialist to confirm the report.
- ☐ If the call is from BP personnel, obtain their name, location and call back information of the person. Get the all information necessary to complete the Notification Checklist (i.e. location, incident description, weather conditions).
- ☐ Notify the Control Center Team Leader or their delegate. (a voice mail message does not count, keep calling until you speak to the person – if you cannot reach the Team Leader move on to making the notifications listed below)
- ☐ Notify the Area O&M Team Leader (a voice mail message does not count, keep calling until you speak to the person)
- ☐ Your notifications are complete.
- ☐ Complete the Notification Checklist in the Field Document and turn it in to HSSE.

Control Center Team Leader:

- ☐ When notified of an incident request all of the information detailed in the Notification Checklist. This information will be used by the District Operations Manager to assess the need for Incident Management Team response and Agency notifications.
- ☐ Notify the District Operations Manager or his delegate (a voice mail message does not count, keep calling until you speak to the person)
- ☐ Notify the Environmental Coordinator or backup HSSE person (a voice mail message does not count, keep calling until you speak to the person)
- ☐ Your notifications are complete
- ☐ Complete the Notification Checklist in the Field Document and turn it in to HSSE.

Environmental Coordinator:

- ☐ Make agency notifications as appropriate.
- ☐ Notify Environmental Team Lead
- ☐ Notify Communications and External Affairs
- ☐ Notify US Pipelines & Logistics (USPL) Department of Transportation (USDOT) Advisor (if reported to the National Response Center or Washington Utilities and Transportation Commission [WUTC])
- ☐ Notify USPL Crisis Management Advisor

2.2 Spill Detection and Mitigation Procedures

Olympic personnel continuously monitor operational performance and integrity throughout pipeline operations. This monitoring is performed through visual inspections and analysis of operational conditions, such as line pressures, flow volumes, pump and valve actuation, and tank levels, at the Olympic Renton Control Center (RCC). The RCC has the capability of controlling pumps and valves and monitoring the pressures and flow volumes along the entire length of the pipeline. The Tulsa Control Center monitors and controls the Cherry Point Crude and Butane Pipelines. If abnormal operating conditions precipitate during pipeline operation, audible and visual alarms activate, and an investigation is subsequently initiated to determine the source of the abnormal condition. Based on sensitivity of the leak detection system and historical data, under normal or adverse weather conditions the maximum time to detect a spill and shutdown throughput is 15 minutes. The information presented in this section is general in nature. Current and specific procedures are in the Operations Maintenance and Emergency Response (OMER) Manuals.

The information provided within this section describes the types of system monitoring utilized to detect and prevent leaks; and once a leak has been confirmed, the procedures initiated to prevent further discharge of material from the pipeline prior to the arrival or assembly of the spill response team.

2.2.1 Olympic Renton Control Center Monitoring

Pipeline pressures, flow rates, and line balances are monitored at the RCC, with conditions deviating outside of normal operational standards immediately investigated. Aboveground tanks facilities are equipped with independent high and high-high level alarms that will signal the RCC. In the case of a high level alarm transfer operations shall be suspended, with product diverted into an alternate storage or breakout tank. In the case of a high-high alarm, the facility will automatically be locked out. All equipment control and performance variations require immediate analysis in order to determine the source of the potential problem.

Leaks may be detected via several methods. All RCC Operations Controllers are trained in these methods and use their best judgment to analyze any potential leak situation.

Listed below are several methods by which a leak may be detected:

- Pressure drop/flow variation
- Shortage trend evident in over/short calculations,
- Significant shortage in one checking period without pressure drop,
- Use of a computational pipeline model,
- Recorded history of the system operating under similar conditions,
- Pipeline patrol planes surveillance,
- Landowner's reporting, and/or
- Reports issued on emergency telephones via company personnel, third parties, and/or civil authorities.

2.2.2 Abnormal Operating Conditions and Proposed Counter Measures

Unintended Valve Closure

Whenever a valve closes against an operational pipeline, abnormally high pressure can result. The following procedures shall be undertaken via the Olympic RCC Operations Controller(s) in the event of unintended valve closure:

- Upon receipt of an alarm for high pressure (or other information indicating a potentially blocked line), the RCC Operations Controller(s) shall immediately initiate emergency shutdown procedures through

suspension of operations of:

- The nearest pumping unit(s) upstream of the high pressure condition,
- Pumping units at the originating station, and
- All downstream pumping units.

- Subsequent to line shutdown, the RCC Operations Controller(s) shall investigate the source of the high pressure (using all available information) and subsequently determine the level and duration of the high pressure reported by the equipment.
- Notification of the RCC Operations Team Lead shall commence immediately subsequent to line shutdown.
- If conditions indicate that a loss of product from the pipeline might have occurred, the pipeline shall remain down, and field specialists will be dispatched to the affected area(s). The pipeline shall be blocked in segments in an attempt to isolate the affected area(s) and minimize the potential release.
- If a release is confirmed, the RCC Operations Controller(s) shall commence defined spill response procedures.
- If the decision is made to restart the pipeline, line balance calculations shall be monitored at frequent intervals. If the line balance indicates a consistent loss trend, the pipeline will be shut down as soon as the trend is apparent, and appropriate investigative steps shall be undertaken. Some imbalances upon start-up may be the result of line pack and should be expected but should not continue once pressure has stabilized.

Unintended Shutdown

An unintended shutdown of a pumping unit or station could result from pressure changes within the pipeline or via equipment failure. The Olympic RCC Operations Controller(s) response to this occurrence shall vary depending upon the probable cause. Data, such as computer trends, protective device settings, and computer alarm limits, may provide necessary information to determine probable cause.

Within multi-station pipeline segments, other station shutdowns may be affected upon the initial shutdown. A pumping unit shutdown resulting from pressure abnormalities (such as high discharge, high case, or low suction pressures) requires immediate investigation via the RCC Operations Controller(s):

- High discharge or case pressure could indicate a blockage within the pipeline. If an unexplained or high case discharge should occur, the RCC Operations Controller(s) shall initiate shutdown of the pipeline and follow the procedures previously outlined for addressing a valve closure.
- Low suction shutdown at intermediate pump stations could indicate a release from the pipeline, especially if the station control valve was not controlling suction pressure just prior to shutdown. If information indicates that a release may have occurred, emergency shutdown and isolation procedures shall be followed. Spill response procedures shall be initiated.
- If a shutdown results from equipment failure, an alarm will be received at the Olympic RCC.
- If the alarm indicates a lockout situation, the station or pumping unit will remain shutdown until an employee inspects the affected location. Start-up of any locked-out pump shall not be attempted prior to field analysis and completion of necessary repairs. Pumping units that remain locked out shall be isolated from the balance of the system.
- For alarms that are not indicative of a lockout condition, the RCC Operations Controller(s) shall investigate all available information to determine if the pumping unit should be restarted.

Line Pressure / Flow Changes

Sudden increases or decreases in pressure or flow can be the result of normal operational events, including:

- Pumping unit changes,

- Valve position changes, and
- Fluid specific gravity changes.

Abnormal conditions could also cause these changes, thus indicating line blockages or pipeline releases.

An unexplained increase or decrease in flow, in addition to a decrease in pressure outside of established limits, is an indication of a potential release. Should this condition occur, the RCC Operations Controller(s) will investigate all available information. If no operational reason or instrumentation malfunction is apparent, the RCC Operations Controller(s) shall immediately initiate emergency shutdown procedures and dispatch appropriate employees to the affected area(s). If a release is confirmed, the RCC Operations Controller(s) shall initiate defined spill response procedures.

An unexplained decrease in flow, coupled with an increase in pressure outside of established limits, is an indication of an unintended line blockage. In the event of such an occurrence, the RCC Operations Controller shall initiate shutdown procedures and follow requirements for addressing an unintended valve closure.

Potential Malfunctions

Potential malfunctions within the pipeline system include the failure of a pumping unit to stop or failure of a valve to open or close upon command.

- If a pumping unit fails to stop when commanded, a failsafe device will trip incoming power to the facility. The RCC Operations Controller(s) shall dispatch a field employee to investigate the problem.
- If a valve fails to open or close when commanded, the RCC Operations Controller(s) may have several options, depending upon the respective valve and the situation. The RCC Operations Controller(s) may elect to divert fluid to another location or shut down the pipeline or facility (if not already shutdown due to a facility lockout or shutdown). The RCC Operations Controller(s) shall monitor all available information and call for assistance from appropriate operations or maintenance personnel, as required.

2.2.3 Software/Hardware

Detection and estimation of release volumes is achieved through the use of SCADA (Supervisory Control and Data Acquisition) software, field hardware, and the experience of the Olympic RCC Operations Controllers. While no single element may identify a potential leak situation, the combination of hardware and software tools provides the Operations Controllers with optimal detection capabilities.

The SCADA Software, is designed to detect and post any failure of software or hardware. The SCADA system contains several software elements, which both alarm the Operations Controllers in the event of an abnormal condition, as well as automatically document the event for immediate, on-line review. Deviation limit alarms notify the Operations Controllers in the event of a system analog value deviating outside of a preset absolute or percentage of change limit. Deviation limits are calculated on a per scan basis (every four (4) to five (5) seconds).

The SCADA system provides the capability of trending any system discrete, analog, calculated point, or accumulator. There are several online trends available to the controller for each facility and motor operated valve. The Operations Controllers may also trend historical, on-line data.

The Operations Control Center is equipped with a computational pipeline model running on a computer interfaced to the SCADA computers. This software package can assist in identifying releases, instrumentation errors, and measurement errors. When an unexpected or unexplained alert from this system is received, the indicated line segment shall be shutdown immediately by the Operations Controller and the Control Center Supervisor is to be notified. The Controller will close the appropriate remote controlled valves and monitor pressure for a minimum of thirty minutes. The line may be restarted if there are no unexplainable pressure drops in the closed-in line segment(s) and the Control Center Supervisor or the Area Team Leader has approved a restart.

If the computational pipeline model goes off-line due to a communication outage or other problem, the Control Center Supervisor shall be notified immediately and the frequency of manual over/short

calculations shall be increased to intervals of not more than fifteen minutes during the outage.

Hourly log sheets are maintained by the Operations Controllers, which allow a review of activity, not only of past, but anticipated events. The Operations Controllers manually log volumes received into and out of the system, as well as over/short calculations. Review of these values via the Operations Controllers is based upon current line conditions and previous activities.

In the field Olympic utilizes esri ArcGIS for all Geographic information planning. ArcGIS Collector and ArcGIS Online is a complete cloud-based geographic information system (GIS) mapping tool. It is used to easily capture and update data in the field, with or without cell service. This program allows field staff to fill out forms, capturing and returning accurate field data that integrates seamlessly into ArcGIS, and collect or update data using a map or GPS. Tool features include:

- Downloading map areas to a device and working offline.
- Collecting points, lines, areas, and related data.
- Filling out easy-to-use, map-driven forms.
- Attaching photos and videos to pipeline features.
- Use professional-grade GPS receivers.
- Searching for features, coordinates, and places. This includes line segments, block valves, break out tanks, containment structures, control stations, safety equipment, pipeline right of way, access points, pipeline control points and Geographic Response Plans (GRP).
- Streamline field workflows by integrating with other applications on a wide range of devices.

Data is accessible using the ArcGIS application on all cell phones, tablets, and computers or can be accessed from ArcGIS online. Collected data and features can be exported from the program as a shapefile or a Keyhole Markup Language file for further distribution.

2.2.4 Visual Monitoring

In addition to continuous monitoring of operating conditions via the Olympic RCC, visual inspections of the pipeline ROW are conducted on a periodic basis.

Aerial visual inspection of the entire length of the pipeline, using a fixed-wing aircraft, is performed periodically (at least 26 times per year). Pipeline segments are also visually inspected via maintenance personnel during the normal course of work, and routine observations are made from surface vehicles as they drive along pipeline ROWs. Abnormal conditions are noted and responded to immediately. If abnormal conditions are noted via the RCC, field personnel are directed to the affected area(s) to visually assess the situation and prevent any risk of discharge of material.

2.2.5 Reports from Outside Sources

Signs are posted on perimeter fencing, with a 24-hour telephone number to call in the event of an emergency. The Olympic 24-hour telephone number is also printed on ROW signs at highway and water crossings and on mile post markers.

Outside sources may report conditions which indicate that a leak has occurred. When calls of this nature are received, the RCC Operations Controller(s) shall:

- Gather the necessary information from the caller using the Spill Report Form located in the Field Document,
- Assess SCADA and information received from the caller. If conditions warrant:
  - Initiate emergency procedures,
  - Dispatch field personnel to the site to perform a visual observation, and

- Continue monitoring all available information.

If a release is confirmed, the RCC Operations Controller shall commence defined spill response procedures.

2.2.6 Natural Disasters

In the event of a natural disaster (flood/storm, earthquake), the activities within Section 5.99.01, Part J of the OMER Manual shall be implemented. Additionally, the Landslide and Erosion matrix is utilized by the ROW team to inspect known locations of landslide and erosion features following rain events (1 inch or greater). For further assurance, annual inspections are conducted by the ROW team to ensure landslide and erosion repairs are effective.

Following a natural disaster, facility personnel will inspect Olympic facilities to determine any effect that the disaster may have had on pipeline operations. For landslide and earthquake inspections, the Pipeline Geotechnical Inspection and Structural Mechanical Inspection checklists in the Field Document should be utilized.

2.2.7 Safety Devices

Safety devices are installed within the Olympic operating system in order to:

- Protect pipeline facilities.
- Prevent injury to persons, property, and the environment.

These devices include:

- Relief valves.
- High and high-high level switches and alarms on storage tanks and sumps.
- Pump building and containment area hydrocarbon detection.
- Power failure alarms.

Generally, these alarms shall require or result in shutdown of some portion of the pipeline system. In the event of station lockout, field employees will be sent to investigate and correct the condition. The shutdown portion of the system shall not be restarted until the designated field employee(s) notifies the RCC Operations Controller(s) that an abnormal condition does not exist and the system is safe.

2.2.8 Release Prevention Methods

The following pipeline release prevention methods have been incorporated into the engineering design of the Olympic system:

- Check and gate valves have been installed to control back flow in the event of a release.
- Pressure relieving valves have been installed within the pipeline system to avoid pressure build-up.
- Regular inspection and maintenance of facilities is conducted.
- All valves, pipes, and fittings are maintained at a working pressure suitable to the design requirements of the system.
- Cathodic protection has been installed and maintained within the operating system.
- Line markers clearly define pipeline ROW/road crossings.
- Visual inspection of pipeline ROWs has been incorporated into routine operating procedures.
- Work by third parties in proximity to pipeline systems is monitored.
- All mainlines and lateral lines are subject to periodic inspections (five (5) year frequency) via internal inspection tools (i.e. smart pigs).

The following release prevention methods have been incorporated into the engineering design and operational procedures of Olympic facilities to prevent releases from pipeline or terminal tankage:

- High level alarms on all storage tanks.
- Monthly inspections of storage tanks.
- Frequent visual inspection during field surveillance.
- Hydrocarbon detectors within vaults.
- Secondary containment encompassing aboveground storage tanks and breakout tankage.
- Fencing encompassing facilities to prevent unauthorized entry.

2.2.9 Spills to Ground

All spills that threaten waters of the state (surface or ground water) or pose a threat to human health will be immediately reported following the notification procedures detailed in Section 3.

In the event that a release is known or suspected of impacting soil, a notification will also be made to the Washington Department of Ecology (WDOE) Toxics Cleanup Program within 90 days in accordance with the Model Toxics Cleanup Act (Washington Administrative Code [WAC] 173-340). As soon as practicable a groundwater spill assessment will be performed. The goals of the assessment will be to determine the nature and extent of the impact, the gradient and flow direction of groundwater in the vicinity of the release identify down-gradient sensitive receptors that may require protection, and identify potential preferential pathways that may be in proximity to the release location. The following paragraphs describe the general methods to fulfill the goals of the groundwater spill assessment.

- Groundwater assessment will be performed using existing wells if they are in the vicinity of the release and with additional grab sampling via direct-push or other intrusive techniques if the impact is known or suspected of extending beyond the existing monitoring well network.
- If existing wells are not present, then assessment will be performed using grab samples collected via direct-push drill rig or other intrusive methods. Wells will be installed as appropriate to supplement data from grab samples and to collect data to evaluate groundwater flow direction and gradient. Wells will be installed by a well driller licensed in Washington State and installed according to WDOE regulations.

Samples selected for chemical analysis will be submitted to an analytical laboratory licensed by WDOE) Chemical analysis methods will include methods approved by WDOE or the United States Environmental Protection Agency (USEPA).

- A sensitive receptor survey will be performed to evaluate the location of municipal water supply wells, wetlands, surface water bodies, and/or other sensitive receptors that may be adversely impacted by the release. Sensitive receptor surveys may include, but not necessarily be limited to: reviewing appropriate maps, reviewing WDOE well records, and visual reconnaissance.
- Where groundwater discharges or is suspected to discharge to surface water, visual inspection of surface water and/or surface water sampling and analysis will be performed to evaluate the groundwater to surface water pathway.
- If underground utilities, pipelines or other buried infrastructure are located in proximity to the spill, their locations will be confirmed and their potential to act as preferential pathways will be evaluated.

Olympic maintains a contract with National Response Corporation Environmental Services Inc. (NRCES) Antea Group (Antea) for the management of spill response involving releases to soil. NRCES is also Olympic's contractor for on-going soil and groundwater remediation projects. Contact information for NRCES can be found in Figure 3.5.

2.3 Spills of Non-Floating Product

Spills of Oil that, Depending on the Chemical Properties, Environmental Factors (Weathering), and Methods of Discharge, may Submerge or Sink (WAC 173-182- 324)

BP and Olympic handle several products, which, based on their physical and chemical properties, and/or the properties of the water bodies they may spill into, have the potential to sink or submerge. Refer to Figure 2.2 for a complete product list with potential non-floating oils identified.

Figure 2.2: Non-Floating Product List

Product Name	Density (kg/m3)	Specific Gravity	API	Group #	Sulfur
Gasoline	700 – 800	0.7 – 0.8	70.6 – 45.4	I	avg. 10 ppm
(synonyms: RUL, subgrade, unlead)					
Jet Fuel	775 – 840	0.77 – 0.84	52.3 – 36.9	I	Not avail.
(synonyms: JetA1, avgas)					
Diesel	720 – 880	0.82 – 0.88	41.1 – 29.3	II	< 15 ppm
(synonyms:, LSDF, ULSD)					
Lube Oils*	846	0.85	35	III	Not avail.
Crude Oils*	700 – 950	0.7 – 0.98	70.6 – 17.5	I/II/III/IV	0 – 0.1%
(synonyms: Bakken, Black Wax Crude, Canadian Oil Sands)					

*** Products with the potential to become non-floating oils per WAC 173-182-030(31).**

2.3.1 Contracted Resources for Non-Floating Product Spills

Olympic has a service agreement with NRCES, an approved Primary Response Contractors (PRC) with the state of Washington and the U.S. Coast Guard. PRC has the necessary personnel and equipment (see contractor's PRC application and WRRL as appropriate) capable of responding to an oil spill within the time frames outlined in Table 2 to meet this regulatory requirement of WAC 173-182-324(2). PRC will aggressively respond to floating oil, will, and will prepare for detection, delineation, and recovery of non-floating oil if necessary.

2.3.2 Non-Floating Product Assessment

There are many important ways that a floating oil spill response differs from an NFO spill response, including the personnel, equipment, and tactics that will be used to respond to the spill. Because of these differences, it is important to determine early on whether a spilled product has the potential to sink or submerge.

Within the first hour of a spill, Olympic personnel will conduct an initial assessment of the characteristics of the spilled product, and the characteristics of the waterbody it spilled into (using Attachment A of section 9412.A2 in the NWACP). If available at the time, we will consult with available response partners including NRCES, the environmental unit, NOAA SSC, and other company resources to determine if there is a potential for the oil to sink or submerge. If the potential exists, we will begin to mobilize the equipment and personnel necessary to respond. If we do not immediately observe a potential to sink or submerge, we commit to reevaluating the potential as the response evolves.

Figure 2.3: Timetable for Non-Floating Product Response Resources

Time	Capability
1 hour	**Assessment:** BP will initiate an assessment and consultation with PRC regarding the potential for the spilled oil to submerge or sink. We may use environmental factors (i.e., density of the receiving water, the chemical properties of the oil released, or other indicators) to begin a non-floating oil (NFO) assessment to identify the need for personnel and equipment mobilization if it will be needed during the cleanup effort.
6-12 hours	**Detection and Delineation:** Should the assessment and consultation determine that the oil may become an NFO, the following PRC resources and personnel to detect and delineate the spilled oil could have arrived on scene: side scan sonar, multibeam sonar, laser fluorosensors, induced polarization system, divers, remotely operated vehicles, and/or other methods to locate the oil on the bottom or suspended in the water column. Additionally, containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface, or to reduce spreading on the bottom, could have arrived.
12-24 hours	**Sampling:** PRC resources and personnel necessary to assess the impact of the spilled oil on the environment could have arrived. **Recovery:** Additionally, dredges, submersible pumps, sorbents, agitators, or other equipment necessary to recover oil from the bottom and shoreline could have arrived.

2.3.3 Tools for an NFO response

The Pacific Northwest response community has developed response resources and tools to support spills from NFOs. Available resources/tools that Olympic and NRCES may reference in the event of a spill include:

- NWACP Section 9412– Non-floating Oils Response Tools
- GRP sections including the Non-floating Oils Response Options and Considerations Tool and the updated Resources at Risk information which details resources in the water column and seafloor at risk from NFO releases
- Additional response resources are located in the Sector Puget Sound Area Contingency Plan
- uSCAT Technical Reference Manual
- Sunken Oil Detection and Recovery, American Petroleum Institute Technical Reports (1154-1, and 1154-2)

Olympic and NRCES will follow the above resource guidelines for detecting, delineating, and recovering non-floating oils, as applicable.

2.4 Spill Surveillance Guidelines

- Surveillance of an oil spill should begin within one (1) hour or as soon as possible following discovery to enable response personnel to confirm product type, assess spill size, movement, and potential impact locations.
- Clouds, shadows, sediment, floating organic matter, submerged sand banks, or wind-induced patterns on the water may resemble an oil slick if viewed from a distance.
- Assess present and future environmental conditions to determine the possible extent of the oil (i.e.

rain events).

- Use surface vessels to confirm the presence of any suspected oil slicks, if safe to do so. If possible, direct the vessels from the aircraft and photograph the vessels from the air to show their position and size relative to the slick.
- Updated reporting is required if the quantity, nature and/or area of impact of the spill changes from what was initially reported.
- Dispatch observers to downstream river or stream crossings to determine maximum reach of the spill.
- Adequate observation of oil on the water surface from a boat, dock or shoreline is difficult particularly in a fast moving streams or rivers where mixing is likely to occur.
- Spill surveillance is best accomplished using helicopters or small planes. Helicopters are preferred due to their superior visibility and maneuverability.
- Low visibility and night time surveillance can be improved by utilizing infrared camera equipped aircraft. The US Coast Guard and some county agencies have IR equipped helicopters that may be available to assist in spill tracking. These assets will be requested in situations when it is safe to fly and the aircraft and a crew trained in spill tracking are available.
- High wing fixed-wing planes provide better visibility than low-wing types.
- Document observations in writing and with photographs and/or videotapes.
- Describe the approximate dimensions of the oil slick based on available reference points (i.e. vessel, shoreline features, and facilities). Use the aircraft or vessel to traverse the length and width of the slick while timing each pass.
  - Calculate the approximate size and area of the slick by multiplying speed and time.
- Record aerial observations on detailed maps, such as topographic maps.
- Boats may be used to patrol the area and document the location and movements of the spill during periods of reduced visibility (dense fog or low cloud cover). However, this method may not be safe if the spill involves a highly flammable product.
- Oil spill tracking buoys are a tool that has been studied for open water spill tracking in low visibility conditions. Deployment of tracking buoys will be facilitated through response contracts with NRCES and MSRC. The performance of the buoys has not been evaluated in inland water situations which are a common scenario of a spill from the pipeline. If a tracking buoy is developed for river waters, its use will be incorporated into the plan.
- Surveillance is required during spill response operations to gauge effectiveness of response operations, assist in locating skimmers and continually assess size, movement, and impact of spill.
- An Oil Spill Surveillance Checklist is included in Figure 2.2.

2.4.1 Aerial Surveillance Resources

Olympic maintains contracts with four aviation companies that assure the availability of a variety of aircraft and BP certified pilots for spill surveillance operations. MSRC and NRCES will provide trained aerial oil surveillance personnel who can access both fixed and rotary wing aircraft and can be on-scene within 6 hours of notification. Additional assets will be brought in as needed to support spill recovery operations for three 10-hour periods during the first 72-hours of the response. The contract process allows Olympic the opportunity to pre-approve the contractor resources in accordance with BP Aviation standards. The contact information for each of the aviation companies can be found in Figure 3.5.

Figure 2.4: Oil Surveillance Checklist

Record your observations of spilled oil either in the Field Document or directly on a chart of the area under observation. This checklist is an aid for organizing your observations.

General Information

___ Date

___ Time

___ Case name

___ Observer's name

___ Observers' affiliations

___ Location of oil's source (if known)

___ Tidal or river stage (flood, ebb, slack, low water)

___ On-scene weather (wind, sea state, visibility)

___ Platform (helicopter, fixed-wing aircraft, boat)

___ Flight path/trackline

___ Altitude where observation taken

___ Areas not observed (e.g. foggy locations, restricted air spaces, shallow water areas)

Oil Observations

___ Slick Location(s)

___ Slick Dimensions

___ Orientation of Slick(s)

___ Distribution of Oil (e.g. windrows, streamers, pancakes, or patches)

___ Color and Appearance (e.g. rainbow, dull or silver sheen, black or brown in color, mousse)

___ Percent Coverage

___ Is Oil Recoverable (Y/N)? (ex. black oil, mousse, and heavy dull or dark colored sheens)

Considerations

1. During surveillance flights, travel beyond known impacted areas to check for additional oil spill sites.
2. Include the name and phone number of the person making the observations.
3. Clearly describe the locations where oil is observed, as well as the areas where no oil has been seen.

Other Observations

Response Operations

___ Skimmer deployment (general locations where skimmers are working - are they working in the heaviest concentration of oil?)

___ Boom deployment (general locations of boom - does the boom contain oil? Is the oil entraining under the boom?)

Environmental Observations

___ Locations of convergence line, rip tides, and sediment plumes

___ Locations of kelp beds, seagrass beds, and other features that could be mistaken for oil

___ Wildlife present in area (locations and approximate numbers of birds and marine animals)

2.5 Air Monitoring Guidelines

- Air monitoring of the spill location and areas downstream should commence within one (1) hour or as soon as possible.
- Air monitoring will commence at the United States Department of Transportation (USDOT) recommended safe distance of 300 meters
- Monitoring for Lower Explosive Limit (LEL) and oxygen (O_2) will be used to evaluate the necessary evacuation distances and assure safe work locations
- Calibrated LEL/O_2 monitors will be used at all work locations
- Monitoring will be conducted upwind and at a safe distance downwind of the release location
- Monitoring will include low areas such as ditches, excavations and vaults where vapors may have collected and saturated soils exist.
- Results of the monitoring will be recorded on Spill Notification Report and communicated to the On Scene Commander
- All work locations will be monitored continuously, BP safety rules require that work be stopped and the site evacuated if the LEL is greater than 10 percent or O_2 less than 19.5 percent
- For all imminent threats to local populations the local first responders will be dispatched to evacuate. For non-imminent threats our internal Communications and External Affairs will make public announcements.
- Spills of gasoline may require monitoring for the presence of benzene and spills of crude oil may require monitoring for hydrogen sulfide (H_2S). A protocol for benzene and H_2S monitoring will be established by the Safety Officer as part of the Safety Plan.
- Any decisions to evacuate or shelter in place will be made by the initial Incident Commander (IC) or the Unified Command (UC) in conjunction with local fire departments, health departments and/or county emergency management personnel.

Community Air Monitoring

If any risks of impacts to local communities are present, we will acquire additional resources to aid in both the decision making process as well as hazard communications to the impacted community. For a description of action levels for various oil constituents of concern, please reference Section 5 of this plan (pg. 5-10 through 5-14). Any decisions to evacuate or shelter in place will be made by the initial IC or the UC in conjunction with local fire departments, health departments and/or county emergency management personnel. The Northwest Area Contingency Plan (NWACP) will be referenced for reaching out to at risk populations.

Air Monitoring Equipment

Air monitoring instruments will be provided by CTEH. Current equipment available to BP for an actual event are listed below. The most current list of air monitoring equipment will be kept by BP and can be made available upon request.

Detection limits used by responders will be established by utilizing the information provided by Section 9418 of the NWACP.

Figure 2.5: Air Monitoring Equipment

Industrial Hygiene Equipment	
Instrument	
3M Edge 5 Noise Dosimeter	MultiRAE Pro
Analytical Pump Battery Set (5 pack)	Nasal Ranger
AreaRAE 5-gas Monitor	Nextstep CLPX
Audio Mapping Software	OHD Fit Tester 3000
CAL2000 Gas Generator	Ohio Lumex
Drager Accuro Pump	ppbRAE Plus
Drager XAM5100	ProRAE Guardian Software
DryCal DC-Lite Primary Flow Meter	ProRAE Host Control Kit
EntryRAE	Quest NoisePro DL (5 pack)
GasTec GV-100 Piston Pump	Quest QC-10 Calibrator
GilAir Sampling Pump (per pump)	Quest SoundPro Sound Level Monitor DLX
Hapsite ER SituProbe Sampling System	RAE Link
Hapsite ER SPME Sampling System	RAE Link Mesh Kit
Hapsite ER Thermal Desorber Sampling System	Riken Formaldehyde Monitor
Hapsite GC/MS Headspace Unit**	SapphIRe IR with Thermomatch Software
Hapsite GC/MS Service Module**	Scott Nextstep SPM
Hapsite GC/MS**	SKC Analytical Pump (per pump)
HVS3 Vacuum	SKC Quick Take Hi-Vol Pump
IAQ Calc	ToxiPro Express Docking Station
Jerome 431-X Mercury Vapor Analyzer	ToxiPro Personal Monitor
Meteorological Station	ToxiRAE Plus Personal Monitor
Meteorological Station with onsite Dispersion	TSI AM510 Aerosol Monitor
Minican Sampling Canister	TSI DustTrak Aerosol Monitor
MiniRAE 2000	TSI DustTrak-DRX
Modeling Software	TVA-1000B (PID/FID)

MultiRAE Lite	UltraRAE 3000
MultiRAE Plus 5-gas Monitor	Zefon Aerosol Pump
Environmental Equipment	
Instrument	
D.O. Meter (YSI 55)	Manta II Dataport – computer interface
HACH Ammonia Kit	Oil/Water Interface Probe
HACH Surface Water Quality Kit	pH Meter
Hazmat Kit	Ponar
Hazmat ID (FTIR)	Stream Flow Meter
Kemmerer Sampler	Turbidity Meter
Manta II Datalogger	YSI Multi-Probe Plus

2.6 Spill Volume Estimates

Estimated spill volume is required to:

- Report to agencies,
- Determine liquid recovery requirements,
- Determine manpower and equipment requirements, and
- Estimate disposal and interim storage requirements.

If the volume of the spill is unknown, the IC, with guidance from HSSE personnel, should consider the following criteria to determine if reporting is required:

1. If the spill is ongoing; and
2. Whether the spill is located in an area that is adjacent to waters of the state or where there is a pathway to waters of the state, and the environmental conditions, such as rain events, or known shallow groundwater make impacts to water of the state likely.

Actual spill volumes are often unavailable or inaccurate so field estimates are usually required. Some rapid estimation methods are:

Catastrophic Failure during Transfer Operations

Multiply the pumping rate by the elapsed time of the leak and add the contents of the line between the closest valves or isolation points. Line volume can be determined using the Valve Effectiveness Study.

Volume Spilled (barrels [bbls]) = Pump Rate (bbls/min) x Elapsed time (min) + Line Contents (bbls)

Tank Overfills

- Multiply the elapsed time of the leak by the pumping rate.
- Volume spilled (bbls) = elapsed Time (min) x Pump Rate (bbls/min)

Visual Assessment

If a more accurate method is not available, the spill size can be estimated by conducting a visual

assessment of the surface area and thickness. Refer to Figure 2.4 for rough approximations of spill volume. These factors may yield unreliable results due to:

- Color interpretation of sheen varies with different observers.
- Appearance of a slick varies depending on available sunlight, sea state, river current and viewing angle.
- Different products behave differently, depending on their properties and local conditions.

Figure 2.6: Spill Estimation Factors

Oil Thickness Estimations				
Standard Term	**Approx. Film Thickness**		**Approx. Quantity of Oil in Film**	
	inches	**mm**		
Barely Visible	0.0000015	0.00004	25 gallons/mile^2	44 liters/km^2
Silvery	0.000003	0.00008	50 gallons/mile^2	88 liters/km ^{2}
Slightly Colored	0.000006	0.00015	100 gallons/mile^2	179 liters/km ^{2}
Brightly Colored	0.000012	0.0003	200 gallons/mile ^{2}	351 liters/km ^{2}
Dull	0.00004	0.001	666 gallons/mile ^{2}	1,168 liters/km ^{2}
Dark	0.00008	0.002	1,332 gallons/mile ^{2}	2,237 liters/km ^{2}
Thickness of light oils: 0.0010 inches to 0.00010 inches				
Thickness of heavy oils: 0.10 inches to 0.010 inches				

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2.6.1 River Current Estimation

River current is an important factor in determining the oil spill trajectory and which Geographic Response Plans can be deployed ahead of the moving slick. A quick estimate of current speed can be obtained using the “stick” method.

To measure by the “stick” method, drop a stick into the main stream of a river and measure the time it takes for the stick to travel 100 feet down stream. See Figure 2.5 to estimate river speed.

Figure 2.7: River Speed using the Stick Method

Time Required for Stick to go 100 feet (seconds)	Current Speed (miles per hour)
136	0.5
68	1.0
45	1.5
34	2.0
27	2.5

Time Required for Stick to go 100 feet (seconds)	Current Speed (miles per hour)
23	3.0
19	3.5
17	4.0
15	4.5
14	5.0
11	6.0
10	7.0
9	8.0
8	9.0
7	10.0

2.6.2 Oil Slick Velocity / Location Estimate

Based on the estimated nature of stream flows select the probable oil slick velocity (miles/hour):

- Estimate the total time until recovery can start (hours):
  - Estimate the time since the spill was identified
  - Add the time required to mobilize the response equipment and personnel to the control point
  - Add the time to deploy
- Estimate the distance that the spill will advance downstream (miles):
  - Use the total time estimated above
  - Multiply by the current speed estimated in Figure 2.5.
- Estimate the location of the front of the oil spill:
  - Determine the location on the river where the spill occurred
  - Locate the leading edge of the spill using the distance downstream estimated above
  - Select a Geographic Response Plan (NWACP or Olympic) downstream of the leading edge

2.6.3 Estimating Spill Trajectories

Oil spill trajectories should be estimated in order to predict direction and speed of product movement, impact on shorelines and other sensitive areas, and the most effective location to mobilize spill response resources for protection, containment, and recovery. Worst case discharge volume trajectories for the Olympic Pipe Line System can be found in Appendix E and Appendix D for the Cherry Point Crude Pipeline.

Oil spill trajectories can be estimated using vector addition or with computer programs. Hand calculations typically use the following assumptions:

- Oil moves at approximately the same direction and speed as water currents, unless the winds are strong.
- Multiply wind speed by 0.034 to determine the effect of winds on spill movement.

- The combined effects of winds and currents to estimate spill movement speed and direction.

More sophisticated predictions can be obtained from computer programs. Oil spill trajectory services can be obtained from National Oceanic and Atmospheric Administration (NOAA) through the Federal On-Scene Commander.

2.7 Initial Containment Actions

Initial containment actions will focus on onsite containment in the most effective manner to:

- Limit the spread of oil, thereby, preventing the oil from impacting water, and reducing the surface area and the shoreline to be cleaned;
- Concentrate the oil, when safe to do so, making physical recovery more efficient; and
- Limit the environmental impact to the immediate spill area.

Selection of the appropriate location and method will depend upon:

- Length of time spill occurs before being noticed,
- Amount of spill,
- Area of coverage; and
- Environmental factors such as wind speed and direction.

2.7.1 Safety Considerations

- Containment actions should not be conducted during inclement weather or unsafe conditions, such as high winds or rapid currents.
- Eliminate all ignition sources.
- Avoid contact with the spilled product and ensure that the area remains secure to air traffic.
- Be aware of potential changes in position and movement of slick due to tidal action.

In the event of emergencies such as fire or explosion requiring services such as rescue, evacuation, traffic control, etc., the first responder will attempt to establish a safe perimeter. Local emergency responders notified via 911 will conduct emergency response activities listed above. Pipeline operations for these situations are addressed in the Olympic OMER Manual.

2.8 Incident Classification

To ensure consistency in spill reporting and response, the Company has adopted the spill classification system summarized below.

Classification	**Spill Volume**
Tier I	Less than 5 bbls
Tier II	5 - 100 bbls
Tier III	More than 100 bbls

2.9 Evacuation

Evacuation may become necessary to protect personnel and public from hazards associated with an incident. Orderly evacuation is essential to protect the general public as well as company personnel and

property. Evacuation routes have been established and posted at each facility. A site orientation for new employees and visitors will be provided to ensure their awareness of the evacuation routes, muster points, who is responsible for ordering an evacuation and the accounting process using the sign in/sign out sheet.

During a larger incident, the IC should work with local responders to determine safe evacuation routes early in an incident to reduce confusion if evacuation becomes necessary. Muster points shall be at a safe distance from the incident in an appropriate direction (up wind, upstream, and upgrade). If the muster points do not provide adequate shelter, transportation to a central shelter should be arranged after all personnel are accounted for. Local police, fire, and Emergency Medical Services (EMS) must be notified of the evacuation as well as the location of the shelter. As the incident progresses, the IC must continuously evaluate the adequacy and necessity of the shelter. Use Figure 2.6 as reference when not utilizing site specific procedures.

Personnel evacuating their work areas should shut down all operating equipment, secure all sensitive materials, shut off water and electrical power, and follow direction from the runners. Runners (those identified during the site orientation) will direct personnel to the muster points, account for all personnel, ensure the evacuated area is secured, and report the status of the evacuation to the command post. Evacuated personnel shall remain at the shelter until directed otherwise. Local utility companies may be called to secure services to the site if necessary.

Figure 2.8: Evacuation Checklist

Action	Initials
Determine safe evacuation routes.	
Account for personnel.	
Identify muster points.	
Assign Runners to direct evacuation and account for all personnel.	
Identify adequate shelter.	
Arrange transportation to shelter.	
Shutdown all pumping and transfer systems.	
Shut in and properly secure facility and well sites.	
Close valves.	
Secure all electrical panels.	
Establish a secure perimeter around the evacuated area to prevent unauthorized entry.	
If time allows remove sensitive materials from the work site to prevent theft or damage.	
Account for all personnel.	
Ensure adequate medical care for injured personnel.	
Notify local police, fire and Emergency Medical Services (EMS) of the evacuated area, the reason for evacuation, and the location of the muster point.	
Notify Incident Commander (IC).	
Evaluate the adequacy of and need for shelter.	

2.10 Personnel Accountability

Send Word Now will be used for personnel accountability per the USPL Incident Management Plan. Contact the BP Notification Center to activate Send Word Now.

Notification Center 24 Hour Toll Free:	1-800-321-8642 (Local +1-630-961-6200)
Notification Center e-Mail:	notcen@bp.com

2.11 Medical Emergency/Personal Injury

Figure 2.9: Medical Emergency/Personal Injury Checklist

Response Actions	Comment
Medical emergencies may involve and/or be categorized as follows: • First Aid - One or more patients with minor injuries which can be effectively managed with the application of routine First Aid. This type of injury does not require medical transport to a hospital, but may require follow-up with a Physician. • Serious - One or more patients with moderate to serious injuries, requiring response by local Emergency Medical Services (EMS) and may include transport to a hospital for advanced care and treatment. • Life-Threatening - One or more patients with serious or life-threatening injuries, requiring response by local EMS and includes transport to a hospital for advanced care and treatment.	
Assess the scene. Take the following steps, if necessary.	
Establish a secure perimeter around the area to prevent unauthorized entry. If Electrical Emergency (i.e. arc flash, etc.) do not approach patient. Ensure power source has been de-energized/Locked Out Tagged Out	
Call 911 or summon local EMS (Figure 3.3) to the scene; provide information on the nature of injuries and number of injured persons.	
If trained, provide First Aid/CPR as necessary, until EMS arrives at the scene; injured personnel should not be moved unless the situation is life threatening.	
Assist with Medical Evacuation (via air or ground transport) as recommended by EMS personnel.	
Notify Team Leader and make appropriate internal and external notifications (Section 3).	
In case of a fatality: • Do not move the victim. • Do not release name of victim(s). • Contact local law enforcement. • Contact local medical authority. • Preserve the scene and secure the area. • Restrict all communications concerning the incident (do not release names of victims).	
Conduct post-incident debrief and After Action Report.	
Ensure all incident/response documentation is compiled and filed.	

SECTION 3 NOTIFICATIONS

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List of Figures

3.1 Emergency and Notification Procedures

The notification sequence for a spill is as follows:

- The Spill Observer/First Responder will notify the Renton Control Center or Tulsa Control Center (Cherry Point Crude Pipeline and Butane Pipeline only) and if necessary 911 then identify and control the source of a spill, if safe to do so.
- The Operations Controller will notify the Area Operations and Maintenance (O&M) Team Leader and the Control Center Team Leader.
- The Control Center Team Leader will notify the District Operations Manager (Qualified Individual [QI]), Alternates, if necessary, and Environmental Coordinator who will make additional notifications as illustrated in the Notifications Flow Chart (Figure 3.1).

The priority of actions and response procedures will depend upon actual circumstances and will be determined by the Incident Commander. Follow up notifications are the responsibility of the Environmental Coordinator.

3.2 Notification Procedures for Reports from Outside Sources

Notifications for reports from outside sources are as follows:

- The Control Center Operator will notify the Team Leader and Control Center Supervisor.
- If the investigation is from a credible source and is:
  - Conclusive – The Control Center Supervisor will notify the District Manager (QI) and Environmental Coordinator upon spill awareness. The Environmental Coordinator will make all required regulatory notifications.
  - Inconclusive – Within one hour of field personnel arriving on scene, the Control Center Supervisor will notify the District Manager (QI) and Environmental Coordinator if there are indications of a potential release. The Environmental Coordinator will make all required regulatory notifications.

Figure 3.1: Spill Notification Form

Spill Assessment Form

Date: _____ Time: _____

Name of person(s) completing report (list all controllers on-duty):

_____

_____

☐ Discoverer / Responder ☐ Controller* ☐ Other*

*If Controller or Other, information / complaint received from:

☐ Employee/contractor ☐ Public ☐ Other (i.e. agency) _____

Name, address, and phone number of persons making report:

_____

_____

(_____) _____

☐ Spill ☐ Odor Complaint ☐ Other _____

Location: _____

County: _____ City: _____ MP: _____

If Spill: onto ☐ Land ☐ Water ☐ Containment ☐ Other _____

Nearest Watercourse (name and distance, if known): _____

Source: ☐ Pipe ☐ Tank ☐ Valve ☐ Pump ☐ Fitting ☐ Other _____

Product: ☐ Gasoline ☐ Diesel ☐ Jet ☐ Transmix ☐ Other

Estimated Qty: _____ ☐ gallons ☐ barrels

☐ Fire ☐ Explosion ☐ Evacuations ☐ Damage ☐ N/A

Number of Injured:_____ Fatalities:_____ Number Evacuated: _____

Damage in Dollars:_____ ☐ N/A

Cause: ☐ Equipment Failure ☐ Operator Error ☐ Natural Phenomenon ☐ Unknown

Weather Conditions: ☐ Clear ☐ Cloudy ☐ Raining ☐ Snowing ☐ Other _____

Temperature: _____º F Wind Direction/Velocity _____

Brief Incident Description: _____

_____

INITIAL NOTIFICATIONS				
Upon Discovery of a product discharge, the Spill Observer/First Responder shall immediately notify Control Center for any loss of primary containment:				
NOTIFY	**TIME**		**CONTACT**	
Control Center (888) 271-8880				
If this is believed an emergency, immediately notify 911.				
NOTIFY	**NO**	**YES**	**TIME**	**CONTACT**
Has 911 been notified?				
Immediately upon notification, verification or suspicion of a release, the Controller Center Personnel shall complete the Spill Assessment Form.				
NOTIFY	**TIME**		**REMARKS**	
Control Center Team Leader				
The Control Center Team Leader shall notify the following Olympic personnel:				
NOTIFY	**TIME**		**REMARKS**	
Environmental Coordinator and/or Safety Coordinator				
District Operations Manager				
The Area Operations and Maintenance (O&M) Team Leader will begin obtaining resources necessary for operations to respond to the spill. Must determine if a Spill Response Contractors should be deployed and assess the need to activate an Incident Management Team (IMT). Spill Response Contractors Contact list provided on page 27.				
The Environmental Coordinator will notify the applicable Regulatory Agencies, the US Pipelines & Logistics (USPL) Department of Transportation (USDOT) Team (if reported to National Response Corporation Environmental Services Inc. [NRCES] or Washington Utilities and Transportation Commission [WUTC]), the USPL Crisis Management Advisor, Environmental Team Lead, Health, Safety, Security, and Environment (HSSE) manager, and Communications & External Affairs. Immediate Regulatory Agency Notifications provided on page 9.				
The District Operations Manager will make additional BP internal notifications as necessary. (i.e. Head of Operations and HSSE and BP Notification Center).				

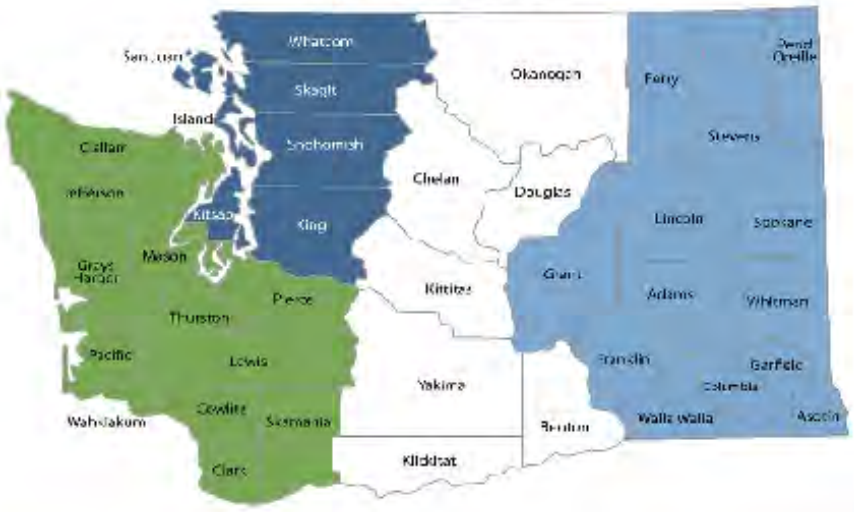
Note: Additional contacts and notifications can be logged on Incident Command System (ICS) Form 214a located in last section of Field Document

IMMEDIATE REGULATORY AGENCY NOTIFICATIONS				
Agency	**Phone Number**	**Time**	**Contact**	**Notification Requirements ***
National Response Center Incident #	(800) 424-8802			A volume of ≥5 gallons is released (5 barrels [bbl]. if result of maintenance work). Verbal notification required within one hour.
Washington State				
Department of Emergency Management Incident #	(800) 258-5990			Any size oil spill threatening or in Washington state waters. Immediate verbal notification required.
Washington Utilities & Transportation Commission (WUTC)	(888) 321-9144			Verbal notification is required within two hours of the discovery of an incident involving company's pipeline, such as a release of a hazardous liquid.
Department of Ecology – NW	(425) 649-7000			All spills to waters of the state, ground and to permeable secondary containment that threaten to impact waters of the state. Immediate verbal notification required.
Department of Ecology – SW	(360) 407-6300			
Oregon State				
Oregon Emergency Response System (OERS) Incident #	(800) 452-0311			Any size oil spill threatening or in Oregon state waters. Immediate verbal notification required.

* Refer to Section 3 Figure 3.4 – Required Agency Notifications for additional reporting standards.

Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region | Northwest Region | Central Region | Eastern Region

Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	3190 160th Ave SE Bellevue, WA 98008	425-649-7000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Headquarters	Across Washington	PO Box 47600 Olympia, WA 98504 -7600	360-407-6000

NORTHWEST PIPELINES DISTRICT CONTACTS			
Personnel	**Phone Number**	**Time**	**Comments**
Sandra Conlan Control Center Team Leader	(206) 786-1532		
Terry Zimmerman District Operations Manager	(219) 973-5985		
Dustin Lambert Central Operations and Maintenance (O&M) Team Leader	(425) 351-9938		
Jeff Berry South O&M Team Leader	(206) 510-0562		
Joseph Paquette North O&M Team Leader	(331) 229-6057		
Alexandria Crooks Environmental Coordinator	(425) 591-3599		
Michaela Decker Safety Coordinator	(312) 434-2764		
Jennifer Dively Health, Safety, Security, and Environment (HSSE) Manager	(219) 293-6333		
Pam Brady Communications & External Affairs	(360) 920-1171		
James Fraley US Pipelines & Logistics (USPL) Department of Transportation (USDOT) Advisor	(360) 957-0203		
BP Notification Center	(800) 321-8642		
Kristen Hancock Interim USPL Crisis Management Advisor	(331) 702-4480		

Figure 3.2: Incident Management Team (IMT) Incident Potential Worksheet (IPW)

If an Incident has disrupted normal Operations this IPW shall be used by the Qualified Individual (QI) to assist in determining if a Facility Response Plan / Emergency Response Action Plan shall be activated.

- If the IMT is activated this IPW shall be attached to the response documentation
- If the IMT is not activated this IPW shall be attached to the IRIS Incident report.
- If the IMT is activated notify the Business Support Team (BST) Leader.
- In the case additional personnel is required Olympic can activate the BP Mutual Response Team (MRT) and utilize The Response Group (TRG) a state approved Spill Management Team (SMT).
- When answering the Escalation Potential question refer to BP Response Priorities: People, Environment, Property, Business

Incident Name: _____ Incident Date: _____ Prepared By (QI or Alternate): _____ Consulted: HSSE _____ Operations_____ C&CM_____ Other_____ Incident Subject Matter Expert (SME)_____ Approved By: _____	Type Of Incident: ☐ Loss of Primary Containment ☐ Natural Disaster/ Severe Weather ☐ Fire/Explosion ☐ Medical Emergency ☐ Security

ESCALATION POTENTIAL?		
Current Situation:		
Is the Incident under control: • Is the Scene Safe? • Is the Source Secure? • Is the extent of impact known? • Has the situation been contained /controlled?	Yes	Continue to monitor and re-evaluate if the Situation changes for the worse or you can stand down
	No	Activate IMT and Refer to the appropriate Emergency Response Plan, per the incident type.
Does the asset have the resources to maintain control of the Incident and return to normal operations? • Return to normal operation in 24 hours or less? • Personnel trained to respond to incident type?	Yes	Continue to monitor and re-evaluate if the Situation changes for the worse or you can stand down
	No	Activate IMT and Refer to the appropriate Emergency Response Plan, per the incident type.
Does the Incident have the potential to escalate with little to no notice? • Is there potential that Media will become involved? • Is there potential that Regulators will become involved? • Are there outside forces (Weather, Local authorities, etc.) that may impair your ability to return to normal operations	Yes	Activate IMT and Refer to the appropriate Emergency Response Plan, per the incident type.
	No	Continue to monitor and re-evaluate if the Situation changes for the worse or you can stand down
Additional Comments:		

Figure 3.3: Additional Notifications

*24 Hour Number

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
A. COMPANY PERSONNEL:			
Renton Control Center	(888) 271-8880*		
BP Notification Center (Mutual Response Team [MRT] and Business Unit Leader notification)	(800) 321-8642* (312) 856-2200*		
BP Group Security	(630) 420-4400		
B. COMPANY FACILITIES:			
Anacortes Pump Station	(360) 293-3551 (Main) (360) 293-8855 (Fax)		
Allen Pump Station	(360) 428-4214 x6007 (Main) (360) 757-1972 (Fax)		
Bayview Products Terminal	(360) 428-4214 (Main) (360) 848-1484 (Fax)		
Castle Rock Pump Station	(360) 274-4361 (Main) (360) 274-8172 (Fax) (360) 274-8385 (Alternate)		
Cherry Point Pump Station	(360) 371-7411 (Main) (360) 371-5614 (Fax)		
Shell Booster	(360) 293-5858 (Main)		
Ferndale Pump Station	(360) 384-4231 (Main) (360) 384-4200 (Fax)		
Linnton Delivery Facility	(503) 286-3272 (Main) (503) 285-8396 (Alternate)		
Olympia Junction	(360) 446-2300 (Main) (360) 446-7842 (Fax)		
Portland Delivery Facility	(503) 286-3997 (Main) (503) 285-8395 (Alternate) (503) 289-7427 (Fax)		
Portland Junction	(503) 222-1528 (Main)		
Renton Control Center	(425) 235-7726 (Main) (888) 271-8880 (Emergency) (206) 235-7717 (Fax)		

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
Renton Admin Office	(425) 981-2518 (Main) (425) 981-2525 (Fax)		
Sea-Tac Delivery Facility	(206) 246-0247 (Swissport)		
Seattle Delivery Facility	(206) 682-1211 (Main) (206) 343-7488 (Fax)		
Tacoma Pump Station	(253) 271-0341 (Main) (253) 271-7946 (Fax)		
Tacoma Delivery Facility	(253) 627-2505 (Main) (253) 627-1447 (Fax)		
Tacoma Junction	(253) 271-0341 x2529 (Main)		
E Booster	(360) 293-5555 (Main)		
Vancouver Junction	(360) 695-8723 (Main)		
Vancouver Delivery Facility	(360) 693-1364 (Main) (360) 693-8255 (Fax)		
Woodinville Pump Station	(425) 398-3846 (Main) (425) 481-1666 (ROW) (425) 483-9022 (Fax)		
C. NOTIFICATIONS AS APPROPRIATE:			
Federal Agencies			
U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA)	(202) 366-4000 (202) 366-4595		
National Oceanic and Atmospheric Administration (NOAA) Office of Response and Restoration - Seattle	(206) 526-6317* (206) 526-6329 (Fax)		
National Weather Service - Seattle	(206) 526-6087 (206) 424-2000 (#9000) after hours		
Federal Bureau of Investigation - Seattle	(206) 622-0460		
U.S. Fish and Wildlife Service Environmental Contaminants Olympia, WA Portland, OR	 (360) 753-5821 (503) 231-6223		
U.S. Army Ft. Lewis Haz. Waste Management	(253) 967-4786		

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
U.S. Army Ft. Lewis Environmental Division	(253) 967-5646		
U.S. Army Ft. Lewis Fire Department	(253) 967-7161		
U.S. Navy Naval Shipyard	(360) 476-3466		
U.S. Navy Naval Base Seattle	(206) 526-3225		
U.S. Navy Supervisor of Salvage	(202) 695-0231		
Department of Interior Environmental Affairs	(503) 231-6157		
Nisqually National Wildlife Refuge	(360) 753-9467		
State Agencies:			
Oregon Department of Environmental Quality	(800) 452-4011		
Washington Highway Patrol (Emergency Only)	(360) 757-1175*		
Washington State Department of Fish and Wildlife • Oil Spill Response Team/Emergency Hydraulic Project Approval • North Puget Sound Region 4 (Mill Creek) (King, Skagit, Snohomish, and Whatcom Counties) • Southwest Washington Region 5 (Vancouver) (Lewis, Cowlitz and Clark Counties) • Coastal Washington Region 6 (Montesano) (Thurston and Pierce Counties)	(360) 534-8233* (425) 775-1311 (360) 696-6211 (360) 249-4628		
Washington State Department of Natural Resources (Regional)	(360) 856-3500		
Washington Department of Parks and Recreation	(360) 755-9231		
Washington State Fire Marshall	(360) 753-0433		
Oregon Department of Fish and Wildlife	(503) 872-5255, x5591 or 5587		
Tribal Councils:			

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
Lummi Nation/Natural Resource Department	(360) 384-2225		
Muckleshoot Indian Tribal Council	(253) 939-3311		
Nisqually Indian Community Council	(360) 456-5221		
Nisqually Tribal Police	(360) 459-9603		
Nooksack Indian Tribal Council	(360) 592-5176		
Puyallup Tribal Council	(253) 597-6200		
Squamish Tribal Council.	(360) 598-3311		
Stillaguamish Board of Directors	(360) 652-7362		
Upper Skagit Tribal Council	(360) 856-5501		
D. PRIMARY OIL SPILL RESPONSE CONTRACTORS:			
National Resources Corporation Environmental Services Inc. (NRCES)	(800) 337-7455*		
Marine Spill Response Corporation (MSRC)	(425) 252-1300* (800) 259-6772*		
E. FIRE SERVICES, MEDICAL SERVICES AND ACCOMMODATIONS BY COUNTY:			
CLARK COUNTY:			
Fire Services: 911 or (360) 696-4461			
Clark County Fire District 5	(360) 759-4404		
Vancouver Fire Department	(360) 696-8166		
Medical Services:			
Memorial Urgent Care Clinic	(360) 696-5232		
Southwest Washington Medical Center	(360) 256-2000		
Accommodations:			
Best Western Inn of Vancouver	(360) 254-4000		
Comfort Inn	(360) 574-6000		
Ramada Inn	(360) 253-5000		
COWLITZ COUNTY:			
Fire Services: 911 or (360) 577-3098			
County Wide Dispatch	(360) 577-3098		
Castle Rock Fire Department			
Fire District #1 -- Woodland			
Fire District #2 - Kelso			
Fire District #3 - Toutle			

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
Fire District #5 - Kalama			
Fire District #6 - Castle Rock			
Kelso Fire Department			
Longview Fire Department			
Medical Services:			
Saint John Medical Center	(360) 423-1530		
Accommodations:			
Cowlitz Comfort Inn	(360) 425-4600		
Cowlitz Red Lion	(360) 636-4400 (800) 733-5466		
Kelso Super 8 Motel	(360) 423-8880		
KING COUNTY:			
Fire Services: 911 or (206) 296-3311			
Valley Com Dispatch	(253) 852-2121		
Auburn /Kent/Tukwila			
Burien/Normandy Park Fire District #2 - Seattle			
Des Moines Fire District #26			
E. FIRE SERVICES, MEDICAL SERVICES AND ACCOMMODATIONS BY COUNTY:			
Fire District #24 - Sea-Tac	(253) 852-2121		
Skyway Fire District #20 - Seattle			
Federal Way Fire Department	(253) 839-6234		
Renton Fire District #25	(253) 852-2121		
Fife Fire Department	(253) 627-0151		
Bellevue/Redmond	(425) 452-6917		
Fire District #16 - Kenmore	(425) 486-2784		
Kirkland Fire Department	(425) 587-3400		
North Highline Fire District - Seattle	(206) 243-0330		
Sea-Tac Fire Department	(253) 852-2121		
Seattle Fire Department	(206) 386-1498		
Medical Services:			
Harbor View Medical Center	(206) 731-3241		
Overlake Hospital	(425) 688-5000		

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
Swedish Medical Center	(206) 386-6000		
Valley Medical Center	(425) 251-5185		
Virginia Mason Hospital	(206) 624-1144		
Accommodations:			
Red Lion - Bellevue	(425) 455-5240		
Days Inn - Bellevue	(425) 643-6644		
Holiday Inn - Renton	(425) 226-7700		
Holiday Inn – SeaTac	(206) 248-1000		
Days Inn - SeaTac	(206) 244-3600		
Best Western Inn - Seattle	(206) 448-9444		
Days Inn - Tacoma	(253) 475-5900		
LEWIS COUNTY:			
Fire Services: 911 or (360) 740-1105			
Centralia Fire Department	(360) 330-7681		
Chehalis Fire Department	(360) 748-3394		
Fire District #2 - Toledo	(360) 864-2366		
Fire District #6 - Chehalis	(360) 748-6019		
Fire District #15 - Winlock	(360) 785-4221		
Napavine Fire Department	(360) 262-3320		
Medical Services:			
Capitol Medical Center	(360) 754-5858		
Providence Hospital	(360) 736-2803		
Saint Peter Hospital	(360) 493-7289		
Accommodations:			
King Oscar Motel	(360) 736-1661		
MULTNOMAH COUNTY, OR:			
Fire Services: 911 or			
Fire Marshal	(503) 731-3423		
Portland Fire Bureau	(503) 823-3700		
Medical Services:			
Good Samaritan Hospital & Medical Center	(503) 413-7711		

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
Providence Medical Center	(503) 215-1111		
Accommodations:			
Courtyard by Marriott	(503) 735-1818		
Red Lion Inn at The Quay	(360) 694-8341		
E. FIRE SERVICES, MEDICAL SERVICES AND ACCOMMODATIONS BY COUNTY:			
PIERCE COUNTY:			
Fire Services: 911 or (253) 798-7470			
Central Pierce Fire & Rescue #6, 7, 9 - Tacoma	(253) 588-5217		
Fife Fire District - Tacoma	(253) 627-0151		
Fort Lewis Fire Department	(253) 967-2427		
North Puyallup Fire District #11 - Puyallup	(253) 841-5432		
Riverside Fire District #14 - Puyallup	(253) 841-5432		
Roy/Lacamas/McKenna District #17	(253) 588-5217		
Medical Services:			
Allenmore Hospital	(253) 459-6633		
Good Samaritan Hospital	(253) 848-6661		
Saint Claire Hospital	(253) 588-1711		
Saint Joseph Hospital	(253) 627-4101		
Tacoma General Hospital	(253) 403-1000		
Accommodations:			
Days Inn - Clover Park	(253) 475-5900		
SKAGIT COUNTY:			
Fire Services: 911 or (360) 336-3146			
County Wide Dispatch	(360) 336-3131		
Alger Fire Station	(360) 724-3451		
Glen Oak Fire Station	(360) 424-7296		
Anacortes Fire Station	(360) 293-1925		
Burlington Fire Station	(360) 755-0261		
Conway Fire Station	(360) 445-5041		
Edison-Bow Fire Station	(360) 766-3125		
La Conner Fire Station	(360) 466-3125		

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
Mount Vernon Fire Department	(360) 336-6277		
Medical Services:			
Cascade Valley Hospital	(360) 435-2133		
Skagit Valley Hospital	(360) 424-4111		
Whidbey General Hospital	(360) 678-5151		
Accommodations:			
Best Western Cotton Tree Inn	(360) 428-5678		
Best Western College Inn	(360) 424-4287		
County Inn	(360) 293-3494		
Ship Harbor Inn	(360) 293-5177		
SNOHOMISH COUNTY:			
Fire Services: 911 or (425) 407-3930			
Everett Fire Department	(425) 257-8100		
Fire District #7 - Clearview	(360) 668-5357		
Fire District #8 - Lake Stevens	(425) 334-3034		
Fire District #11 - Everett	(425) 257-8140		
Fire District #13 & #15 - Marysville	(425) 651-5080		
Fire District #14 - Stanwood	(360) 629-3011		
Fire District #21 & #22 - Arlington	(425) 258-2484		
Marysville Fire Department	(360) 363-8500		
Medical Services:			
Cascade Valley Hospital	(360) 435-2133		
Everett Medical Center	(425) 261-1500		
E. FIRE SERVICES, MEDICAL SERVICES AND ACCOMMODATIONS BY COUNTY:			
SNOHOMISH COUNTY:			
Medical Services:			
Providence General Hospital	(425) 258-7555 (425) 258-7123		
Providence General Medical Center	(426) 261-3000		
Stevens Hospital	(425) 640-4000		
Accommodations:			
Arlington Motor Inn	(360) 652-9595		
Best Western Tulalip Inn	(360) 659-4488		

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
Best Western Cascadia Inn	(425) 258-4141		
Quality Inn	(425) 337-2900		
THURSTON COUNTY:			
Fire Services: 911 or (360) 704-2740			
Fire District #2 - Yelm	(360) 458-2799		
Fire District #3 - Lacey	(360) 491-9555		
Fire District #4 - Rainier	(360) 446-2419		
Fire District #6 - East Olympia	(360) 491-5533		
Olympia Fire Department	(360) 753-8348		
Fire District #9	(360) 273-5060		
Fire District #12 - Tenino	(360) 264-4116		
Fire District #15 - Tumwater	(360) 754-2745		
Medical Services:			
Capitol Medical Center	(360) 754-5858		
Saint Peter Hospital	(360) 493-7289		
Accommodations:			
Clarion Hotel	(360) 352-7200		
Best Western Tumwater Inn	(360) 956-1235		
Olympia Quality Inn	(360) 943-4710		
The Governor Hotel	(360) 352-7700		
Red Lion Olympia Hotel	(360) 943-4000		
WHATCOM COUNTY:			
Fire Services: 911 or (360) 676-6711			
County Wide Dispatch	(360) 676-6811		
Bellingham Fire Department			
Fire Services, Continued:			
Fire District #2 - Bellingham	(360) 676-6811		
Fire District #3 - Bellingham			
Fire District #6 - Bellingham			
Fire District #7 - Ferndale			
Fire District #8 - Bellingham			
Fire District #9 - Lake Samish			

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
Fire District #17 - Ferndale			
Medical Services:			
Saint Joseph Hospital	(360) 734-5400		
United General Hospital	(360) 856-6021		
Accommodations:			
Bellingham Comfort Inn	(360) 738-1100		
Bellingham Days Inn	(360) 671-6200		
Best Western Heritage Inn	(360) 647-1912		
E. FIRE SERVICES, MEDICAL SERVICES AND ACCOMMODATIONS BY COUNTY:			
WHATCOM COUNTY:			
Accommodations:			
Best Western Lakeway Inn	(360) 671-1011		
Hampton Inn Bellingham	(360) 676-7700		
F. MEDIA (Seattle Area):			
TV:			
KWPX-TV	(206) 386-8033		
KSTW	(206) 441-1111		
KIRO	(206) 728-7777		
KOMO	(206) 443-4000		
KING	(206) 448-5555		
KONG	(206) 448-3166		
KCPQ	(206) 674-1313		
Radio:			
KRIZ/KYIZ	(206) 329-7880		
KBLE	(206) 324-2000		
KOMO/KPLZ/KVI	(206) 223-5700		
KISW	(206) 421-5479		
KMTT	(206) 233-1037		
Newspaper:			
Kent Reporter	(425) 204-7838		
Renton Reporter	(425) 271-6673		
Seattle Post Intelligencer	(206) 870-7851		

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
Seattle Times	(206) 464-2000		
G. OTHER PIPELINE 24 HR EMERGENCY:			
Puget Sound Energy	(888) 225-5773		
Trans Mountain Pipeline	(888) 876-6711		
Williams Gas Pipeline	(800) 972-7733		
H. REFINERY AND DELIVERY POINT CONTACTS:			
Refineries:			
BP	(360) 371-1107		
Phillips 66	(360) 384-8283		
Tesoro	(360) 293-9145		
Shell	(360) 293-1758		
Delivery Points:			
Allen Station • Bayview-Puget Sound Energy (PSE)	(888) 225-5773		
Renton Station • Phillips 66	(425) 228-6142		
Seattle Delivery Facility (DF) • Shell • Kinder Morgan • BP	(206) 224-0489 (206) 682-4706 (206) 623-4635		
SeaTac DF • SwissPort Fueling Inc.	(206) 246-0407		
Tacoma DF • Phillips 66 (T1) • Nustar Terminal • Targa Terminal	(253) 627-3878 (253) 627-5711 (253) 606-7227		
Vancouver DF • Tesoro	(360) 696-2390		
Linnton DF • Kinder Morgan	(503) 286-1691		
Portland DF • BP • Nustar	(503) 286-8254 (503) 286-6701 (Main) (503) 539-7610 (Cell)		

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
Portland Junction • Kinder Morgan • Shell • Chevron • Phillips 66 • McCall	(503) 220-1246 (503) 226-3571 (503) 221-7866 (503) 248-1565 (503) 221-5755		
I. CLAIMS ADMINISTRATION			
Crawford & Company - Claims Alert	(800) 241-2541*		
Bud Trice (United States Key Contact)	(404) 229-7061 (Mobile) (404) 300-1201 (Direct) Bud_Trice@us.crawco.com		
KPMG – Claims Oversight			
Damien Margetson	+44 7887 570077 (Direct) Damien.margetson@kpmg.co.uk		
Rachel Hart	+44 7770 315799 Rachel.hart@kpmg.co.uk		

Figure 3.4: Required Agency Notifications

REQUIRED NOTIFICATIONS		
AGENCY	**ADDRESS**	**TELEPHONE NUMBERS**
National Response Center (NRC)	c/o United States Coast Guard (USCG) (CG-3RPF-2) 2100 2nd Street Southwest - Room 2111-B Washington, D.C. 20593-0001	(800) 424-8802 OR (202) 267-2675

REPORTING REQUIREMENTS

TYPE: For all spills that impact or threaten to impact navigable water or for any failure in a pipeline system that:

1. Oil Release
   a. An explosion or unintended fire occurs.
   b. A volume of ≥5 gallons is released (5 bbls if result of maintenance work).
   c. Damage to property, cost of clean-up, and product loss value exceed $50,000.
   d. A death or injury requiring hospitalization occurs.
   e. The incident is deemed significant enough to be reported to the NRC even though none of the above outcomes occurred.
   f. Any body of water is visibly polluted by a BP release
2. Gas Incident
   a. Unintentional estimated gas loss of three million cubic feet or more.
   b. Damage to property, cost of repair, and product loss value exceed $50,000.
   c. A death or injury requiring hospitalization occurs.
   d. The incident is deemed significant enough to be reported to the NRC even though none of the above outcomes occurred.

NOTE: The NRC is the sole federal point of contact for reporting oil and chemical spills. Once a report is received NRC is responsible for distributing the information to federal agencies such as the USCG, Environmental Protection Agency, and the U.S. Department of Transportation.

VERBAL: Immediate notification required. (Within an Hour)

WRITTEN: A written accident report (USDOT Form 7000-1) is required to the U.S. Department of Transportation Pipeline and Hazardous Materials for each failure in a pipeline system when there is a release of hazardous liquid or carbon dioxide transported resulting in any of the following:

1. explosion or fire not intentionally set by the operator.
2. release of 5 gallons or more of hazardous liquid or carbon dioxide, except no report is required for a release of less than 5 bbls resulting from a pipeline maintenance activity (40 Code of Federal Regulations [CFR] 195.50)

AGENCY	**ADDRESS**	**TELEPHONE NUMBERS**
Washington Emergency Management Division (WEMD)	Washington State Military Department Emergency Management Division Building 20 Camp Murray, WA 98430-5112	(800) 854-5406

REPORTING REQUIREMENTS

TYPE: Any size oil spill threatening or in Washington state waters.

VERBAL: Immediate notification required.

WRITTEN: None.

AGENCY	ADDRESS	TELEPHONE NUMBERS
Oregon Emergency Response System (OERS)	3225 State St Salem, Oregon 97301	(800) 452-0311

REPORTING REQUIREMENTS

TYPE: Any size oil spill threatening or in Oregon state waters.

VERBAL: Immediate notification required.

WRITTEN: None.

AGENCY	ADDRESS	TELEPHONE NUMBERS
Washington Utilities and Transportation Commission (WUTC)	1300 S. Evergreen Park Dr. SW Olympia, WA 98504-7250	(888) 321-9144

REPORTING REQUIREMENTS

TYPE: Each hazardous liquid pipeline company must give telephonic notice to the commission within two hours of discovery of an incident involving that company's pipeline, such as a release of a hazardous liquid, that results in:

1. A fatality;
2. Personal injury requiring hospitalization; Fire or explosion not intentionally set by the pipeline company; Spills of five gallons or more of product from the pipeline;
3. Damage to the property of the hazardous liquid pipeline company and others of a combined total cost exceeding twenty-five thousand dollars (automobile collisions and other equipment accidents not involving hazardous liquid or hazardous-liquid-handling equipment need not be reported under this rule);
4. A significant occurrence in the judgment of the hazardous liquid pipeline company, even though it does not meet the criteria of (a) through (e) of this subsection;
5. The news media reports the occurrence, even though it does not meet the criteria of (a) through (f) of this subsection.

VERBAL: Notification required within two hours

WRITTEN: Each hazardous liquid pipeline company that has an incident above shall send a written report to the commission within thirty calendar days of the incident. The report must include the following:

1. Name(s) and address(es) of any person or persons injured or killed or whose property was damaged;
2. The extent of injuries and damage;
3. A description of the incident including date, time, and place;

4. A description and maximum operating pressure of the pipeline implicated in the incident and the system operating pressure at the time of the incident;
5. The date and time the pipeline returns to safe operations; and The date, time, and type of any temporary or permanent repair.

AGENCY	ADDRESS	TELEPHONE NUMBERS
Washington Department of Ecology (WDOE)	3190 160th Ave SE Bellevue, WA 98008-5452	(425) 649-7000 (Northwest Region) OR (360) 407-6300 (Southwest Region)

REPORTING REQUIREMENTS

TYPE: All spills to waters of the state, ground and to permeable secondary containment that threaten to impact waters of the state are considered reportable spills except:

1. Spills which are known to be less than one bbl (42 gallons) that do not impact surface or groundwater.
2. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) releases.
3. On-facility air releases to the atmosphere only.
4. Releases from underground storage tanks regulated under Washington Administrative Code (WAC) 173-360.
5. Preexisting sources or released identified as Resource Conservation and Recovery Act (RCRA) solid waste management units.
6. Spill contains within areas controlled by National Pollutant Discharge Elimination System (NPDES) permitted systems that are not likely to threaten groundwater and do not exceed applicable federal reportable quantities.

UNKNOWN QUANTITIES: If the volume of the spill is unknown, the Incident Commander, with guidance from HSSE personnel, should consider the following criteria to determine if reporting is required:

1. If the spill is ongoing; and
2. Whether the spill is located in an area that is adjacent to waters of the state or where there is a pathway to waters of the state, and the environmental conditions, such as rain events, or known shallow groundwater make impacts to water of the state likely.

VERBAL: Immediately (through WEMD after hours).

WRITTEN: A written report should follow verbal notification no later than 30 days following a release. Cleanup Reports will be submitted as required by the department.

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
AGENCY	**ADDRESS**	**TELEPHONE NUMBERS**
Occupational Safety and Health Administration (OSHA)	200 Constitution Avenue Washington, D.C. 20210	(800) 321-6742

REPORTING REQUIREMENTS

TYPE: Fatality from a work related incident or the inpatient hospitalization of three (3) or more employees as a result of a work related incident

VERBAL: Immediately

WRITTEN: As requested by the Agency

AGENCY	ADDRESS	TELEPHONE NUMBERS
USCG – Sector Puget Sound	1519 Alaskan Way South Seattle, WA 98134	(206) 217-6001

REPORTING REQUIREMENTS

TYPE: Immediately for all spills that impact or threaten navigable water or adjoining shoreline.

VERBAL: Notification to the USCG is typically accomplished by the call to the NRC.

WRITTEN: As the agency may request depending on circumstances.

AGENCY	ADDRESS	TELEPHONE NUMBERS
USCG – Sector Columbia River	2185 SE 12th Place Warrenton, OR 97146	(866) 284-6958 or (503) 861-6211

REPORTING REQUIREMENTS

TYPE: Immediately for all spills that impact or threaten navigable water or adjoining shoreline.

VERBAL: Notification to the USCG is typically accomplished by the call to the NRC.

WRITTEN: As the agency may request depending on circumstances.

AGENCY	ADDRESS	TELEPHONE NUMBERS
U.S. Fish and Wildlife Service	1849 C Street NW Washington, D.C. 20240-0002	(413) 253-8200

REPORTING REQUIREMENTS

TYPE: Wildlife Protection / Rehabilitation.

VERBAL: Immediately

WRITTEN: As the agency may request depending on circumstances

Figure 3.5: Spill Response Contractors

Company	Location	Phone Number	Haz Mat	Vac Truck	Vessel/ Water	Pipeline/ Construction	Tanks	Disposal	GeoTech / Enviro	Safety/ IH	Air	Oiled Wild-life
Antea Group	Bellevue, WA	(800) 477-7411							X			
Arctic Air Service	Warrenton, OR	(503) 861-3700									X	
Baker Tanks	Everett, WA	(425) 347-8811					X					
Barr Air Patrol	Vancouver, WA	(972) 222-0229									X	
Bureau Veritas	Seattle, WA	(206) 763-7364							X	X		
Classic Helicopter	Seattle, WA	(206) 767-0515									X	
Cowlitz Clean Sweep Inc.	Longview, WA	(888) 423-6316	X	X	X							
CTEH	Edmonds, WA	(866) 869-2834								X		
FOCUS Wildlife	Anacortes, WA	(800) 578-3048 24 hr dispatch										X
GeoEngineers	Redmond, WA	(425) 861-6056	X						X			
Global Diving and Salvage	Seattle, WA	(800) 441-3483			X				X			
Hanging H Contractor	Burlington, WA	(360) 755-6989				X						
Heritage Environmental	Several US Locations	(877) 436-8778						X				
IBR (International Bird Rescue)	Fairfield, CA	(888) 447-1743										X
Innovac	Edmonds, WA	(206) 686-0252		X								
Marine Spill Response Corp (MSRC)	Everett, WA	(800) 259-6772 24 hr dispatch	X		X		X	X	X		X	
Matrix Service Inc.	Bellingham, WA	(360) 676-4905	X	X		X						
Michels	Brownsville, WI	(920) 583-3132				X						

Company	Location	Phone Number	Haz Mat	Vac Truck	Vessel/ Water	Pipeline/ Construction	Tanks	Disposal	GeoTech / Enviro	Safety/ IH	Air	Oiled Wild-life
Olson Bros Pro Vac Clean Service	Puyallup, WA	(425) 432-8005	X	X	X							
Snelson Company	Mount Vernon, WA	(360) 856-6511	X			X						
NRCES	Seattle/ Astoria/ Portland	(800) 337-7455 24 hr dispatch	X	X	X	X	X	X	X	X	X	
URS	Seattle, WA	(206) 438-2700	X						X			
Western Refinery Service	Bellingham, WA	(360) 366-3303	X	X								

IH=Industrial Hygiene

SECTION 4 RESPONSE TEAM ORGANIZATION

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4.1 Incident Management Team Description

The Incident Management Team (IMT) is composed of Company personnel organized to plan for and manage oil spills. The IMT will develop strategies and priorities for response, supervise contractors, handle safety and security matters, and provide logistics support for contractor personnel. The IMT will handle all communications with the media and the public. Job descriptions for key IMT members are provided in Figure 4.6. The IMT will train by participating in exercises as noted in Appendix A.

4.2 Incident Management Team Activation Procedures

Activation of the IMT may be accomplished in stages. Initially, the First Responder assumes the role of Incident Commander (IC). During a spill incident, the initial IC may be able to respond without assistance from the IMT. If the situation requires more resources, he/she may request additional manpower or management support from the IMT. This request is made to the District Operations Manager (Qualified Individual [QI]). Depending on the situation, the QI may then assume the role of IC. The QI will call out other IMT members. IMT activation procedures are illustrated in Figure 4.2 and roster in Figure 4.5.

4.3 Incident Management Team Member Response Times

The IC will mobilize to Renton Station within 6 hours. The IMT's maximum expected arrival time during off-hours is within 6 hours of activation. The maximum expected arrival time for company and contractor personnel responding to the scene of a spill is two hours.

4.4 Mutual Response Team Description

The BP Mutual Response Team (MRT) is made up of approximately 180 trained personnel from all Business Entities and Functions who have skills and experience in the Incident Command System (ICS) and who provide emergency services to any BP business for crisis level or extended incidents. A table detailing MRT member training is included in Appendix A. The team is designed to have at least six individuals identified for each ICS Section Chief position, with 2-10 individuals identified for each Unit leader and Technical Specialist role. Most MRT members will come from local and regional business response teams who are very familiar with their individual business needs and capabilities.

The MRT is notified and activated by the Olympic Pipe Line Company IC using the BP Notification System. Activation telephone numbers are included in Figure 3.3. MRT members may supplement local and regional teams or provide a full IMT. The IC may activate specific members with specialized skills, backup support to extended response, or request a full scale deployment for a major incident.

In most incidents, the entire MRT will be notified (not activated) and provided information about the incident. This is to prepare everyone for possible activation. If specific MRT members are needed, they will be activated via the Automatic Notification System. Response times depend on location of the incident, traffic, weather, etc. Under most circumstances, MRT members stationed in the greater Puget Sound area have a 2-6 hour response time. MRT members based elsewhere on the West Coast can respond within 12 hours. MRT members based in the Gulf Coast, East Coast, and mid-continent region are expected to respond within 24 hours.

4.5 Incident Command System/Unified Command

The ICS is used as the method of integrating federal, state and local agencies into the IMT. This system organizes diverse responding agencies into one unified team. Olympic Pipe Line Company uses the ICS outlined in the 2014 BP Incident Management Handbook.

ICS includes a Unified Command Structure consisting of key On-Scene Coordinators: Federal On-Scene Coordinator (FOSC), State On-Scene Coordinator (SOSC), Local On-Scene Coordinator (LOSC), Tribal On-Scene Coordinator (TOSC) and the Responsible Party IC. These entities share decision-making authority as the IC and consult with each other regarding spill response management issues. The FOSC

will coordinate all federal agencies involved in the response. The SOSC will coordinate all state involved in the response activities. The LOSC will coordinate local agencies involved in the response. The TOSC will coordinate tribal agencies involved in the response. The Responsible Party IC will coordinate all company activities. A model IMT organization chart for the Unified Command is shown in Figure 4.4.

Depending upon the size and complexity of the incident, additional federal and state agency personnel may integrate into the other functions of the IMT. The turnover of personnel in functional roles of the response is recognized as a critical activity of the IMT. In order to assure that the incoming response staff are properly briefed into their assigned role the checklist found in Figure 4.1 should be completed by all transitions of the Command Staff, Section Chief, Unit Leader and Branch Director positions.

Figure 4.1: Checklist to Facilitate Transition of IMT Members for Shift Change or Operational Period

ICS Position_____

Incoming IMT member_____

Outgoing IMT member_____

For use by Command Staff, Section Chiefs, Unit Leaders and Branch Directors

No.	Action Completed or Considered for Transition	Yes/No	
1	Can the transition be accomplished with minimal disruption to ongoing response operations?	☐ Yes	☐ No
2	Have incoming IMT members and contractors:		
	• Received the required safety briefings and security clearances?	☐ Yes	☐ No
	• Checked into the main Incident Command Post (ICP)?	☐ Yes	☐ No
	• Received their organizational assignments?	☐ Yes	☐ No
3	Has adequate work space been provided for arriving IMT members and contractors?	☐ Yes	☐ No
4	Have members of the Unified Command been properly briefed on the roles that will be assumed by IMT members and contractors?	☐ Yes	☐ No
5	Has the outgoing IMT IC / Section Chiefs fully briefed the incoming IMT staff regarding:		
	• General Response Objectives and priorities?	☐ Yes	☐ No
	• Problems and solutions being addressed?	☐ Yes	☐ No
	• Incident potential?	☐ Yes	☐ No
6	Is the new chain of command clear to incoming IMT members?		
	• In the ICP?	☐ Yes	☐ No
	• In the field?	☐ Yes	☐ No
7	Have appropriate delegations of responsibilities been made within the Staff / Section?	☐ Yes	☐ No
8	Have outgoing IMT Section personnel properly briefed incoming IMT Section personnel on?	☐ Yes	☐ No
9	Has the ICS 207 Organization Chart been updated to reflect the new staff assignments?	☐ Yes	☐ No

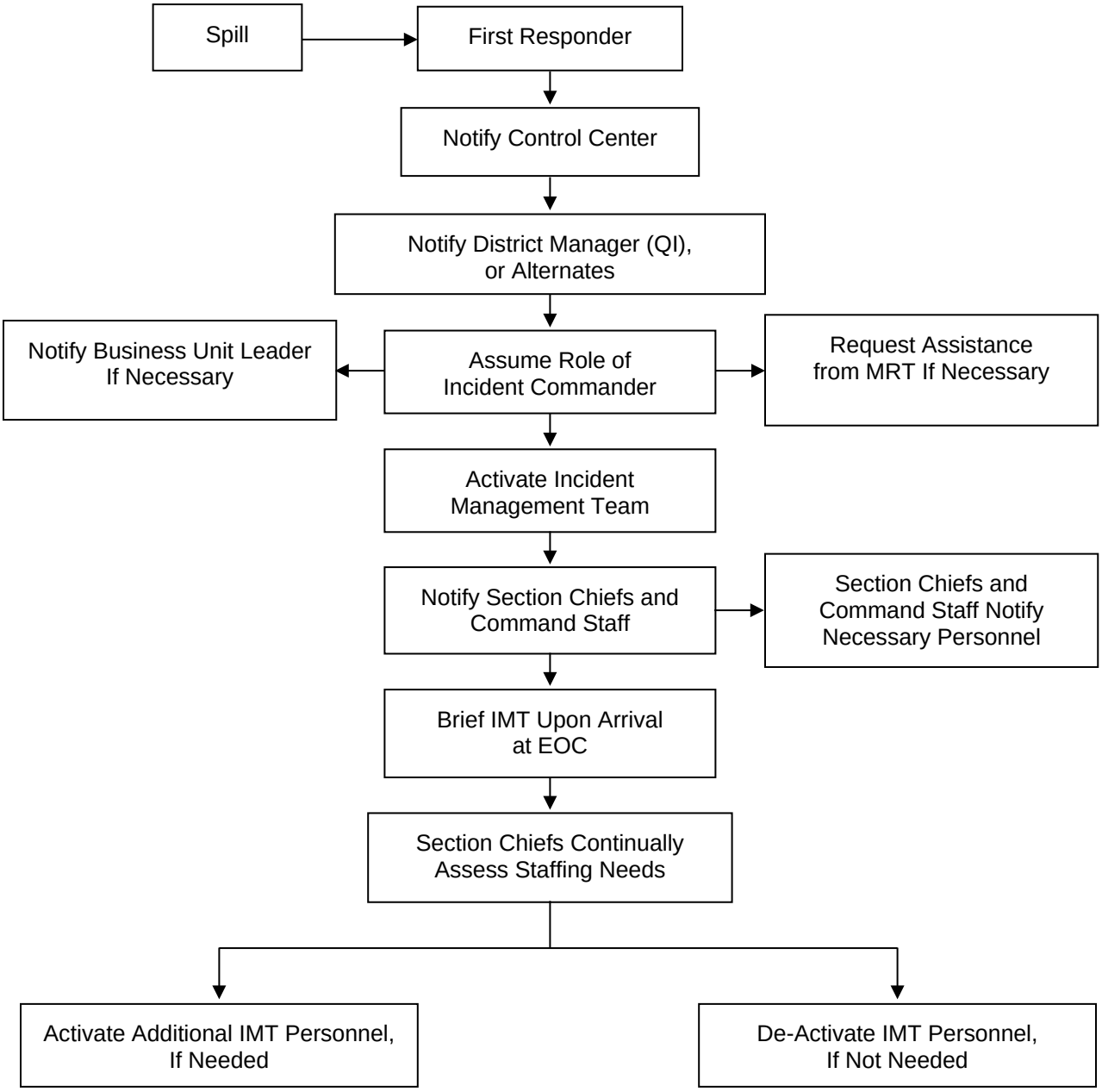
4.6 Qualified Individual

The QI, as the IMT IC, oversees the management of the entire response, establishes the response priorities and objectives, serves as the liaison with Corporate management and works with the State and Federal On-Scene Coordinators in Unified Command. The QI is an English-speaking representative, available on a 24-hour basis, trained in the responsibilities outlined in this section. The QI has the following responsibilities and authorities as required by the Oil Pollution Act of 1990 (40 Code of Federal Regulations [CFR] Parts 9 and 112, 49 CFR Part 194):

- Activate internal alarms and hazard communications systems to notify all appropriate personnel;
- Notify all response personnel as needed;
- Identify the character, exact source, amount and extent of the release and other necessary items needed for notifications;
- Notify and provide information to appropriate Federal, State and Local authorities;
- Assess the interaction of the spilled substance with water and/or other substances stored at the facility and notify on-scene response personnel of assessment;
- Assess possible hazards to human health and the environment;
- Assess and implement prompt removal actions;
- Coordinate rescue and response actions;
- Access company funds to initiate cleanup activities; and
- Direct cleanup activities until properly relieved of responsibility or incident is terminated.

For further information on QI's training, refer to Appendix A. In the event that the QI is not available, Alternate QI's have been designated to serve in this role. Phone numbers for the QI and Alternate QIs are listed in Figure 3.2.

Figure 4.2: Incident Management Team Activation Procedure



EOC = Emergency Operations Center; IMT = Incident Management Team; MRT = Mutual Response Team; QI = Qualified Individual

Figure 4.3: Unified Command Organization Chart

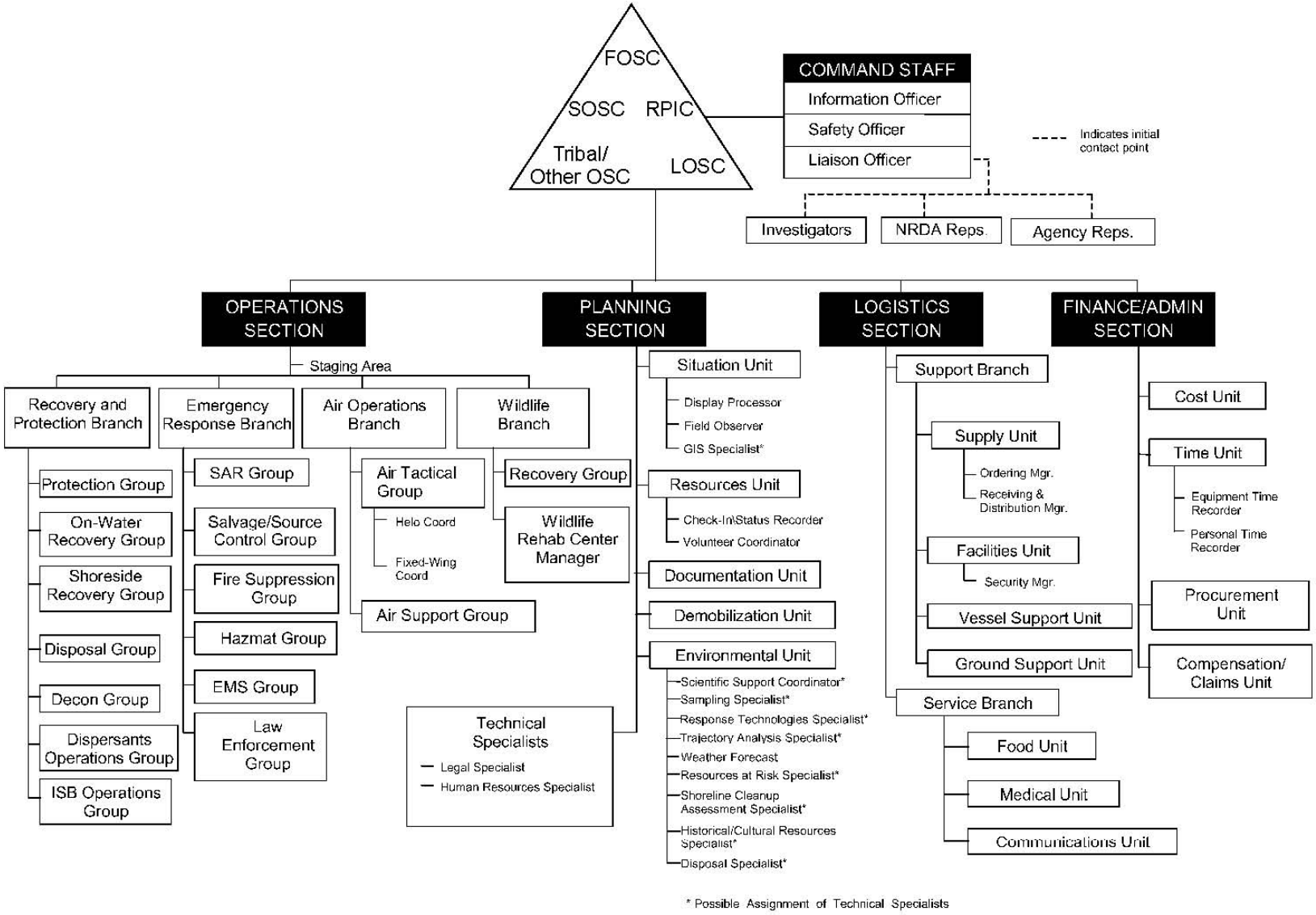


Figure 4.4: Incident Management Team Organization Chart

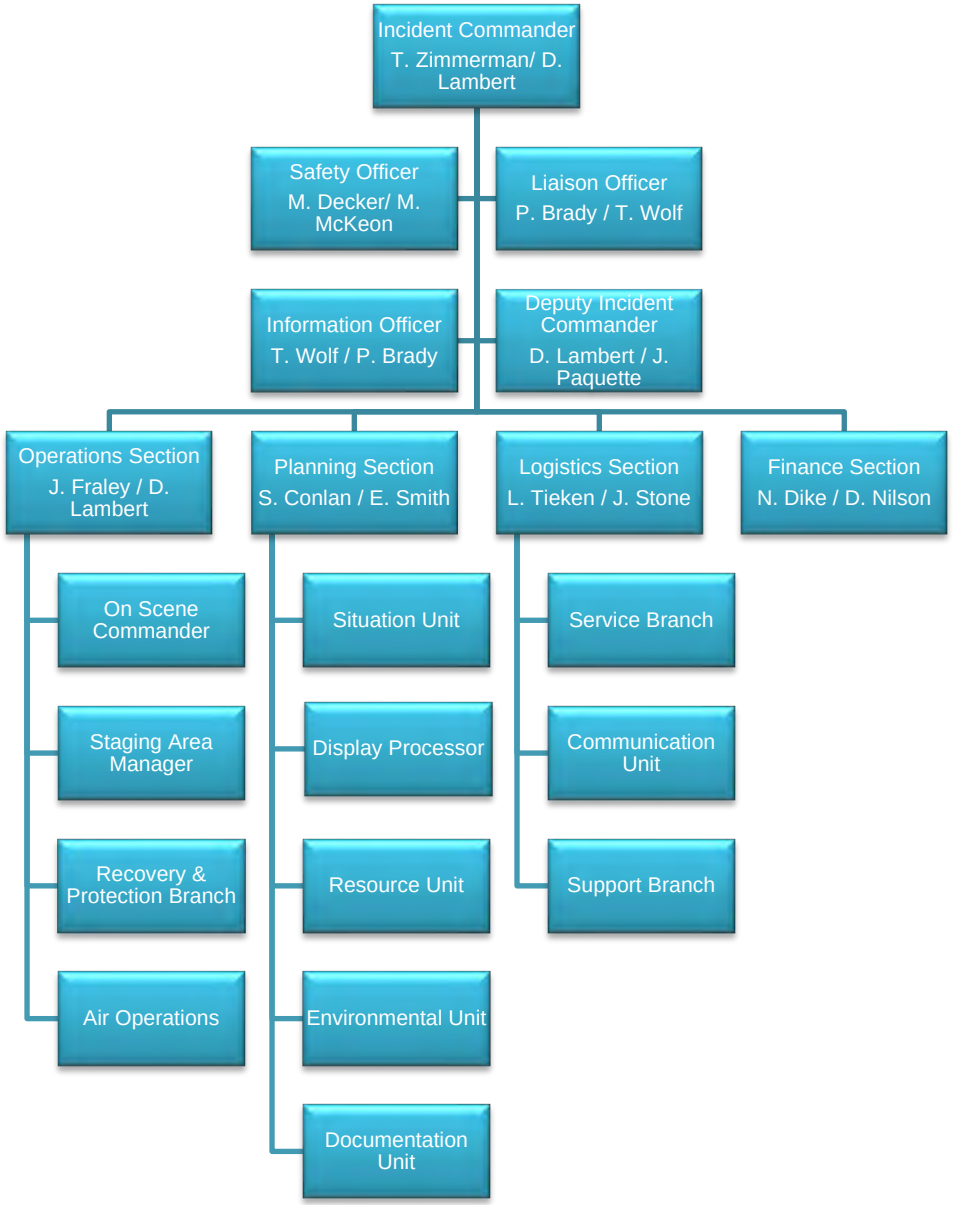


Figure 4.5: Incident Management Team Roster

The Olympic IMT, also referred to as the Spill Management Team (SMT) is solely made up of BP employees.

ICS Position	Name	Name	Name
Responsible Party Incident Commander	Terry Zimmerman	Dustin Lambert	Joseph Paquette
Public Information Officer	Pam Brady	Tom Wolf	Ronald Rybarczyk
Liaison Officer	Tom Wolf	Pam brady	Ronald Rybarczyk
Safety Officer	Michaela Decker	Michael McKeon	Alejandro Sierra
Operations Section Chief	James Fraley	Dustin Lambert	Jeff Berry
Planning Section Chief	Sandra Conlan	Edward Smith	Joseph Paquette
Logistics Section Chief	Lloyd Tieken	Joseph Stone	Daniel Swatman
Finance Section Chief	Noel Dike	Doug Nilsen	Nelson Kabalo
Wildlife Branch Director	Kristen Hancock	Alexandria Crooks	Joy Barrett
Air Operations Branch Director	Chris Anderson		
Situation Unit Leader	Edward Smith		
Resources Unit Leader	Ernest Falcon		
Documentation Unit Leader	Julie Yun		
Environmental Unit Leader	Alexandria Crooks		

Figure 4.6: Incident Management Team Job Description Checklists

The following job description checklists are intended to be used as a tool to assist Spill Management Team members in their positions within the ICS. The position descriptions and checklists were derived from the BP Incident Management Handbook (2018).

The BP Incident Management Handbook was developed as a tool to be used by BP employees responding to an incident globally. However, when responding to an incident associated with the BP Products (North America, Inc.) - Northwest Pipeline District, if there are discrepancies between the BP Incident Management Handbook and Northwest Area Contingency Plan (NWACP), responders should defer to the NWACP.

6. COMMAND SECTION:

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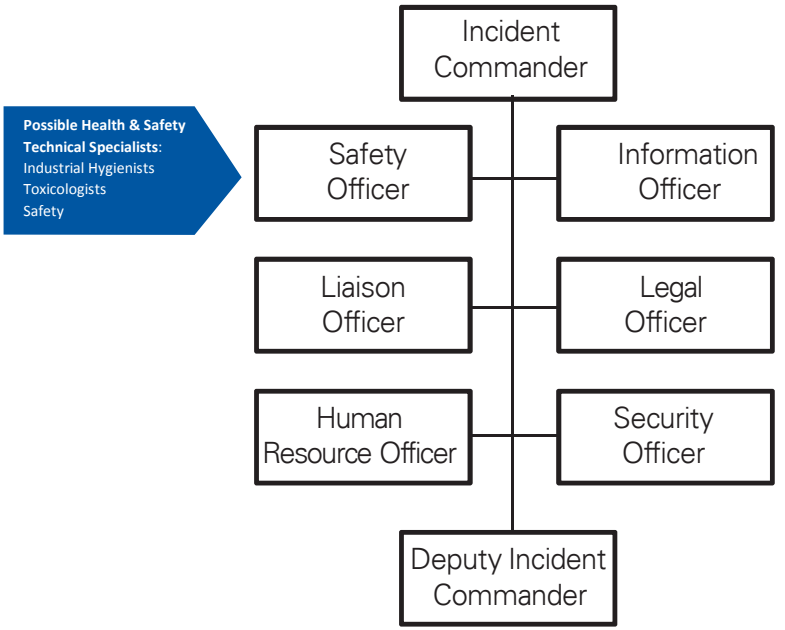
Figure 6

COMMAND STAFF ORGANISATION CHART



The Planning "P" – Command Activities

- During this time period:
  - Meet one-on-one with Command & General Staff members for follow up on assignments.
  - Prepare further guidance and clarification as needed
  - Receive operations briefing

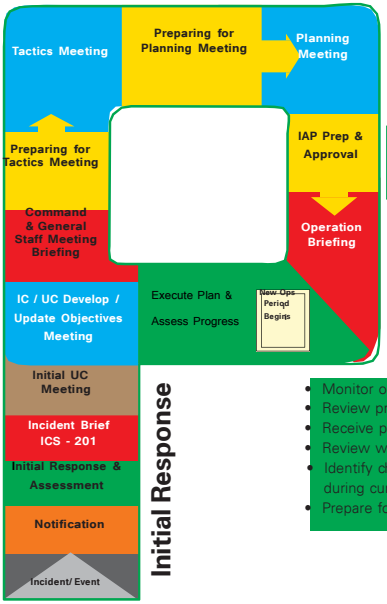
- Meet and brief Command & General Staff on IC/UC direction, objectives & priorities.
- Assign work tasks
- Resolve problems & clarify staff roles and responsibilities

- Establish priorities
- Identify constraints & Limitations
- Develop incident objectives
- Identify necessary SOP's
- Agree on operating policy, procedures and guidelines
- Agree on division of UC workload

- Finalize UC structure
- Determine overall response organisation
- Identify and select support facilities
- Clarify UC roles and responsibilities
- Determine Operational period
- Select OSC & Deputy OSC
- Make key decisions

- Determine ICS-201 briefing timeframe & receive briefing
- Clarify/request additional information
- Determine incident complexity
- Provide interim direction
- Initiate change of command
- Determine UC players
- Ensure interagency notifications
- Brief superiors

- During this time period:
  - Agree on who will present UC's response emphasis and motivation remarks
  - Review task assignments, objectives, decisions & directions
  - Receive operations briefing



- Ensure that an appropriate initial response is deployed
- Provide direction as needed
- Monitor initial response operations

- Provide opening remarks
- Review response pain as presented to ensure that Command's directions and objectives have been properly addressed
- Provide further guidance and resolve issues
- Give tacit approval of the proposed Plan
- Agree when written plan will be ready for review & approval

- Review IAP for completion and make changes as necessary
- Approve Plan

- Provide overall guidance and clarification
- Provide leadership presence and motivational remarks
- Emphasize response philosophy

- Monitor on-going operations
- Review progress of assigned tasks
- Receive periodic situation briefings
- Review work progress
- Identify changes that need to be made during current and future operations
- Prepare for UC Update Objectives Meeting

COMMON RESPONSIBILITIES

This section contains Responsibilities that are ***common*** to Command Staff in an response organization.

- ☐ Obtain initial briefing from Incident Commander (IC), attend daily staff meetings and briefings, and relay relevant information to personnel assigned to function / Office
- ☐ Size up incident, identify function-specific problems and solutions, and break work down into manageable tasks
- ☐ Provide Incident Commander periodic status reports
- ☐ Assist Incident Commander in
  - Analysing incident potential
  - In preparation of Strategic Objectives & response priorities
- ☐ Provide Logistics Section Chief or Supply Unit with information on personnel, equipment, material, and supply needs for function / Office
- ☐ Attend Assessment Meetings and provide reports on nature and status of work
- ☐ Ensure that Finance Section Chief is advised of all cost commitments by Staff or Office
- ☐ Compile and maintain appropriate documentation
- ☐ IMT Staffing needs:
  - Develop organisation chart with personnel assigned to function / Office
  - Provide Resource Unit with initial and, as necessary, updated organisation chart(s)
  - Maintain proper span-of-control when assigning tasks to Office staff
  - Consider alternate or backup personnel for extended (24-hour) coverage.
- ☐ Brief IMT Staff personnel on items discussed during meetings; assign Action Items, as appropriate
- ☐ If requested, assist Planning Section Chief in preparation of
  - Incident Potential Worksheet
  - Incident Action Plan
- ☐ Prepare verbal or written transition report for incoming personnel assigned to function / Office

INCIDENT COMMANDER

Responsible for the overall management of incident response operations and for serving as the Incident Management Team's (IMT's) primary contact person with all involved or interested external parties. If Unified Command (UC) is established, these responsibilities are held jointly with UC members

INCIDENT COMMANDER RESPONSIBILITIES

- ☐ Ensure that personnel safety is accorded the highest priority during conduct of incident response operations
- ☐ Establish and maintain an organisation capable of providing management direction to, and support for, at-the-scene tactical response operations
- ☐ Supervise incident response operations and ensure that they are carried out in a manner consistent with BP policy, appropriate government directives, and the needs and concerns of impacted areas
- ☐ Provide an initial briefing either to IMT as a whole or to members of Command and General Staffs
- ☐ Analyse incident potential
- ☐ Establish Strategic Objectives and response priorities, and ensure IMT and tactical response personnel are carrying out incident response operations in a manner consistent with objectives and priorities
- ☐ Ensure that all required and appropriate notifications have been made to BP senior management & provide regular updates on incident status (i.e., Entity and/or Business Support Team), and government agencies
- ☐ Serve as primary on site contact person for BP senior management, government representatives, and possibly news media and neighbouring facilities.
- ☐ Establish a Unified Command Structure with appropriate government agency On scene Coordinators
- ☐ Monitor, evaluate effectiveness, and forecast duration of incident response operations; if necessary, establish "operational" periods and shift schedules
- ☐ Conduct Assessment Meetings as appropriate.
- ☐ Review and approve press releases and statements as they relate to incident response operations
- ☐ Determine when IMT is prepared to initiate Incident Action Plans (written and verbal). Approve and authorize implementation of Incident Action Plans

- ☐ Determine need for General / Long Term Plan. If needed, initiate, approve, and authorize implementation of General / Long Term Plan
- ☐ Consider need for an alternate or backup person for extended (24-hour) coverage
- ☐ Compile and maintain appropriate documentation

PRODUCTS INCIDENT COMMANDER IS RESPONSIBLE FOR:

IAP Cover Sheet (review & sign, if approved. Forward to Planning SC), Incident Potential Worksheet, ICS 201 & 209 (review and forward to Business Support Team Leader, draft ICS 202 with Planning Section Chief

DEPUTY INCIDENT COMMANDER

Responsible for assisting the Incident Commander through the direct supervision of work being carried out by the Section Chiefs. Also responsible for knowing the Incident Management System (IMS) and making sure it is used effectively and efficiently during the conduct of incident response operations.

DEPUTY INCIDENT COMMANDER RESPONSIBILITIES

- ☐ Assume any responsibility delegated by Incident Commander (IC).
- ☐ Ensure that Incident Command Post (ICP) is set up and made operational in a timely fashion
- ☐ Monitor IMT members activation; determine and advise IC on availability of key team members
- ☐ Ensure that each Section gets organised in a timely fashion
- ☐ Prepare organisation chart for Command Staff; consider need for backup personnel for extended (24-hour) coverage.
- ☐ Assist IC in analysis of incident potential and development of Strategic Objectives and response priorities
- ☐ Coordinate activities of Section Chiefs to ensure conduct of safe, effective, and efficient incident response operations
- ☐ Assist IC in ensuring that operations are carried out in a manner consistent with BP policy, Incident Management System, and appropriate government directives
- ☐ Focus on communications; address communication problems as they arise
- ☐ Facilitate IMT Meetings; chair IMT Meetings, if instructed by IC.
- ☐ Follow up on Action Items identified during formal IMT Meetings
- ☐ Ensure that (Unified) Command objectives and priorities are being addressed by balance of IMT and tactical response personnel
- ☐ Interface with (Unified) Command to ensure that their problems and solutions are addressed by balance of IMT in a timely fashion
- ☐ Provide IC informal briefings, as necessary, on nature and status of incident and incident response operations
- ☐ Work with Section Chiefs to ensure that appropriate documentation is compiled and forwarded to Planning Section (i.e., Chief or Documentation Unit Leader)
- ☐ Ensure that response operations are closely coordinated, and resolve any conflicts that may arise between these operations
- ☐ Ensure that appropriate BP and/or government directives are communicated to and followed up on by Section Chiefs
- ☐ Serve as secondary on site contact person for BP senior management, and government representatives

PRODUCTS DEPUTY INCIDENT COMMANDER IS RESPONSIBLE FOR:

Unit Log (ICS 214) and Assist IC complete necessary tasks

SAFETY OFFICER

Responsible for supporting the Site Safety Officer and for providing expertise on safety issues that may arise during execution of incident response operations. Responsible for the preparation, maintenance, and distribution of an incident-specific Site Safety Plan; investigating near misses and accidents; preparing Safety Bulletins; reviewing field assignments to ensure that they can be carried out in a manner consistent with the Site Safety Plan and supervising the work of any Technical Specialists *(Industrial Hygienists, Safety professionals, air monitoring, decontamination, etc.)* supporting incident response operations.

SAFETY OFFICER RESPONSIBILITIES

- ☐ Address needs of Site Safety Assistants
- ☐ Supervise preparation of written, incident-specific Site Safety Plan
- ☐ Receive information from Site Safety Assistants and brief Incident Commander and Situation Unit on:
  - status of personnel (i.e., missing, injured, dead)
  - hazards present
  - location of hazard control zones
  - PPE requirements
  - decontamination requirements
  - location of first aid station(s)
  - emergency medical procedures
  - hazards present at incident scene and measures being instituted to protect response personnel against hazards
  - contents of incident-specific Site Safety Plan (ICS 208)
- ☐ Advise Incident Commander on when it is safe to enter or return to an impacted area. Exercise emergency authority to prevent or stop unsafe acts.
- ☐ Ensure compliance with all relevant BP and governmental safety requirements
- ☐ Obtain and provide Site Safety Assistants copies of Material Safety Data Sheets (MSDSs) for spilled/emitted materials
- ☐ Brief Section Chiefs on safety concerns and precautions; ensure key personnel are familiar with site safety issues
- ☐ Monitor BP personnel and contractors for conformance with incident-specific Site Safety Plan and associated requirements
- ☐ Set up a system to identify, and work with IMT Site Safety Assistants to eliminate safety hazards in all aspects of incident response operations
- ☐ Confirm/establish industrial hygiene standards and requirements to be observed by on-scene tactical response personnel. Select, retain, and supervise Industrial Hygienists, Safety professionals, toxicologists, etc., when needed
- ☐ Provide information and advice to field operations (Deputy Operations Section Chief or Branch Directors), Site Safety Assistants, Incident Commander, and Section Chiefs regarding

toxic properties of, and immediate and long-term public health issues associated with, chemicals involved in incidents.

- ☐ Evaluate impact of incident and remedial activities on health of employees, contractors, and affected citizens
- ☐ Ensure response personnel have necessary level of safety training
- ☐ Coordinate safety-related communications; supervise preparation of and issue Safety Bulletins on issues affecting or likely to affect worker safety
- ☐ Investigate safety-related near misses and accidents; develop Safety Bulletins that describe remedial actions to avoid future occurrences
- ☐ Establish procedures, with Medical Unit, for handling medical emergencies, evacuations and in preparation of an Emergency Medical Plan (ICS 206)
- ☐ Assist Information Officer in describing any toxic hazards to media and public
- ☐ Provide Planning Section Chief or Situation Unit initial and, as necessary, updated information on safety and health considerations, updated information on location of hazard control zones, decontamination areas, and first aid station(s) for Situation Map
- ☐ Assist in IAP development:
  - Prepare Field Assignment(s) for all safety tasks to be carried out by field operations team
  - Provide information on safety issues associated with field assignments
  - Review each field assignment for next operational period (NOP) against existing Site Safety Plan to determine:
    - locations where proposed work will be carried out
    - whether hazards in locations already have been adequately characterized
    - whether locations are already adequately covered with existing hazard control zones
    - whether PPE requirements for proposed work have been clearly defined
    - whether decontamination requirements for proposed work have been clearly defined
  - If a field assignment for NOP is not adequately addressed by existing Site Safety Plan, prepare modifications to plan
  - If a field assignment for NOP has associated safety hazards that cannot be avoided or adequately mitigated through measures described in Site Safety Plan, immediately notify Deputy Incident Commander

PRODUCTS SAFETY OFFICER IS RESPONSIBLE FOR:

Unit Log (ICS 214), Site Safety Plan (ICS 208), Safety Message (ICS 204), Hazard Risk Analysis Worksheet (ICS 215a), Medical Plan (ICS 206 review & approve)

SAFETY AND HEALTH TECHNICAL SPECIALISTS

Responsible for the preparation, maintenance, and distribution of an incident-specific technical safety and health plans (i.e. Industrial Hygiene, air monitoring, decontamination, etc.), providing technical advice and information for safety and health related issues, reviewing field assignments to ensure that they can be carried out in a manner consistent with the safety plans.

SAFETY & HEALTH TECHNICAL SPECIALISTS RESPONSIBILITIES

- ☐ Coordinate activities with IMT Safety Officer and Site Safety Assistants
- ☐ Assist Safety Officer in preparation of written, incident-specific technical safety and health plans
- ☐ Brief IMT Safety Officer and Assistant Safety Assistants on technical safety issues
- ☐ Provide IMT Safety Officer and Site Safety Assistants advice on when it is safe to enter or return to an impacted area
- ☐ Ensure compliance with all relevant BP and governmental safety requirements
- ☐ Exercise emergency authority to prevent or stop unsafe acts
- ☐ Obtain and provide Site Safety Officer copies of Material Safety Data Sheets (MSDSs) for spilled/emitted materials
- ☐ Brief Section Chiefs on safety and concerns and precautions; ensure key personnel are familiar with site safety issues
- ☐ Monitor BP personnel and contractors for conformance with incident-specific Site Safety Plan and associated requirements
- ☐ Set up a system to identify, and work with IMT Safety Officer to eliminate, safety hazards in all aspects of incident response operations
- ☐ Confirm/establish industrial hygiene standards and requirements to be observed by at-the-scene tactical response personnel
- ☐ Evaluate impact of incident and remedial activities on health of employees, contractors, and affected citizens
- ☐ Ensure response personnel have necessary level of safety training
- ☐ Coordinate safety-related communications; supervise preparation of and issue Safety Bulletins on issues affecting or likely to affect worker safety
- ☐ Provide information and advice to Deputy Operations Section Chief or Branch Directors, Site Safety Assistants, Incident Commander, and Section Chiefs regarding toxic properties of, and immediate and long-term public health issues associated with, chemicals involved in incidents
- ☐ Assist Information Officer in describing any toxic hazards to media and public

- ☐ Select, retain, and supervise Industrial Hygiene, Safety, toxicology, etc. contractors when needed
- ☐ Provide Planning Section Chief or Situation Unit initial and, as necessary, updated information on safety and health considerations, updated information on location of hazard control zones, decontamination areas, and first aid station(s) for Situation Map
- ☐ Assist in IAP development:
  - Provide information on safety issues associated with field assignments
  - Review each field assignment for NOP against existing Site Safety Plan to determine:
    - locations where proposed work will be carried out
    - whether hazards in locations already have been adequately characterized
    - whether locations are already adequately covered with existing hazard control zones
    - whether PPE requirements for proposed work have been clearly defined
    - whether decontamination requirements for proposed work have been clearly defined
  - If a field assignment for NOP is not adequately addressed by existing Site Safety Plan, prepare modifications to plan
  - If a field assignment for NOP has associated safety or health hazards that cannot be avoided or adequately mitigated through measures described in Site Safety Plan, immediately notify Deputy Incident Commander

PRODUCTS HEALTH & SAFETY UNIT LEADER IS RESPONSIBLE FOR:

Health & Safety Plan with Safety Officer
Field Assignment (ICS 204 Safety Message) with Safety Officer
Unit Log (ICS 214)

INFORMATION OFFICER

Responsible for organising and managing all public affairs activities associated with incident response operations.

INFORMATION OFFICER RESPONSIBILITIES

- ☐ Organise and manage all media-related activities
- ☐ Serve as principal advisor to Incident Commander (IC) on all matters relating to external communications and interactions with media
- ☐ Advise IC of public affairs impacts caused by the incident and incident response operations
- ☐ Identify "public" audiences and their concerns
- ☐ Develop proactive methods for addressing "public" concerns:
  - "If Asked" statements, Press releases, briefings, conferences, Town Hall Meetings, One-on-one interviews, tours, etc.
- ☐ Obtain necessary approvals from IC prior to release of information to public
- ☐ Provide Situation Unit with the following information for posting on the Information Centre:
  - Press releases, briefings, conferences
  - Town Hall meeting schedule
  - "If Asked" statements
  - Other external relations-related materials
- ☐ Work with government agency Public Affairs personnel to coordinate statements to the public; establish a Joint Information Centre (JIC), if appropriate
- ☐ Prepare IC or delegate for interactions with media
- ☐ Keep IC informed about content and tenor of media reports
- ☐ Work with Logistics Section to set up a media centre, if warranted
- ☐ Select, retain, and supervise public affairs specialists, when needed
- ☐ Circulate progress reports for non-involved BP personnel and BP partners
- ☐ Monitor press reports. Maintain record of newspaper articles, radio and television broadcasts, press conferences, and briefings
- ☐ Provide status reports to Business Support Team (BST); keep BST informed about status of work on all public relations problems and solutions that are judged to be, or have potential to become, crisis situations

PRODUCTS INFORMATION OFFICER IS RESPONSIBLE FOR:

Unit Log (ICS 214)

Media Briefing materials, Crisis Communication Handbook materials

LIAISON OFFICER

Responsible for organising and managing all government and community affairs activities associated with incident response operations.

LIAISON OFFICER RESPONSIBILITIES

- ☐ Organise and manage all government and community affairs activities
- ☐ Serve as principal advisor to Incident Commander (IC) on all matters relating to external communications and interactions with non-directly involved government agencies and non-governmental organisations
- ☐ Advise IC on government affairs and community relations impacts of incidents and incident response operations
- ☐ Obtain necessary approvals from IC prior to release of information to non-directly involved government agencies and non-governmental organisations
- ☐ Select, retain, and supervise government affairs and media relations specialists, when needed
- ☐ Provide status reports to Business Support Team (BST); keep BST informed about status of work on all government affairs and community relations problems and solutions that are judged to be, or have potential to become, crisis situations
- ☐ Serve as IMT contact person for non-directly involved government agencies and non-governmental organisations
- ☐ Identify government agency and non-governmental organisation audiences and their concerns
- ☐ Develop proactive methods for addressing government agency and non-governmental organisation concerns:
  - fact sheets
  - meetings
  - Town Hall meetings
  - tours
- ☐ Provide Situation Unit with information on scheduled meetings for posting in Information Centre
- ☐ Monitor statements made by non-directly involved government agencies and non-governmental organisations
- ☐ Keep Incident Commander informed about content and tenor of statements made by non-directly involved government agencies and non-governmental organisations

PRODUCTS LIAISON OFFICER IS RESPONSIBLE FOR:

Unit Log (ICS 214), List of agency contacts, Crisis Communications Handbook materials

LEGAL OFFICER

Responsible for providing advice on legal issues associated with incident response operations and for handling all legal matters.

LEGAL OFFICER RESPONSIBILITIES

- ☐ Serve as legal advisor to Incident Commander (IC) and provide legal advice to other members of the IMT
- ☐ Prepare summary reports which examine legal situation, key issues associated with the incident, with options and courses of action that can be followed; follow up to determine their effectiveness
- ☐ Determine applicable laws, legal exposures, and validity of defences, and develop necessary legal strategies
- ☐ Become familiar with all incident aspects in order to identify and address legal issues that may arise during incident response operations
- ☐ Act as primary contact for BP partners' legal representatives; coordinate legal action taken in concert with partners, if possible and appropriate
- ☐ Select, retain, and supervise outside legal counsel, if needed
- ☐ Determine BP and BP partners' legal relationship with other involved parties. Ensure that no conflicts of interest arise with other parties, insurers, etc. during conduct of incident response operations
- ☐ Advise IMT members on need to restrict access to affected facility, vessel and/or incident-related facilities for legal or insurance reasons
- ☐ Advise IC, Section Chiefs, and Documentation Unit Leader on documentation retention guidelines to support incident-related litigation. Consistently review process to ensure compliance with established guidelines.
- ☐ If requested to do so by IC, review press releases and other correspondence directed to external parties and government authorities
- ☐ Handle all contract-related legal matters.
- ☐ Assist Finance Section Chief or Compensation/Claims Unit in establishing and implementing third-party settlement procedures, arranging for adjustment assistance, and processing claims.
- ☐ Ensure that information that may be relevant to the defence and/or settlement of future claims or litigation is gathered and preserved
- ☐ Provide Ops Section Chief and Planning Section Chief legal advice on operations related to the handling of land issues, off-site waste storage and disposal
- ☐ Assist Human Resources Group in event of fatalities or major injuries during incident response operations
- ☐ Provide status reports to Business Support Team (BST); keep BST informed about legal problems and solutions that are judged to be, or have the potential to become, crisis situations

PRODUCTS LEGAL OFFICER IS RESPONSIBLE FOR:

ICS 214 Unit Log (ICS 214)

HUMAN RESOURCES OFFICER

Responsible for addressing human resources issues that arise for response personnel, for providing Critical Incident Stress Debriefing services, for arranging grief counselling for response personnel adversely impacted by incident and/or response-related injuries and fatalities, and for arranging humanitarian assistance to the families of individuals injured or killed by the incident or during response operations.

HUMAN RESOURCES OFFICER RESPONSIBILITIES

- ☐ During a mass casualty incident, serve as a principal advisor to Incident Commander on measures to handle and treat injured personnel, handle disposition of bodies of dead personnel, interact with families, and interact with government agencies
- ☐ Ensure that all required and appropriate notifications are made to families of injured or dead personnel
- ☐ Ensure that names of injured and dead personnel are protected until notifications of next of kin are completed
- ☐ Implement humanitarian assistance for BP personnel and/or their families impacted by an incident or response operations
- ☐ Advise Incident Commander and other personnel regarding status of Humanitarian Assistance activities
- ☐ Coordinate Humanitarian Assistance activities through the BP Human Resources Department
- ☐ Request guidance and information regarding any changes in BP policy and procedures that may impact Humanitarian Assistance activities
- ☐ Arrange for grief counselling for members of Incident Management Team, as necessary
- ☐ Activate outside assistance (clergy, psychologists, counsellors, etc.), as necessary
- ☐ Coordinate with Compensation/Claims Unit Leader, as necessary

PRODUCTS HUMAN RESOURCES OFFICER IS RESPONSIBLE FOR:

Unit Log (ICS 214)

SECURITY OFFICER

Responsible for providing expert guidance on how to respond effectively to security-related incidents or security problems/issues during incident response operations. Works with Security Unit Leader to ensure that adequate security services are provided for on-scene tactical response operations and at incident facilities.

SECURITY OFFICER RESPONSIBILITIES

- ☐ Serve as security advisor to Incident Commander
- ☐ Ensure Facility Security procedures are being followed
- ☐ Prepare and maintain an incident specific Security Plan which ensures response areas are secure from non-authorized personnel i.e. ICP, FOB, Staging Area, etc.
- ☐ Issue Security Bulletins, as necessary
- ☐ Select, retain, and supervise outside security specialists, if needed
- ☐ Provide executive protection, as required
- ☐ Coordinate security operations with Federal, State and local government security agencies
- ☐ Investigate threats and crimes against company personnel and property
- ☐ Maintain record of security operations

PRODUCTS SECURITY OFFICER IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Security Plan
Traffic Plan

7. OPERATIONS SECTION

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Figure 7a

OPERATIONS SECTION ORG CHART

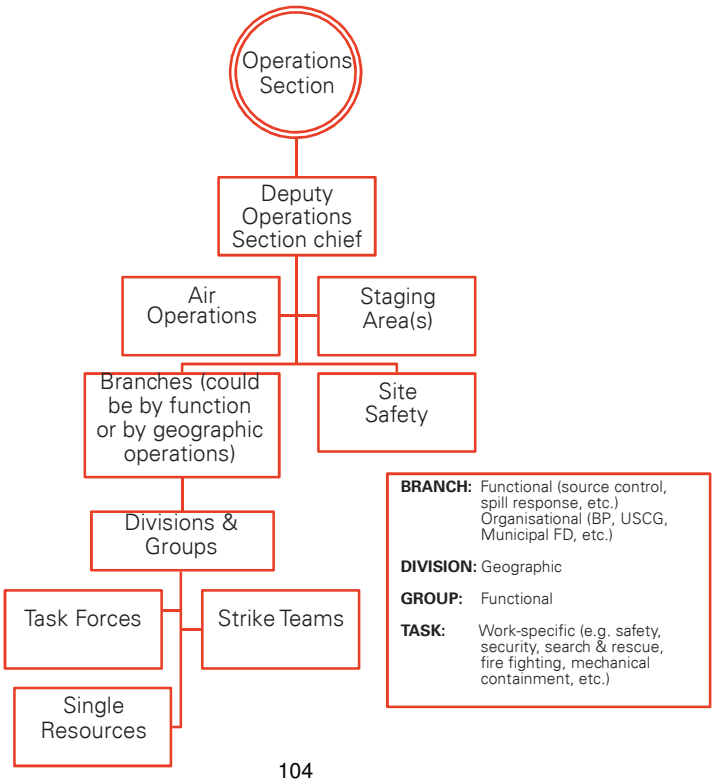


Figure 7b

OPERATIONS SECTION FUNCTIONS

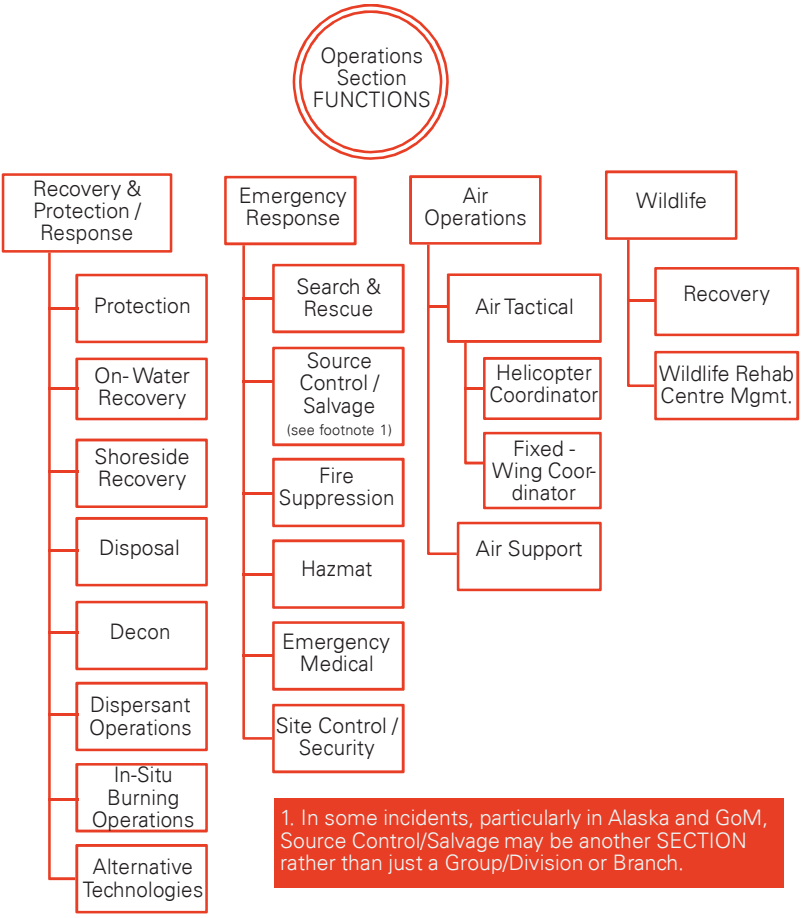


Figure 7c

Sample
OPERATIONS SECTION ORG CHART
with Branches by Function

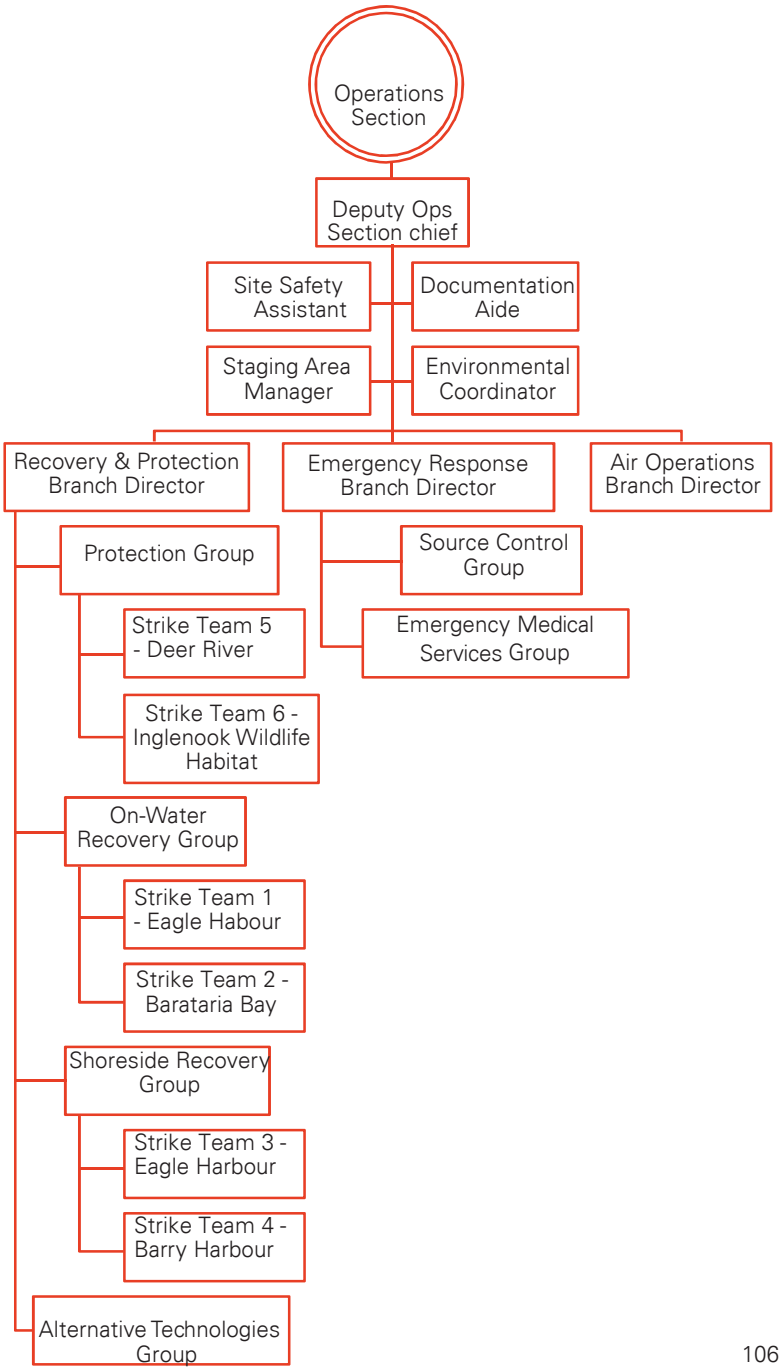
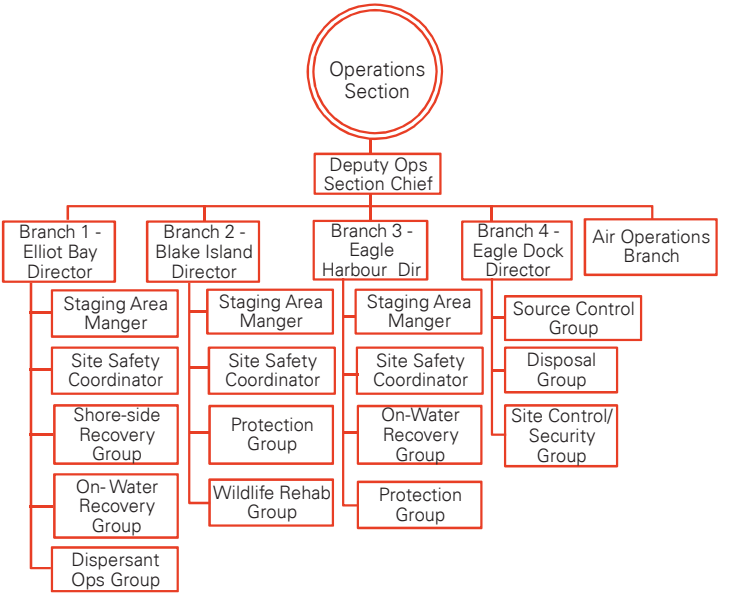


Figure 7d

Sample
OPERATIONS SECTION ORG CHART
with Branches by Geographic Area



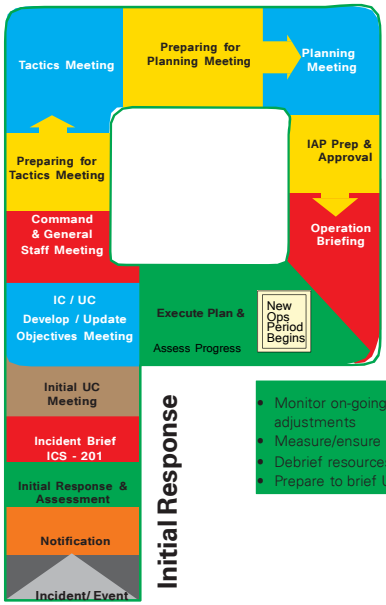
The Planning "P" – Operations Activities

- Brief on current operations
- Divide incident into manageable units
- Develop work map
- Develop strategy/tactics to deploy
- Complete ICS-215
- Identify resource needs
- Identify contingencies
- Develop operations org chart
- Continue on-scene operations

- Complete 8.5" x 11" ICS-215
- Continue to update work progress
- Continue on-scene operations

- Brief on planned strategy/tactics (ICS-215 & work map/chart)
- Identify how incident will be subdivided into mgmt./work units
- Identify resource needs & reporting locations
- Identify any contingencies as needed
- Identify organisational requirements

- Develop draft strategies & tactics for each assigned objective, including alternative and/or contingency strategies using a Work Analysis Matrix
- Outline work assignments and required resources using ICS-215
- Develop/outline OPS Section organisation for next operational period



- Provide information for IAP (ICS-220)
- Ensure ICS-204 tasking are clear
- Communicate incident status changes
- Continue on-scene operations

- Receive direction from IC/UC
- Clarify objectives & priorities
- Clarify organisational issues
- Identify any limitations & restrictions
- Reach agreement on IC/UC focus and direction
- Discuss interagency issues
- Prepare for tactics meeting
- Continue on-scene operations

- Provide operations briefing to Ops Sec Personnel
- Ensure support to operations in place
- Deploy next operating period resources

- Using ICS 201, brief on current operations
- Clarify issues & concerns
- Discuss planned operations & direction

- Monitor on-going operations & make tactical adjustments
- Measure/ensure progress against stated objectives
- Debrief resources coming off shift
- Prepare to brief UC/Planning on accomplishments

- Assess situation
- Develop ICS-201
  - Develop initial tactics & priorities
  - Develop sketch map
  - Summarize actions
  - Develop resources summary
  - List current organisation
- Continue to update response using ICS-201

COMMON RESPONSIBILITIES

This section contains Responsibilities that are ***common*** to Section Chiefs and Unit Leaders.

- ☐ Obtain initial briefing from Incident Commander (IC), attend daily staff meetings and briefings, and relay relevant information to personnel assigned to function
- ☐ Size up incident, identify function-specific problems and solutions, and break work down into manageable tasks
- ☐ Provide Incident Commander periodic status reports
- ☐ Assist Incident Commander in
  - Analysing incident potential
  - In preparation of Strategic Objectives & response priorities
- ☐ Provide Logistics Section Chief or Supply Unit with information on personnel, equipment, material, and supply needs for Section
- ☐ Attend Assessment Meetings and provide reports on nature and status of work
- ☐ Ensure that Finance Section Chief is advised of all cost commitments by Staff or Section
- ☐ Compile and maintain appropriate documentation
- ☐ IMT Staffing needs:
  - Develop organisation chart with personnel assigned to function or Section
  - Provide Resource Unit with initial and, as necessary, updated organisation chart(s)
  - Maintain proper span-of-control when assigning tasks to Section personnel
  - Consider alternate or backup personnel for extended (24-hour) coverage.
- ☐ Brief IMT Staff personnel on items discussed during meetings; assign Action Items, as appropriate
- ☐ If requested, assist Planning Section Chief in preparation of
  - Incident Potential Worksheet
  - Incident Action Plan
- ☐ Prepare verbal or written transition report for incoming personnel assigned to function

OPERATIONS SECTION CHIEF

Responsible for providing strategic direction & support to field personnel. Also responsible for receiving information on nature/status of field response operations, providing information to Incident Commander (IC) & IMT team.

OPERATIONS SECTION CHIEF RESPONSIBILITIES

- ☐ Serve as primary IMT contact person for field personnel; receive Field Reports (including Initial Incident Briefing Form - ICS 201 at the beginning of the incident).
- ☐ Establish direct line of communications (i.e., Command Network) protocol with field personnel
- ☐ Discuss/define initial strategy with Deputy Incident Commander (DIC) and other appropriate IMT members Officers; provide regular updates on nature and status of tactical response operations
- ☐ Review and ensure strategy appropriateness and tactics being employed by field personnel; provide necessary strategic direction
- ☐ Provide Situation Unit and Resource Unit with up-to-date information on nature/status of tactical response operations and resources.
- ☐ Assist Planning Section Chief or Plan Development Unit preparing Incident Action Plan (IAP); Objectives and field assignments
  - Obtain field personnel information on current tasks which will continue into the next operational period (NOP), new tasks that will be initiated before end of current operational period and continue into NOP, and new tasks that should be initiated during NOP
  - Feedback on list of resources needed to carry out tasks identified for NOP
- ☐ Ensure that personnel involved in field response operations have the personnel, equipment, materials, and supplies needed to carry out those operations in a safe, effective, and efficient manner.
- ☐ Ensure that all Operations Section personnel are aware of and follow BP safety policies, appropriate government agency directives, and Incident Safety Plan
- ☐ Ensure government agencies concerns and impacted citizens are adequately considered in formulation and execution of response strategies
- ☐ Receive information from Planning Section Chief on the location and movement of spilled or emitted materials
- ☐ Work with Environmental Unit Leader to develop protection/ clean-up strategies
- ☐ Ensure that appropriate documentation is compiled by field personnel and forwarded to Documentation Unit

PRODUCTS OPERATIONS SECTION CHIEF IS RESPONSIBLE FOR:

Initial Incident Briefing (ICS 201)
Unit Log (ICS 214)
Operations Planning Worksheet (ICS 215) – with Resources Unit Leader
Field Assignments (ICS 204s) – with RUL using ICS 215
Hazard and Risk Analysis Worksheet (ICS 215a) – with Safety

INITIAL INCIDENT COMMANDER (DEPUTY OPS SECTION CHIEF)

Responsible for organising and managing on-scene tactical response operations in a safe and effective fashion and for keeping the balance of the IMT informed of the incident nature/status and tactical response operations.

INITIAL INCIDENT COMMANDER (DEPUTY OPERATIONS SECTION CHIEF) RESPONSIBILITIES

- ☐ If initial on-scene Incident Commander:
  - report incident
  - assume field command unless relieved by a more appropriate / qualified individual
  - alert other area personnel area of incident nature/location and, if necessary, establish Isolation Perimeter.
  - Evacuate non-responder personnel to a safe area outside perimeter
  - account for all personnel
  - if qualified, initiate defensive and/or offensive response actions consistent with: level of expertise and training; knowledge of problem(s); and understanding of hazards
- ☐ Receive incident report; Activate appropriate members
- ☐ Travel to incident scene; observe safe approach guidelines
- ☐ Assume on-scene command; establish Field Operations Base (FOB)
- ☐ Ensure own safety and that of fellow responders; work closely with Site Safety Assistant on:
  - hazards present, location of hazard control zones
  - required level of PPE
  - decontamination requirements; location of contamination reduction (warm) zone
  - emergency medical procedures
- ☐ Determine security type and level needed to maintain Isolation Perimeter; if necessary, establish Security Task Force
- ☐ Identify optimum location for each staging area; communicate location information to the Staging Area Manager
- ☐ "Size up" situation to identify problem(s) to be addressed by tactical response personnel
- ☐ Establish and maintain a clearly defined tactical response organisation
- ☐ Develop solution(s) to problem(s) (i.e., a strategy) and prioritize needs to implement strategy down into manageable tasks
- ☐ Assign tasks to Branch Directors, Division/Group Supervisors, Task Leaders, and allocate checked-in resources to tasks
- ☐ Prioritize tasks, as necessary

- ☐ Manage resources; keep track of resource status; provide Staging Area Manager information on unmet resource needs
- ☐ Brief Branch Directors, Division/Group Supervisors, Task Leaders on:
  - Strategy and nature/location of task and its relationship to strategy
  - safety considerations
  - communications procedures, including chain-of-command
- ☐ Establish appropriate Communications Network(s); define a Communication Protocol for each network:
  - who talks to whom, about what, when and how
- ☐ Take all appropriate and safe actions to:
  - control the source(s) of problem(s)
  - limit spread of spilled or emitted materials and their impacts
  - protect sensitive environmental, social, and economic resources
  - clean, remediate, repair resources impacted by spilled or emitted materials and/or tactical response operations
- ☐ Address span-of-control problems
- ☐ Designate Aide(s) responsible for compiling Field Reports and/or for setting up and maintaining communications equipment and/or for providing assistance on technical matters
- ☐ If IMT is activated, communicate with Operations SC via Command Network
- ☐ Compile and maintain appropriate documentation
- ☐ Provide Operations Section Chief Field Reports (including Initial Incident Briefing Form - ICS 201 at the beginning of the incident) approximately 30 to 45 minutes before each IMT Assessment Meeting; ensure reports provide current information on:
  - locations of incident facilities, including:
    - Field Operations Base, staging area(s), decontamination station(s)
    - first aid station(s), security check point(s), as necessary
  - nature, location, and status of source(s), characteristics of spilled/emitted material(s)
  - field response organisation down to task level
  - nature and status of tasks broken down by Branch and/or Division
  - "Assigned" resources broken down by task, "Available" resources broken down by staging area
  - progress being made, problems being encountered, needs

PRODUCTS DEPUTY OPS SECTION CHIEF IS RESPONSIBLE FOR:

Initial Incident Briefing (ICS 201)
Unit Log (ICS 214)
Field Reports/Updates

SITE SAFETY ASSISTANT

Responsible for ensuring that all appropriate actions are taken to protect the health and safety of on-scene tactical response personnel.

SITE SAFETY OFFICER RESPONSIBILITIES

- ☐ Travel to incident scene; check in at Field Operations Base (FOB); report to Initial Incident Commander (Deputy Operations Section Chief) or Branch Director supervising field response operations
- ☐ If necessary, assist Initial Incident Commander or Deputy OSC or Branch Director in:
  - determining safe approach guidelines
  - defining Isolation Perimeter
  - determining need to evacuate non-responders from Isolation Zone
  - instituting personnel accountability system at the incident scene
- ☐ Characterize chemical and physical hazards in area(s) where task(s) are to be carried out before task(s) is/are initiated
- ☐ If necessary, organise and manage a Site Entry Team to carry out "on site" Site Characterizations
- ☐ Define hazard control zones
- ☐ Ensure all field responders who enter an Exclusion (hot) zone are adequately equipped, trained, and briefed (i.e., tailgate safety briefing / toolbox talks, etc.)
- ☐ Determine level of PPE to be worn in each exclusion (hot) and contamination reduction (warm) zone
- ☐ Determine level of decontamination to be carried out in contamination reduction (warm) zone
- ☐ Evaluate need for first aid at incident scene; establish first aid station(s)
- ☐ Monitor field response operations; order immediate cessation of any unsafe task or work practice
- ☐ Determine need for Site Safety Officer(s) at Branch and/or Division levels, if established
- ☐ If there are any fatalities or injuries during conduct of field response operations, participate in all related investigations; issue Safety Bulletin(s)
- ☐ Advise Staging Area Manager regarding food, water, shelter, and sanitary requirements for tactical responders
- ☐ Advise Safety Officer on status of personnel (i.e., missing, injured, dead) and, if underway, any safety-related tasks
- ☐ Provide safety status reports to Initial Incident Commander or Deputy OSC or Branch Director and to Safety Officer
- ☐ Compile and maintain appropriate documentation

PRODUCTS SITE SAFETY OFFICER IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Initial Hazard and Safety Analysis Worksheet (ICS 201-5)

STAGING AREA MANAGER

Responsible for establishing and maintaining a staging area and for coordinating the delivery of support services i.e.: food, water, shelter, PPE, and sanitation services for on-scene tactical response personnel and fuel, water, and lubricants for response equipment.

STAGING AREA MANAGER RESPONSIBILITIES

- ☐ Travel to incident scene; check in at Field Operations Base (FOB); report to Initial Incident Commander / Deputy Operations Section Chief or Branch Director supervising field response operations
- ☐ Work with Initial Incident Commander/Deputy OSC or Branch Director to identify best location(s) to stage resources
- ☐ If Initial Incident Commander/Deputy OSC or Branch Director determines need for multiple staging areas, arrange for establishment of staging areas; appoint a Manager for each area, and establish a direct line of communications with each Manager
- ☐ For each staging area:
  - identify exact location
  - if possible, define and secure boundaries of area
  - identify ingress and egress points; if necessary, post signs to control traffic flow into and out of area
  - identify and obtain personnel and equipment needed to operate area
  - segregate resources, by kind, in area
- ☐ Institute resource check-in/check-out procedures
- ☐ Establish a direct line of communications with Initial Incident Commander/Deputy OSC or Branch Director
- ☐ Keep On-Scene Commander (Deputy OSC) or Branch Director informed about kind and quantity of resources in each area
- ☐ Work with IMT Logistics Section Chief/Communications Unit Leader to establish a Supply Network
- ☐ Receive and process resource requests generated by tactical response personnel
- ☐ Dispatch staged resources to locations specified by Initial Incident Commander/Deputy OSC or Branch Director
- ☐ Forward resource requests that cannot be addressed with staged resources to IMT Logistics Section Chief/Supply Unit Leader via Supply Network
- ☐ Receive follow-up reports from IMT Logistics Section Chief/ Supply Unit Leader on status of Section's efforts to obtain requested resources

- ☐ Provide Initial Incident Commander/Deputy OSC or Branch Director status reports on resources checked-in and available in staging area and resources that are en route to staging area
- ☐ Receive guidance from Site Safety Assistant
- ☐ Obtain and make available the food, water, shelter, and sanitary facilities necessary to support tactical responders
- ☐ Maintain first aid station(s) if located in staging area(s)
- ☐ Supervise demobilization of staging area
- ☐ Compile and maintain appropriate documentation

PRODUCTS STAGING AREA MANAGER IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Check-in/out List (ICS 211)
Field Reports/Updates

AIDE(S)

Responsible for assisting Initial Incident Commander / Deputy Operations Section Chief or Branch Director supervising field response operations, particularly in regard to keeping track of checked-in resources, compiling information for Field Reports, and maintaining appropriate documentation.

AIDE(S) RESPONSIBILITIES

- ☐ Travel to incident scene; check in at Field Operations Base (FOB); report to Initial Incident Commander / Deputy Operations Section Chief or Branch Director supervising field response operations;
- ☐ Assist Initial Incident Commander / Deputy OSC or Branch Director in:
  - Monitoring Command Communication Network
  - Tracking staged resources; if necessary, establish direct line of communications with Staging Area Manager
  - Tracking "available" and "assigned" resources to carry out tasks
  - Maintaining appropriate documentation including consistently compiling information for written Field Reports.
- ☐ Receive information from Site Safety Assistant; compile site safety-related information for Field Reports, including:
  - Hazards, location of Isolation Perimeter, hazard control zones
  - PPE requirements, decontamination requirements, first aid stations
- ☐ Provide information to Planning Section to assist in development of Incident Action Plan

PRODUCTS AIDE(S) IS RESPONSIBLE FOR:

Unit Log (ICS 214)

AIR OPERATIONS MANAGER

Responsible for managing air operations associated with tactical response operations, including: scheduling, locating heliports, arranging for air-to-air and air-to-ground communications, and coordinating the designation and enforcement of air space restrictions with appropriate government officials.

AIR OPERATIONS MANAGER RESPONSIBILITIES

- ☐ Travel to incident scene; check in at Field Operations Base (FOB); report to Initial Incident Commander / Deputy Operations Section Chief or Branch Director supervising on-scene response operations
- ☐ Assist Initial Incident Commander / Deputy OSC or Branch Director in:
  - Identifying the most appropriate aircraft,
  - Air operations nature, magnitude, & location to support/carry out tactical response operations
  - Determining need for and define air space restrictions
  - Tracking "available" (i.e., staged) air resources
- ☐ Work with Staging Area Manager to provide Logistics Section Chief or Supply Unit with information on tactical aircraft needs; order equipment, personnel, materials, and supplies needed to support/carry out tactical air operations
- ☐ Identify, set up and maintain bases of operation for all tactical aircraft including:
  - Maintaining inventory of aircraft (both Fixed wing and helicopters)
  - Instituting check-in/check-out procedures
- ☐ Work with Logistics Section Chief or Ground/Vessel Support Unit to:
  - Ensure all aircraft are properly inspected
  - Establish and maintain an Air Operations Plan (ICS 220)
- ☐ Coordinate declaration and enforcement of air space restrictions with appropriate government officials
- ☐ Work with Safety Officer/Site Safety Assistant to create Safety Plan for air operations
- ☐ Work with IMT Logistics Section Chief or Communications Unit Leader to establish air-to-air, air-to-ground, air-to-vessel communications networks
- ☐ Supervise all tactical air operations
- ☐ Arrange for fuelling, maintenance and repair of aircraft resources, as requested
- ☐ Coordinate air support requirements with personnel in other Sections

- ☐ Establish procedures for emergency reassignment of aircraft
- ☐ Approve and schedule flights of non-incident-related aircraft within area of restricted air space
- ☐ Keep abreast of air traffic situation external to incident
- ☐ Compile and maintain appropriate documentation

PRODUCTS AIR OPERATIONS MANAGER IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Air Operations Plan (ICS 220)
Field Assignments (ICS 204s) – (review)
Field Reports/Updates

SOURCE CONTROL / SALVAGE BRANCH DIRECTOR

Responsible for supervising on-scene source control operations. In some incident types and/or areas, Source Control and/or Salvage may become its own SECTION, having a Section Chief that is part of the Command Staff reporting directly to the Incident Commander. (See Section 1.2)

SOURCE CONTROL / SALVAGE BRANCH DIRECTOR RESPONSIBILITIES

- ☐ Assist Operations Section Chief or Deputy Operations Section Chief supervising response operations in sizing up situation, and/or in developing solution(s) (i.e., a strategy) to address source control/salvage-related problem(s)
- ☐ Supervise field source control/salvage operations
- ☐ Brief personnel assigned to carry out source control/salvage-related tasks; ensure that assigned personnel have information and equipment they need to carry out tasks safely and effectively
- ☐ Ensure health & safety of all field source control/salvage personnel; determine need for Branch-specific Site Safety Assistant
- ☐ Provide Operations Section Chief or Deputy OSC
  - Advice on Isolation Zone evacuation potential, as necessary
  - Information about nature/status of source control/salvage operations.
- ☐ Institute personnel accountability procedures
- ☐ Ensure appropriate (safe) actions are taken to stop, isolate, and/ or control incident source
- ☐ Assess damage to affected facilities and take appropriate action(s) to minimize additional damage
- ☐ If necessary, identify location(s) of Branch-specific staging area(s)
- ☐ Provide Staging Area Manager information on resource needs
- ☐ Compile and maintain appropriate documentation

PRODUCTS SOURCE CONTROL / SALVAGE BRANCH DIRECTOR IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Field Assignments (ICS 204s) – (review)
Field Reports/Updates

BRANCH DIRECTOR

Responsible for supervising on-scene response operations associated with the incident.

BRANCH DIRECTOR RESPONSIBILITIES

- ☐ Size up situation, and/or develop solution(s) (i.e., a strategy) to address situation
- ☐ Supervise field response operations
- ☐ Ensure health and safety of all branch response personnel; determine need for Branch-specific Site Safety Assistant
- ☐ Brief personnel assigned to carry out response-related task(s); ensure that assigned personnel have information and equipment they need to carry out tasks safely and effectively
- ☐ Institute personnel accountability procedures
- ☐ Account for all assigned personnel and equipment
- ☐ Maintain proper span-of-control; establish Divisions, if necessary
- ☐ Provide Operations Section Chief or Deputy OSC:
  - Advice on Isolation Zone evacuation potential, as necessary
  - Information about nature/status of branch operations.
- ☐ If necessary, identify location(s) of Branch-specific staging area(s)
- ☐ Provide Staging Area Manager information on resource needs
- ☐ Compile and maintain appropriate documentation

PRODUCTS RESPONSE BRANCH DIRECTOR IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Field Assignments (ICS 204s) – (review)
Field Reports/Updates

DIVISION / GROUP SUPERVISOR

Responsible for supervising tactical response operations within a geographic area (i.e., Division) or for a function that crosses Division boundaries (i.e., Group).

DIVISION/GROUP SUPERVISOR RESPONSIBILITIES

- ☐ If asked, assist in sizing up situation, and/or in developing solution(s) (i.e., a strategy) to address situation
- ☐ Receive assignments from Initial Incident Commander / Deputy Operations Section Chief or Branch Director
- ☐ Supervise field response operations within a geographic area (i.e., Division) or for a function that crosses Division boundaries (i.e., Group)
- ☐ Ensure health and safety of all tactical response personnel within area or function of responsibility
  - Receive information on Isolation Perimeter location
  - Provide Deputy Operation Section Chief or Branch Director with advice on whether or not to evacuate Isolation Zone, as necessary
  - Receive safety briefing from Site Safety Assistant
- ☐ Brief personnel assigned to carry out response-related tasks within area or function of responsibility; ensure that assigned personnel have information and equipment they need to carry out tasks safely and effectively
- ☐ Institute personnel accountability procedures
- ☐ Account for all assigned personnel and equipment
- ☐ Maintain proper span-of-control; establish Task Forces or Strike Teams, if necessary
- ☐ Keep Deputy Operations Section Chief or Branch Director informed about nature and status of response operations within area or function of responsibility
- ☐ Receive information on location of staging area(s); if necessary, identify location(s) of Division- or Group-specific staging area(s)
- ☐ Provide Staging Area Manager information on resource needs
- ☐ Compile and maintain appropriate documentation

PRODUCTS RESPONSE BRANCH DIRECTOR IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Field Assignments (ICS 204s) – (review)
Field Reports/Updates

TASK LEADER

Responsible for carrying out assignment in a safe fashion and in a manner consistent with directions received from the Operations Section.

TASK LEADER RESPONSIBILITIES

- ☐ If asked, assist Deputy Operations Section Chief, Branch Director, or Division/Group Supervisor in sizing up situation, and/or in developing solution(s) (i.e., a strategy) to address problem(s)
- ☐ Receive assignment from Deputy Operations Section Chief, Branch Director, or Division/Group Supervisor, including but not limited to:
  - Location and nature of assignment
  - objective(s) to be achieved
  - hazards present with PPE requirements
  - decontamination requirements
  - kind and amount of assigned resources
  - communications procedures
- ☐ Brief task force response personnel assigned to carry out task; ensure that assigned personnel have information and equipment they need to carry out task safely and effectively
- ☐ Establish a personnel accountability system to keep track of personnel, particularly while they are working in exclusion (hot) zone
- ☐ Account for all assigned personnel and equipment
- ☐ Ensure health and safety of all task force response personnel within area or function of responsibility; receive a safety briefing from Site Safety Assistant
- ☐ Maintain proper span-of-control
- ☐ Provide Deputy Operations Section Chief, Branch Director, or Division/Group Supervisor
  - Periodic status reports
  - Immediate updates about special events/accidents
  - Recommendations on decommissioning time-line of personnel and equipment
- ☐ Provide Staging Area Manager information on resource needs, either directly or through Division/Group Supervisor, Branch Director, or Deputy Operations Section Chief
- ☐ Compile and maintain appropriate documentation

PRODUCTS TASK LEADER IS RESPONSIBLE FOR:

Unit Log (ICS 214)

Field Assignments (ICS 204s) – (review) – if assigned

Field Reports/Updates

8. PLANNING SECTION

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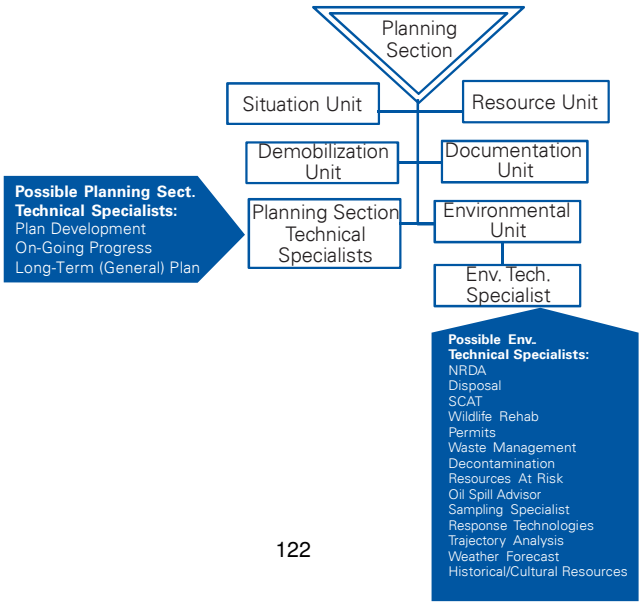
Figure 8

PLANNING SECTION ORGANISATION CHART



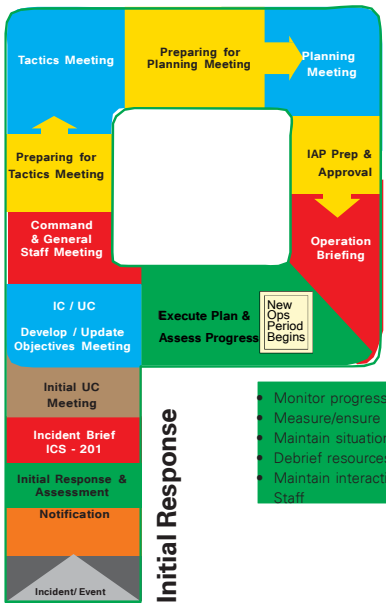
The Planning "P" – Planning Activities

- Facilitate meeting
- Provide Situation Briefing
- Review proposed strategy, tactics & resource requirements
- Identify resource shortfalls
- Assure the strategy & tactics comply with IC/UC objectives
- Mitigate Logistics and Safety issues

- Clean up ICS-215 & make hard copies for attendees
- Notify participants of meeting location & time
- Setup meeting room

- Facilitate meeting
- Provide Situation Briefing
- Confirm availability of resources
- Verify support for the proposed plan
- Document decisions & assigned actions

- Meet with Operations to determine strategies, tactics & resource requirements
- Complete ICS-215
- Notify meeting participants of scheduled meeting
- Setup meeting room



- Develop components of the IAP
- Review completed IAP for correctness
- Provide IAP to IC/UC for review and approval
- Make copies of IAP for distribution

- Setup meeting room
- Facilitate meeting
- Provide situation briefing
- Receive work tasks & assignments
- Resolve conflints & clarify roles & responsibilities

- Setup briefing area
- Provide situation briefing
- Distribute copies of IAP
- Facilitate briefing
- Make adjustments to IAP, if nedessary

- Setup meeting room
- Facilitate meeting
- Provide recorder to document decisions
- Distribute and post decisions

- Monitor progress of implementing the IAP
- Measure/ensure progress against stated objectives
- Maintain situation and resources status
- Debrief resources coming off shift
- Maintain interaction with Command and General Staff

- Setup meeting room
- Facilitate meeting
- Provide recorder to document decision points

- Facilitate ICS-201 brief
- Obtain ICS-201 & distribute to RESL & SITL
- Document results of ICS-201 briefing

- Check-in
- Receive IC/UC Briefing
- Activate Plans Section
- Organise & brief subordinates
- Acquire work materials

COMMON RESPONSIBILITIES

This section contains Responsibilities that are ***common*** to Section Chiefs and Unit Leaders.

- ☐ Obtain initial briefing from Incident Commander (IC), attend daily staff meetings and briefings, and relay relevant information to personnel assigned to function
- ☐ Size up incident, identify function-specific problems and solutions, and break work down into manageable tasks
- ☐ Provide Incident Commander periodic status reports
- ☐ Assist Incident Commander in
  - Analysing incident potential
  - Preparation of Strategic Objectives & response priorities
- ☐ Provide Logistics Section Chief or Supply Unit with information on personnel, equipment, material, and supply needs for Section
- ☐ Attend Assessment Meetings and provide reports on nature and status of work
- ☐ Ensure that Finance Section Chief is advised of all cost commitments by Staff or Section
- ☐ Compile and maintain appropriate documentation
- ☐ IMT Staffing needs:
  - Develop organisation chart with personnel assigned to Section
  - Provide Resource Unit with initial and, as necessary, updated organisation chart(s)
  - Maintain proper span-of-control when assigning tasks to Section or Unit personnel
  - Consider alternate or backup personnel for extended (24-hour) coverage.
- ☐ Brief IMT Staff personnel on items discussed during meetings; assign Action Items, as appropriate
- ☐ If requested, assist Planning Section Chief in preparation of
  - Incident Potential Worksheet
  - Incident Action Plan
- ☐ Prepare verbal or written transition report for incoming personnel assigned to Section or Unit

PLANNING SECTION CHIEF

Responsible for provision of short-term and, if necessary, long-term planning; the compilation and display of information on the nature/ status of an incident, incident response operations; and retention of all related documentation.

PLANNING SECTION CHIEF RESPONSIBILITIES

- ☐ Supervise implementation of all applicable contingency plans
- ☐ Ensure Operations Section is provided information on sensitive resource areas that need to be protected during response operations
- ☐ Ensure all required internal and external notifications have been made
- ☐ Prepare Incident Potential Worksheet either alone or in con junction with other members of Command and General Staff;
  - Assist Incident Commander (IC) in evaluation of Incident Potential
  - Provide a copy of the Incident Potential to the Business Support Team (BST)
- ☐ Assist IC in analysing results of size up process and in identifying Section-specific problems that need to be addressed by Strategic Objectives
- ☐ Facilitate preparation and distribution of Incident Action Plans
  - Work with IC or Deputy IC to define next operational period (NOP) duration
  - Ensure field assignments fully address Objectives for NOP
  - Ensure that environmental and safety reviews are performed on field assignments for NOP
- ☐ Facilitate preparation and distribution of General / Long-Term Plan and any other incident specific plans, reports, or other required documents
- ☐ Facilitate collection and posting of incident nature/status updates and response operations in the Information Centre. Ensure same information is elevated to the BST via the IC.
- ☐ Advise IC on all environmental aspects of source control and response operations, and ensure compliance with environmental laws, regulations, and/or government directives
- ☐ Facilitate collection and retention of appropriate documentation
- ☐ Ensure technical specialists are checked in and assigned to appropriate Units within IMT / Field
- ☐ Provide Information and Liaison Officers with accurate, up-to- date information on response operations, including:
  - Location, fate and effects of emitted/discharged materials
  - weather and other conditions
  - environmentally sensitive areas, wildlife affected by incident, and/or status of protection efforts
- ☐ Assist Information and Liaison Officers in responding to requests for information from media, government agencies, and other external parties

PRODUCTS PLANNING SECTION CHIEF IS RESPONSIBLE FOR:

Objectives (ICS 202)
Executive Summary IAP
(Collect all pieces) IAP
Cover
Unit Log (ICS 214)
Incident Potential Worksheet
General / Long-Term Plan

SITUATION UNIT LEADER

Responsible for gathering and displaying incident nature/status and incident response operations information, for preparing Situation Status Reports, and for preparing situation projections in support of short and long-term planning efforts.

SITUATION UNIT LEADER RESPONSIBILITIES

- ☐ Work with Resource Unit to establish and maintain Information Centre:
  - Receive Incident Name, operational periods, initial and, if necessary, updated Strategic Objectives from Incident Commander
  - Receive initial and, if necessary, updated Incident Facts related to:
    - description of incident, description of spilled/emitted material, source, status of source control operations, status of incident, response operations, and impacts from Operations Section Chief,
    - weather, tides, sunrise/sunset and sensitive areas from Planning Section Chief or Environmental Unit Leader
    - safety considerations and information on safety and health considerations from Safety Officer
    - updated meetings schedule from Deputy IC or Planning Section Chief
  - Obtain appropriate chart(s), map(s), plot plan(s) for use as Situation Map
  - Receive following Situation Map from Operations Section Chief:
    - location of source(s), spilled/emitted material(s)
    - location of Field Operations Base (FOB), staging area(s)
    - location of Isolation Perimeter with secured access point(s)
    - location of Branches, Divisions, Groups, if created
    - location of tasks
    - wind and current speed and direction, if applicable

- ☐ Prepare projections of situation
- ☐ Update Situation Map and Status Boards in Information Centre before Briefings, Assessment Meetings; if requested, record Action Items identified during meetings
- ☐ Work with Resources Unit to prepare Situation Status Reports (ICS 209s) and provide them to IC for transmission to Business Support Team (BST)
- ☐ Assist in preparing Incident Action Plans (IAP); keep Planning Section Chief or Plan Development Unit apprised of any changes which may affect IAP content;
  - weather conditions for NOP
  - on-going tactical response operations
  - projected movements of spilled/emitted material(s) during NOP
  - mass balance projections for NOP
- ☐ Assist in compilation of General / Long-Term Plan; Provide following information to Planning Section Chief or Plan Development Unit:
  - long-range weather forecast
  - long-range trajectory analysis
  - long-range mass balance analysis
- ☐ Track status of incident-specific plans
- ☐ If approved by Planning Section Chief and Operations Section Chief, send observers to field to provide situational updates

PRODUCTS SITUATION UNIT LEADER IS RESPONSIBLE FOR:

Maps: Trajectory, Over-flight / field observation, Resources status, Situation, Resources at Risk/Protection Strategy, Division zone Situation status report (ICS 209), Tides / currents / weather, Daily Meeting Schedule (ICS 230), Unit Log (ICS 214)

FIELD OBSERVER

Responsible for assisting operations in the field in providing information to the Situation Unit leader.

FIELD OBSERVER RESPONSIBILITIES

- ☐ Gather, update, and apply situational information relevant to the assignment
- ☐ Gather information to assist in advanced planning and accurate predictions
- ☐ Establish effective relationships with relevant personnel
- ☐ Communicate and ensure understanding of work expectations within the chain of command and across functional areas

- ☐ Report information to the Situation Unit Leader (SUL) by established procedure and ensure understanding by recipient
- ☐ Report immediately any condition observed that may cause danger and a safety hazard to personnel

PRODUCTS FIELD OBSERVER IS RESPONSIBLE FOR:

Unit Log (ICS 214)

RESOURCE LEADER

Responsible for tracking on-scene resource status, including organisational assignments, and for displaying resource status in the Information Centre.

RESOURCE UNIT LEADER RESPONSIBILITIES

- ☐ Work with Situation Unit to establish and maintain Information Centre
- ☐ Institute and monitor application of resource check in/check out procedures with Staging Area Manager
- ☐ Receive information on "en route" resources from Logistics Section or Supply Unit, "available" resources by staging area, "assigned" resources by task and location, and "out-of- service" resources by location from Operations Section
- ☐ Compile and maintain a comprehensive organisation chart and post chart in Information Centre
- ☐ Update resource Status Boards in Information Centre before Briefing Meeting and Assessment Meetings
- ☐ Compile information on organisational assignments for Next Operational Period (NOP) for inclusion in Incident Action Plans (IAPs)
- ☐ Work with Situation Unit to prepare situation status reports and provide them to Incident Commander for transmission to Business Support Team
- ☐ Assist in compilation of Incident Action Plans; keep Planning Section Chief or Plan Development Unit preparing IAP apprised of any changes in resource status that could affect content of IAP; provide following information to Planning Section Chief or Plan Development Unit preparing IAP:
  - Information on "en route" resources scheduled to arrive during NOP to Planning Section Chief or Plan Development Unit preparing IAP
  - Organisational Assignments form (ICS 203)

PRODUCTS RESOURCE UNIT LEADER IS RESPONSIBLE FOR:

Check-in/out sheet (ICS 211)
T-Cards (ICS 219)
Organisation Assignment List (ICS 203)
Organisation Chart (ICS 207)
Situation Status – Status Summary Resource info (ICS 209)
Resource Change form (ICS 210)
Field Assignment (ICS 204) – with OSC
Operational Planning Worksheet (ICS 215) – with OSC)
Unit Log (ICS 214)

CHECK-IN / STATUS RECORDER

Responsible for conducting check-in / check-out procedures and documentation for incident resources

CHECK-IN / STATUS RECORDER RESPONSIBILITIES

- ☐ Post signs to direct arriving resources to incident check-in locations
- ☐ Organize and maintain check-in station
- ☐ Record check-in information on Check-in form (ICS 211)
- ☐ Direct incoming personnel/resources to appropriate function / location
- ☐ Forward completed Check-in forms (ICS 211) and Status Change forms (ICS 210)
- ☐ Maintain information about incident resources (e.g. total, number, location)
- ☐ Assist Resource Unit Leader in tracking restrictions / work requirements for operations resources

PRODUCTS RESOURCE UNIT LEADER IS RESPONSIBLE FOR:

Check-in/out sheet (ICS 211)
T-Cards (ICS 219)
Unit Log (ICS 214)

DOCUMENTATION UNIT LEADER

Responsible for compiling documentation and establishing / maintaining incident files, providing duplication/distribution services to Incident Management Team (IMT) members, and documenting all IMT meetings.

DOCUMENTATION UNIT LEADER RESPONSIBILITIES

- ☐ Work with Legal Officer to develop documentation guidelines for distribution to appropriate field responders and IMT members
- ☐ Establish mechanism to document important actions and/or decisions, particularly those made during IMT Meetings
- ☐ Distribute and collect Log Books (ICS 214) to appropriate field responders and IMT members
- ☐ Establish duplication and distribution services within Incident Command Post
- ☐ Duplicate and file all official forms and reports
- ☐ Organise and maintain documentation files in a convenient, secure location
- ☐ Check records for completeness and accuracy prior to filing
- ☐ Obtain approval from Planning Section Chief prior to release of documentation
- ☐ Verify with Incident Commander and Legal Officer the destination of all incident related files

PRODUCTS DOCUMENTATION UNIT LEADER IS RESPONSIBLE FOR:

Accurate, up-to-date incident files
Meeting Record (ICS 231)
Open Action Item Tracker (ICS 233)
Unit Log (ICS 214)

DEMOBILIZATION UNIT LEADER

Responsible for preparing an incident-specific Demobilization Plan, and assisting members of the Incident Management Team (IMT) in implementing the plan in an orderly, safe, and cost-effective fashion.

DEMOBILIZATION UNIT LEADER RESPONSIBILITIES

- ☐ Review resource status information and meet with IMT personnel to determine scope and timing of demobilization efforts
- ☐ Prepare and obtain approval of Demobilization Plan
- ☐ Work with Logistics Section personnel and Staging Area Manager(s) to implement Demobilization Plan
- ☐ Coordinate personnel demobilization efforts with Human Resources

PRODUCTS DEMOBILIZATION UNIT LEADER IS RESPONSIBLE FOR:

Demobilization Plan, Demobilization Check-out form (ICS 221)
Unit Log (ICS 214)

ENVIRONMENTAL UNIT LEADER

Responsible for managing all environmental matters associated with incident response operations, including: environmental assessment; permitting; modelling and surveillance; environmental monitoring and damage assessment; sensitive habitat, and wildlife protection/ rehabilitation. Also responsible for providing technical advice to Operations Section on activities including waste disposal, in *situ* burning, and dispersant use.

ENVIRONMENTAL UNIT LEADER RESPONSIBILITIES

- ☐ Review environmental aspects of Incident Action Plans (IAPs) and provide Planning Section Chief or Plan Development Unit with specific Environmental Messages, as warranted
- ☐ Evaluate and recommend additional support in terms of environmental consultants and contractor services
- ☐ Provide Planning Section Chief or Plan Development Unit information on sensitive environmental, social, and economic areas/resources within areas projected to be impacted by spilled/emitted materials

Alternative Technologies

- ☐ Provide recommendations on use of alternative technologies to IC/UC
- ☐ Participate in development and implementation of IAPs as they relate to alternative technologies
- ☐ Evaluate oil characteristics and weather parameters to determine if which alternative technology would be effective
- ☐ Identify and acquire necessary specialists to support alternative technologies
- ☐ Obtain approvals for alternative technology operations
- ☐ Make recommendations to Procurement Unit on sources for chemicals, application equipment, and any other necessary materials and assist in scheduling/determining appropriate delivery points of shipment
- ☐ Assist Safety Officer in evaluation of alternative technology safety considerations
- ☐ Evaluate potential environmental problems associated with alternative technologies and liaise with any environmental regulators, if necessary

Clean-up Assessment

- ☐ Establish a Shoreline Clean-up Assessment Team (SCAT) to evaluate impacts to shoreline/land areas
- ☐ Carry out assessment operations to determine degree of oiling, to identify most appropriate clean-up technique, and to decide if clean-up is completed
- ☐ Provide clean-up technique recommendations to Operations and Planning Sections and for IAP development

Environmental Monitoring: Damage Assessments

- ☐ Determine need for/ability to conduct damage assessment operations
- ☐ Arrange for environmental specialists to collect data and assess impacts to:
  - water & air quality
  - wildlife
  - sensitive environmental and cultural resource areas
  - human resources & health
- ☐ Design monitoring programs, including collection and preservation of samples from affected and unaffected resources and areas
- ☐ Identify NRDA expertise and legal counsel assistance
- ☐ Document extent of spill distribution and affected resources

Modelling and Surveillance

- ☐ Establish surveillance program; interface with field Surveillance Task Leader
- ☐ Work through Logistics Section Chief or Supply Unit to obtain necessary resources to support surveillance operations, including aircraft, maps, communications equipment, cameras, video recorders, & surveillance specialists
- ☐ Assist in interpreting remote sensing data
- ☐ Develop appropriate trajectory model(s) and forecast slick movements
- ☐ Maintain environmental databases
- ☐ Provide Operations and Planning Section Chiefs and Situation Unit Leader with initial and updated information on weather, tides, sunrise/sunset, forecasted slick movements, and location of sensitive resource areas

Strategic Assessment

- ☐ Use applicable contingency plans to identify sensitive resources that could be affected, and help determine priorities and methods of protection
- ☐ Provide Operations Section Chief with information on potential environmental impacts of any response technique that could adversely affect the environment, including cultural resources
- ☐ Advise Information and Liaison Officers on impact of the incident and response operations on the environment

Waste Management

- ☐ Prepare a Waste Management Plan that includes information on:
  - waste streams
  - waste segregation practices and procedures
  - collection procedures
  - transportation modes and procedures
  - waste storage & disposal sites
- ☐ Obtain information on all applicable federal, state, and local laws, regulations, and standards applicable to collection, transport, storage and disposal of wastes
- ☐ Work with Operations Section Chief to develop waste handling procedures that minimize secondary environmental impacts and to Identify temporary storage areas for recovered wastes
- ☐ Collect and present environmental information required to support waste management, transportation, storage and disposal permit applications
- ☐ Identify approved waste disposal facilities; determine procedures for waste acceptance
- ☐ Provide Situation Unit Leader with information on amount of waste recovered, stored, and disposed at approved facilities
- ☐ Maintain all statutory, regulatory, and corporate record keeping required for all waste streams
- ☐ Contract professional waste management companies as necessary to assist in waste management operations
- ☐ Approve changes to Waste Management Plan; provide information on changes to Operations Section Chief and Environmental Unit Leader

Wildlife and Sensitive Habitat Protection

- ☐ Assess need for and feasibility of wildlife rehabilitation centres, including all financial aspects, procurement of staff and equipment, training, and centre management

- ☐ Work through Logistics Section Chief or Supply Unit to obtain necessary resources to construct and operate facilities for wildlife rehabilitation, as appropriate
- ☐ Coordinate wildlife and habitat protection and rehabilitation operations with appropriate resource agencies
- ☐ Identify experts to assess wildlife impacts and rescue and rehabilitation, as appropriate
- ☐ Work with Safety Officer to provide for the safety of personnel engaged in wildlife protection and rehabilitation operations
- ☐ Maintain accurate, up-to-date information on wildlife and habitat impacts and rehabilitation operations, including documentation of successes and mortalities

PRODUCTS ENVIRONMENTAL UNIT LEADER IS RESPONSIBLE FOR:

Field Assignment - Environmental Message (ICS 204)
Situation Status report (ICS 209) – Status Summary w/ SUL, Mass Balance info
Resources at Risk (ICS 232)
Unit Log (ICS 214)

TECHNICAL SPECIALIST(S)

Responsible for providing specific technical advice/assistance to personnel engaged in response operations, and for managing the identification/acquisition of technical experts (i.e., contractors / consultants) which may be necessary to support those operations.

TECHNICAL SPECIALIST(S) RESPONSIBILITIES

- ☐ Provide technical advice and assistance to Field Operations and IMT members
- ☐ If field responders or IMT members require advice from technical experts, assist them in identifying and acquiring qualified experts
- ☐ Coordinate with Finance Section Chief or Procurement Unit to make appropriate contractual arrangements for contractors and/or consultants
- ☐ Coordinate review of solicited and unsolicited proposals for technical work

PRODUCTS TECHNICAL SPECIALIST IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Specialist plans

OIL SPILL ADVISOR

Responsible for being the Principal Science Advisor to BP IMT. In the US, this positions is similar to NOAA Scientific Support Coordinator. Outside of the U.S., it is similar to ITOPF Technical Advisor.

OIL SPILL ADVISOR RESPONSIBILITIES

- ☐ Evaluate environmental trade-offs of countermeasures and clean-up techniques, and response endpoints
- ☐ Gain consensus on scientific issues affecting response
- ☐ Provide expertise on:
  - Over flight Maps and Trajectory Analysis
  - Weather, Tides, and Currents
  - Resources at Risk, including threatened and endangered species, in conjunction with Natural Resource Trustee Representatives and the FOSC's Historical/Cultural Resources Specialist
  - Information on Chemical Hazards
  - Information Management
- ☐ Attend planning meetings

PRODUCTS PLAN DEVELOPMENT UNIT LEADER IS RESPONSIBLE FOR:

Unit Log (ICS 214)

ONGOING PROCESS GROUP SUPERVISOR

Responsible for providing information on the status of other, unaffected on- going processes at the incident facility that may impact upon or be impacted by incident response operations (for example, other refinery operations)

ON-GOING PROCESS GROUP SUPERVISOR RESPONSIBILITIES

- ☐ Analyse situation to identify on-going processes that are unaffected by incident, but could have an impact on or be impacted by response operations
- ☐ Analyse on-going processes to identify potential conflicts with response operations.
- ☐ Provide Operations and Planning Section Chiefs and BST Business Continuity personnel with status information of on-going processes. Provide suggestions to avoid impacts resulting from conflicts between the processes and emergency operations

PRODUCTS ON-GOING PROCESS GROUP SUPERVISOR IS RESPONSIBLE FOR:

Unit Log (ICS 214)

PLAN DEVELOPMENT UNIT LEADER

Responsible for preparing Incident Action Plans (IAPs), a General / Long-term plan, or other specific plans as requested by PSC.

PLAN DEVELOPMENT LEADER RESPONSIBILITIES

- ☐ Provide Planning Section Chief information on personnel, equipment, materials, and supply needs
- ☐ Coordinate with Planning Section Chief or Situation Unit and appropriate IMT members to gather information for preparing the IAPs and General / Long-term Plan

Prepare Incident Action Plans

- ☐ Obtain the following information from Operations Section Chief:
  - tasks currently underway, task progress through to completion of Current Operational Period (COP), and determine if tasks will continue into Next Operational Period (NOP)
  - new tasks that will be initiated before end of COP and continue into NOP
  - new tasks to be initiated during NOP

- ☐ Obtain following information from Planning Section Chief or Situation Unit:

- weather conditions for NOP
- projected movements of spilled/emitted material(s) during NOP
- mass balance projection for NOP

☐ Obtain information on "en route" resources that will be "available" during NOP from Planning Section Chief or Resource Unit

☐ Receive Organisational Assignments (ICS 203) for NOP from Resource Unit

☐ Obtain information on resources at risk (ICS 232) during NOP from Planning Section Chief or Environmental Unit

☐ Review applicability of existing strategic Objectives for the NOP; if necessary, prepare recommended changes for consideration by IC/UC

☐ Receive copy of approved tactics for NOP from the Operation Section Chief. Engage in tactical planning

☐ Use Operational Planning Worksheet (ICS 215) to
- list tasks to be continued into or initiated during NOP and prepare task-specific objectives
- identify resource "requirements" and unmet resource "needs" associated with each field assignment for NOP

☐ Provide copy of Operational Planning Worksheet (ICS 215) and NOP field assignments (ICS 204s) to Logistics Section Chief or Supply Unit, Safety Officer, Planning Section Chief, and Environmental Unit. Receive feedback and make any necessary changes.

☐ For written IAPs, prepare either Field Assignment form (ICS 204), for tasks not already covered by such a form or Field Assignment Change Sheet form (ICS 204C), for tasks already covered by a Field Assignment form (ICS 204)

Prepare General / Long-Term Plan

☐ Compile list of tasks and resources to be covered by General / Long-Term Plan, and record them on a General / Long-Term Plan worksheet

☐ Meet with IC/UC and Operations and Planning Section Chiefs to identify critical tasks and milestones for completion of work on critical tasks

☐ Receive projection on how long it will take to bring source under control from Operations Section Chief

☐ Receive situation projection from Planning Section Chief or Situation Unit, including:

- long-range weather
- trajectories of spilled materials until they are no longer mobile and/or emitted materials until they are no longer present in unhealthy concentrations
- location & nature of sensitive environmental, social, and economic areas/resources within area(s) projected to be impacted by spilled/emitted materials

☐ Receive information on response techniques to be utilized by Operations Section to treat, contain, recover, store, and/or dispose of discharged/emitted materials
☐ Work with Operations, and/or Logistics Section Chief(s) to identify equipment and personnel necessary to carry out source control and response tasks
☐ Project duration of tasks and record on General/Long-Term Plan worksheet
☐ Project resource requirements to complete tasks on a daily basis for next week, weekly basis for first month, and monthly basis for remaining months to end of response, and record the on General / Long-Term Plan worksheet
☐ When General/Long-Term Plan is compiled, review plan with Section Chiefs who are responsible for tasks covered by plan; make necessary changes
☐ Provide copy of General/Long-Term Plan to Planning Section Chief
☐ Use General/Long-Term Plan as guide in preparation of all subsequent IAPs
☐ Update General/Long-Term Plan on daily basis

PRODUCTS PLAN DEVELOPMENT UNIT LEADER IS RESPONSIBLE FOR:

Objectives (ICS 202) – with Planning Section Chief
Executive Summary
IAP (Collect all pieces)
IAP Cover
Incident Potential Worksheet
General / Long -Term Plan
Unit Log (ICS 214)

INTER-SECTION LIAISON

Responsible for assisting Section Chief, particularly in regard to keeping the lines of communications open with other IMT Sections; achieving this primarily by becoming the main conduit of information to/from designated Sections.

INTER-SECTION LIAISON RESPONSIBILITIES

- ☐ Determine information to be communicated / compiled with designated section(s)
- ☐ Assist Section Chief in monitoring communication networks between sections
- ☐ Assist Section Chief in compiling and maintaining appropriate documentation
- ☐ Provide info to Planning Section to assist in development of IAPs

PRODUCTS INTER-SECTION LIAISON IS RESPONSIBLE FOR:

Unit Log (ICS 214)

WASTE MANAGEMENT / DISPOSAL SPECIALIST

Responsible for providing the Waste Management / Disposal plan(s) that details the collection, sampling, monitoring, temporary storage, transportation, recycling, and disposal of all anticipated response wastes.

WASTE MANAGEMENT / DISPOSAL SPECIALIST RESPONSIBILITIES

- ☐ Prepare a Waste Management / Disposal Plan that includes information on:
  - waste streams
  - waste segregation practices and procedures
  - collection procedures
  - transportation modes and procedures
  - waste storage sites
  - waste disposal sites
- ☐ Obtain information on all applicable federal, state, and local laws, regulations, and standards applicable to collection, transport, storage, and disposal of wastes
- ☐ Work with Operations Section Chief to develop waste handling procedures that minimize secondary environmental impacts
- ☐ Check HAZWOPER/Health and Safety for waste handling workers; PPE
- ☐ Collect and present environmental information required to support waste management permit applications
- ☐ Obtain all necessary permits and approvals to transport, store, and dispose of wastes

- ☐ Identify temporary storage areas for recovered wastes
- ☐ Identify approved waste disposal facilities; determine procedures for waste acceptance
- ☐ Provide Situation Unit Leader with information on amount of waste recovered, waste stored, and waste disposed of at approved facilities
- ☐ Maintain all statutory, regulatory, and corporate record keeping required for all waste streams
- ☐ Contract professional waste management companies as necessary to assist in waste management operations; support Procurement Unit & Supply Unit in negotiations with contractors.
- ☐ Determine types and estimate quantities of wastes generated.
- ☐ Develop Waste Minimization plan and message.
- ☐ Develop cost-effective Waste Management / Disposal plan.
- ☐ Approve changes to Waste Management / Disposal Plan; provide information on changes to Operations Section Chief and Environmental Unit Leader
- ☐ Establish liaison with contractors and disposal sites.
- ☐ Assess needs and obtain materials and provide information on Storage Location and Capacity, Equipment Needed, Transportation, and Disposal/Recycle of:
  - Oily liquids from skimming
  - Oily liquids from shore clean-up
- ☐ Identify Staging/Storage Area location(s) (Temporary/Final), Design area, Equipment Needed, Transportation, and Disposal of:
  - Oily solids
  - Non-Oily liquids
  - Non-Oily solids/Trash
  - Hazardous Waste (temporary locations)
  - Wildlife Rescue and Rehabilitation Centre waste (solids & liquids)
  - Vessel Decontamination waste
  - Personnel Decontamination Stations waste
- ☐ Identify location(s) for Animal Carcass storage (Refrigerated)
- ☐ Obtain Generator ID Number.
- ☐ Develop and Implement Manifest/Bill of Lading Tracking System.
- ☐ Ensure manpower and contractor resources are identified and on standby.
- ☐ Support Operations in field to implement Waste Management Plan.

PRODUCTS WASTE MANAGEMENT SPECIALIST IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Waste Management / Disposal Plan
Waste Minimization

DECONTAMINATION SPECIALIST

Responsible for the operations of the decontamination element, for providing decontamination as required by the incident responders, and for providing the Decontamination Plan that details the decontamination processes and resources.

DECONTAMINATION SPECIALIST RESPONSIBILITIES

- ☐ Prepare a Decontamination Plan.
- ☐ Establish the Contamination Reduction Corridor
- ☐ Work with Operations Section Chief to develop decontamination procedures that provide for the safety of responders and waste minimization
- ☐ Check HAZWOPER/Health and Safety for waste handling workers; PPE
- ☐ Identify contaminated people & equipment
- ☐ Maintain control of movement of people and equipment within the Contamination Reduction Zone
- ☐ Maintain communications and coordinate operations with an Entry Leader
- ☐ Maintain communications and coordinate operations with the Site Access Control Leader and the Site Refuge Area Manager (if activated)
- ☐ Coordinate the transfer of contaminated patients requiring medical (after decontamination) to the Medical Group.
- ☐ Coordinate handling, storage, and transfer of contaminants within the Contamination Reduction Zone.
- ☐ Ensure manpower and contractor resources are identified and on standby.
- ☐ Brief Site Safety Officer on conditions.
- ☐ Provide Situation Unit Leader with information on decontamination activities

PRODUCTS DECONTAMINATION SPECIALIST IS RESPONSIBLE FOR:

ICS 214 Unit Log
Decontamination Plan

SHORELINE CLEANUP ASSESSMENT TEAM (SCAT) SPECIALIST

Responsible for providing appropriate cleanup recommendations as to the types of the various shorelines and the degree to which they have been impacted.

SCAT SPECIALIST RESPONSIBILITIES

- ☐ Recommend the need for, and number of, SCAT
- ☐ Ensure manpower and contractor resources are identified and on standby
- ☐ Activate additional people and contractors as needed and establish SCAT teams
- ☐ Prepare and implement SCAT Plan
- ☐ Obtain response plans (FRP, ACP, etc.) and detailed maps, charts, GIS layouts, and aerial photos
- ☐ Tour incident site and surrounding areas
- ☐ Coordinate Shoreline Clean-up Assessment operations with affected landowners, municipalities, and in the U.S.: Federal and State resource trustees
- ☐ Determine shore types and current and potential damage to each
- ☐ Recommend clean-up options for each shore type
- ☐ Advise Operations on clean-up recommendations
- ☐ Monitor clean-up operations for effectiveness, implementation of strategies, and revise plans as required
- ☐ Provide Situation Unit Leader with initial and updated information on SCAT activities and plan status
- ☐ Assist in preparing Incident Action Plans; keep Planning Section Chief, Environmental Unit Leader, or Plan Development Unit preparing IAP apprised of clean-up recommendations for NOP

PRODUCTS SCAT SPECIALIST IS RESPONSIBLE FOR:

Unit Log (ICS 214)
SCAT Plan(s)

NATURAL RESOURCES DAMAGE & ASSESSMENT (NRDA) SPECIALIST (U.S. only)

Responsible for coordinating needs and activities of the NRDA/trustee team. Many NRDA activities overlap with the environmental assessment performed for the sake of spill response. Therefore, the NRDA Specialist must work closely with the NRDA trustees, SCAT Specialist, Environmental Unit Leader, and Operations Section to resolve any problems or address areas of overlap, and to obtain timely information on the spill and injuries to natural resources.

NRDA SPECIALIST RESPONSIBILITIES

- ☐ Minimize Natural Resource Damages
- ☐ Make contact with Trustees; propose cooperative assessment; determine need for/ability to conduct damage assessment operations
- ☐ Assist in prioritizing resources and minimizing injuries
- ☐ Advise Operations on response priorities in conjunction with Trustees
- ☐ Collect baseline/background information and data regarding condition of injured resources
- ☐ Establish NRDA Team
- ☐ Implement assessment of injured resources, including impacts to water and air quality, wildlife, sensitive environmental and cultural resources, and human health and resources
- ☐ Design monitoring programs, including collection and preservation of samples from affected and unaffected resources and areas
  - – Obtain necessary sampling permits and Trustee cooperative agreements
  - – Design and implement field sampling programs (pre and post impact)
  - – Collect neat, fresh, and weathered samples of spilled material
- ☐ Ensure wildlife rehabilitation process initiated when needed; document injured or dead animals as NRDA evidence
- ☐ Identify expert witnesses and legal counsel assistance
- ☐ Implement documentation procedures and develop data management program
- ☐ Develop long term NRDA Assessment Plan with Trustees
- ☐ Provide Situation Unit Leader with initial and updated information on NRDA activities and plan status

PRODUCTS NRDA SPECIALIST IS RESPONSIBLE FOR:

Unit Log (ICS 214)
NRDA Plan

WILDLIFE REHABILITATION SPECIALIST

Responsible for minimizing wildlife injuries during responses and coordinating aerial and ground reconnaissance of the response site wildlife. Advise IMT on wildlife protection strategies; coordinating the search for, collection, and field tagging of dead and live impacted wildlife; and setting up recovery and cleaning facilities.

WILDLIFE REHABILITATION SPECIALIST RESPONSIBILITIES

- ☐ Determine affected wildlife species and potential damage to each
- ☐ Coordinate reconnaissance of wildlife in the area
- ☐ Alert IMT personnel to laws and policies regarding injured wildlife
- ☐ Determine wildlife protection strategies
- ☐ Identify wildlife hazing procedures and resources
- ☐ Prepare plan to recover and rehabilitate impacted wildlife
- ☐ Supervise Wildlife Branch operations
  - Establish/implement protocols for collection of impacted wildlife
  - Coordinate transportation of wildlife to processing stations
  - Coordinate participation of volunteers and public at large
  - Establish wildlife release protocols
- ☐ Assess need for and feasibility of wildlife rehabilitation centres, including all financial aspects, procurement of staff and equipment, training, and centre management
- ☐ Work through Logistics Section Chief or Supply Unit to obtain necessary resources to construct and operate facilities for wildlife rehabilitation, as appropriate; help identify rehabilitation centre location
- ☐ Coordinate wildlife and habitat protection and rehabilitation operations with appropriate resource agencies
- ☐ Identify experts to assess wildlife impacts, rescue & rehabilitation, as necessary
- ☐ Work with Safety Officer to provide for the safety of personnel engaged in wildlife protection and rehabilitation operations
- ☐ Maintain accurate, up-to-date information on wildlife/habitat impacts and rehabilitation operations, including documentation of successes and mortalities; provide information to situation Unit Leader

PRODUCTS WILDLIFE REHAB SPECIALIST IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Wildlife Rehabilitation Plan

9. LOGISTICS SECTION:

Unique Roles and Responsibilities and Checklists

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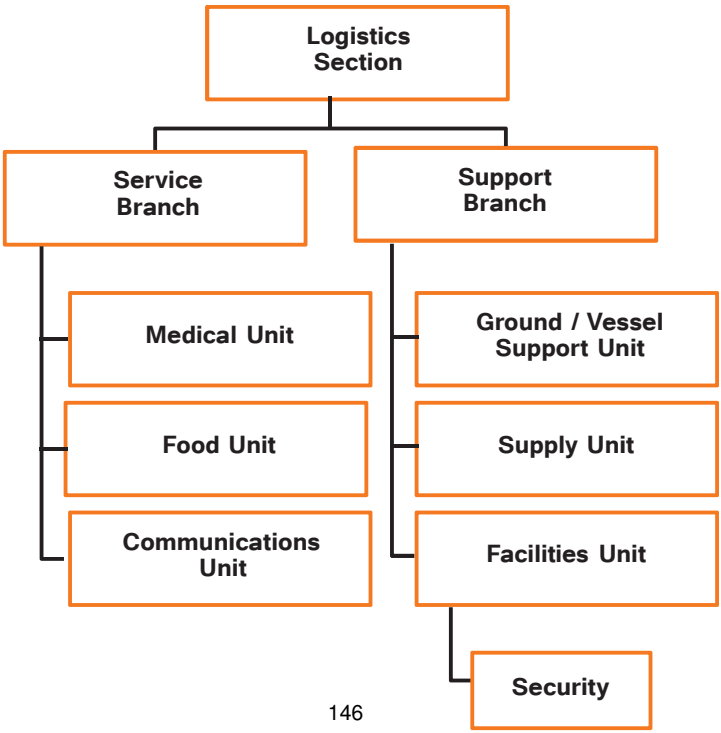
Figure 9

LOGISTICS SECTION ORGANISATION CHART



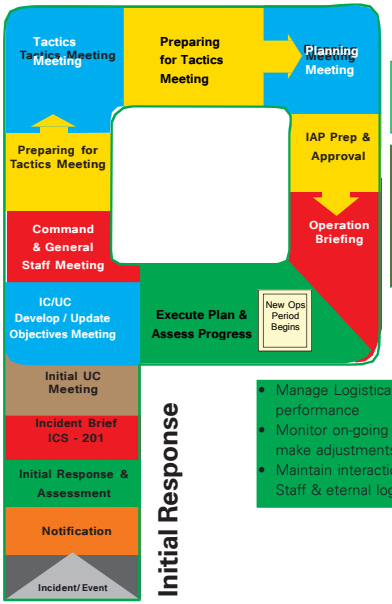
Planning "P" – Logistics Activities

- Review proposed tactics
- Identify resource needs & reporting locations from ICS 215 and 215a
- Discuss availability of needed resources
- Identify resource shortfalls
- Identify resource support requirements

- Meet with Log Units to confirm status & availability of required resources
- Determine additional resources necessary to support objectives
- Update Ops on resource non-availability to meet reporting requirements & suggest alternatives if necessary
- Order support for resources
- Identify contingencies as needed

- Confirm availability of required resources and time-lines
- Determine additional resources necessary to support objectives
- Identify and contingencies as needed
- Verify support for upcoming plan
- Provide estimates of future service and support requirements

- Survey availability of tactics
- Obtain status of ordered resources
- Summarize support capabilities, facilities, comms., etc.
- If needed clarify resource requesting approval & ordering process



- Provide info for IAP (ICS-205, 206 & Transport Plan)

- Receive IC/UC direction
  - Priorities, limitations & constrains
  - Key decisions
- Provide feedback to IC/UC on focus/direction
- Discuss interagency issues
- Discuss resource requesting, approval, and ordering process
- Discuss Log Section needs
- Discuss support facilities

- Provide logistics information briefing to Operations Section personnel
- Review Medical & Comms Plan, Transportation Plans, & Other logistical information to support field operations

- Attend Initial Inc brief
  - Current overview
  - Anticipated Log Section activities
  - Indication of required support

- Manage Logistical Resources & monitor section performance
- Monitor on-going logistical support & processes & make adjustments as necessary
- Maintain interaction with Command and General Staff & eternal logistical contacts

- Arrive & Check-in
- Assess situation
- Receive IC/UC briefing
- Activate Log Section
- Organise & brief subordinates
- Acquire work materials
- Forecast Requirements
  - Transformation
  - Medical
  - Resources
  - Communications
  - Facilities
  - Resources requesting
  - Safety issues
  - Environmental issues
  - Food/shelter

COMMON RESPONSIBILITIES

This section contains Responsibilities that are ***common*** to Section Chiefs and Unit Leaders.

- ☐ Obtain initial briefing from Incident Commander (IC), attend daily staff meetings and briefings, and relay relevant information to personnel assigned to function
- ☐ Size up incident, identify function-specific problems and solutions, and break work down into manageable tasks
- ☐ Provide Incident Commander periodic status reports
- ☐ Assist Incident Commander in
  - Analysing incident potential
  - In preparation of Strategic Objectives & response priorities
- ☐ Provide Logistics Section Chief or Supply Unit with information on personnel, equipment, material, and supply needs for Section
- ☐ Attend Assessment Meetings and provide reports on nature and status of work
- ☐ Ensure that Finance Section Chief is advised of all cost commitments by Staff or Section
- ☐ Compile and maintain appropriate documentation
- ☐ IMT Staffing needs:
  - Develop organisation chart with personnel assigned to function or Section
  - Provide Resource Unit with initial and, as necessary, updated organisation chart(s)
  - Maintain proper span-of-control when assigning tasks to Section personnel
  - Consider alternate or backup personnel for extended (24-hour) coverage.
- ☐ Brief IMT Staff personnel on items discussed during meetings; assign Action Items, as appropriate
- ☐ If requested, assist Planning Section Chief in preparation of
  - Incident Potential Worksheet
  - Incident Action Plan
- ☐ Prepare verbal or written transition report for incoming personnel assigned to function

LOGISTICS SECTION CHIEF

Responsible for obtaining the personnel, equipment, materials, and supplies needed to mount and sustain incident response operations, and for providing the services necessary to ensure incident response operations are carried out in a safe and efficient fashion.

LOGISTICS SECTION CHIEF RESPONSIBILITIES

- ☐ Work with Staging Area Manager to establish and maintain Supply Network
- ☐ Work with Resource Unit Leader (RUL) and Operations Section Chief to establish and publish a resource ordering procedure for the response
- ☐ Work with Incident Commander (IC) and Section Chiefs to identify and ensure timely and efficient provision of support services
- ☐ Ensure that logistics support and service needs are met in a timely and efficient fashion, and in a manner that maximizes personnel safety and efficiency of response operations
- ☐ Ensure that guidelines, procedures, forms, and data management systems necessary to manage acquisition of response resources and control inventory are followed by Logistics Section personnel
- ☐ Work with Finance Section Chief to institute requisition procedure
- ☐ Provide Finance Section Chief with copy of all Purchase Orders
- ☐ Ensure that an overall inventory management system is maintained of all equipment, materials, and supplies purchased, rented, borrowed, or otherwise obtained during incident response operations
- ☐ Ensure that records are maintained on equipment and services provided and contracts executed during incident response operations
- ☐ Provide Planning Section Chief or Resource Unit with up-to-date information on destination and ETA of all equipment and personnel resources obtained for response operations
- ☐ Assist Planning Section Chief or Plan Development Units in preparation of Incident Action Plans by reviewing draft Field Assignments
- ☐ Provide Operations Section Chief with recommendations on timing of release of logistics services and support personnel and equipment
- ☐ Notify Deputy Incident Commander if Logistics Section cannot address (an) unmet resource need(s)

PRODUCTS LOGISTICS SECTION CHIEF IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Communications Plan (ICS 205) – review
Medical Plan (ICS 206) - review
Traffic Plan – (review), Vessel Routing Plan – (review)

SERVICE BRANCH DIRECTOR

Responsible for providing logistics support services necessary to ensure incident response operations are carried out in a safe and efficient fashion.

SERVICE BRANCH DIRECTOR RESPONSIBILITIES

- ☐ Supervise work of Service Branch personnel to ensure they provide services necessary to sustain incident response operations
- ☐ Work with Incident Commander and Section Chiefs to identify and ensure timely and efficient provision of support services, including:
  - Food, water, sanitation, and shelter
  - Fuel, lubricants, spare parts
  - Communications systems
  - Medical services
  - Others, as necessary
- ☐ Ensure that logistics service needs are met in a timely & efficient fashion, and in a manner that maximizes personnel safety and efficiency of response operations
- ☐ Ensure that guidelines, procedures, forms, & data management systems necessary to manage provision of services are followed by Branch personnel
- ☐ Work with Communications Unit Leader to ensure appropriate type and quantity of communications equipment is obtained and applied to response operations. Communications equipment is assigned to well-defined networks, and support is provided for establishment and maintenance of Communications & Message Centres
- ☐ Work with Medical Unit Leader to ensure that a clear emergency medical procedure is in place, and that Medevac & treatment services are in place
- ☐ Work with Food Unit Leader to ensure that food, water, and sanitation requirements are addressed in a complete and timely fashion
- ☐ Provide Logistics Section Chief with decommissioning recommendations of services-related personnel and equipment

PRODUCTS SERVICE BRANCH DIRECTOR IS RESPONSIBLE FOR:

Unit Log (ICS 214)

COMMUNICATIONS UNIT LEADER

Responsible for providing required communications equipment and for establishing, operating, and maintaining effective, integrated communications networks.

COMMUNICATIONS UNIT LEADER RESPONSIBILITIES

- ☐ Conduct location survey of available on-scene communications equipment
- ☐ Work with Section Chiefs to identify and ensure timely and efficient provision of communications equipment to incident facilities and for field personnel
- ☐ Establish Communications Centres as appropriate
- ☐ Establish Dispatch and Incident Message Centre functions
- ☐ Work with Operations Section Chief to establish Command and Tactical Network(s)
- ☐ Work with Logistics Section Chief, Service Branch Director, or Supply Unit to establish Supply Network
- ☐ Allocate specific communication frequencies & telephone numbers to specific networks
- ☐ Prepare and maintain a Communications Plan (ICS 205)
- ☐ Assist Planning Section Chief or Plan Development Units in preparation of Incident Action Plans by reviewing draft NOP Field Assignments to obtain information needed to define Tactical Network
- ☐ Provide and supervise technical staff necessary for 24-hour communications support, including installation, maintenance, change outs, and removal of equipment
- ☐ Monitor communications
- ☐ Keep Logistics Section Chief or Service Branch Director informed about equipment-related communications problems, shortcomings, or lack of equipment that will affect incident response operations
- ☐ Ensure that records are maintained on communications equipment distributed during response operations
- ☐ Maintain and provide training in proper use of communications equipment
- ☐ Establish telephone "hot lines," as needed
- ☐ Obtain special permits, communications site rentals, and other services related to communications networks
- ☐ Provide Logistics Section Chief or Service Branch Director with decommissioning recommendations of communications equipment
- ☐ Demobilize communications equipment

PRODUCTS COMMUNICATIONS UNIT LEADER IS RESPONSIBLE FOR:

Communications Plan (ICS 205)
Unit Log (ICS 214)

MEDICAL UNIT LEADER

Responsible for providing expertise on medical issues that may arise during the conduct of incident response operations. Also responsible for acting as a medical liaison with public health authorities.

MEDICAL UNIT LEADER RESPONSIBILITIES

- ☐ Understand hazards present at incident scene and measures being instituted to protect response personnel against hazards
- ☐ Brief Logistics Section Chief or Service Branch Director on medical concerns and precautions; ensure key personnel are familiar with medical issues
- ☐ Assist Planning Section Chief, IMT Safety Officer, or Safety Officer in preparation of incident-specific Site Safety Plan
- ☐ Determine level of medical expertise i.e., first aid, medivac, etc. needed at incident scene
- ☐ Liaise with local emergency medical agencies i.e. hospitals, Medics etc.
- ☐ Provide Planning Section Chief or Situation Unit with initial and, as necessary, updated information on location of First Aid Station(s) for Situation Map
- ☐ Establish procedures for handling medical emergencies and evacuations
- ☐ Prepare Emergency Medical Plan (ICS 206)
- ☐ Assist Planning Section Chief or Plan Development Units in preparation of Incident Action Plans by reviewing each field assignment for NOP to determine whether existing emergency medical procedures cover proposed work
- ☐ Work with Branch Directors and Site Safety Officer to ensure that properly trained personnel, equipment, and facilities are available to pick up, transport, and treat injured personnel
- ☐ Maintain an inventory of medical supplies and disburse supplies, as needed
- ☐ Maintain a record of all accidents that result in injuries, illnesses, or fatalities

PRODUCTS MEDICAL UNIT LEADER IS RESPONSIBLE FOR:

Medical Plan (ICS 206)
Unit Log (ICS 214)

FOOD UNIT LEADER

Responsible for determining and addressing the food, potable water, and sanitation requirements of all personnel involved in incident response operations.

FOOD UNIT LEADER RESPONSIBILITIES

- ☐ Work with Logistics Section (i.e., Chief or Supply Unit) members to determine and meet food, potable water, and sanitation requirements for personnel involved in incident response operations
- ☐ Develop a food distribution plan for all field and ICP personnel
- ☐ Assess situation at each location and determine and establish the most appropriate method for camp and food services
- ☐ Assess need for sanitation facilities for tactical response personnel; provide sanitary facilities in accordance with applicable standards
- ☐ Verify that potable water & well-balanced meals are served at each location
- ☐ Assist Planning Section Chief or Plan Development Units in preparation of Incident Action Plans by reviewing each field assignment for NOP to determine and address Unit responsibilities concerning provision of Food Unit services during NOP

PRODUCTS FOOD UNIT LEADER IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Food Inventory

SUPPORT BRANCH DIRECTOR

Responsible for supervising the work of those responsible for obtaining the personnel, equipment, materials, and supplies needed to mount and sustain incident response operations.

SUPPORT BRANCH DIRECTOR RESPONSIBILITIES

- ☐ Supervise work of Supply Unit personnel to ensure they obtain the personnel, equipment, materials, and supplies needed by balance of Incident Management Team (IMT) and Field Operations Team in a timely fashion
- ☐ Work with Supply Unit and Communications Unit to establish and maintain Supply Network
- ☐ Ensure that logistics support is provided in a timely and efficient fashion, and in a manner that maximizes personnel safety and efficiency of response operations

- ☐ Assist Logistics Section Chief in instituting a requisition procedure
- ☐ Ensure that Finance Section Chief is provided a copy of all Purchase Orders
- ☐ Ensure that an overall inventory and inventory management system is maintained of all equipment, materials, and supplies purchased, rented, borrowed, or otherwise obtained during incident response operations
- ☐ Ensure that guidelines, procedures, forms, and data management systems necessary to manage acquisition of response resources and control inventory are followed by Support Branch personnel
- ☐ Ensure that records are maintained on equipment and services provided during incident response operations
- ☐ Ensure that Supply Unit provides Planning Section Chief or Situation Unit with up-to-date information on destination and ETA of all "en route" equipment and personnel resources obtained for response operations
- ☐ Work with Facilities Unit Leader to ensure incident facilities:
  - Are activated/established in a timely manner
  - have space, equipment, materials, and supplies necessary to
  - operate in an optimum fashion
  - and field response operational areas have adequate security
- ☐ Work with Ground/Vessel Support Unit Leader to ensure that appropriate, properly inspected land, water, and air transportation resources are available to move response resources to, within, and out of areas where response operations are underway in a safe and efficient fashion
- ☐ Provide Logistics Section Chief with decommissioning recommendations logistics support personnel and equipment

PRODUCTS SUPPORT BRANCH DIRECTOR IS RESPONSIBLE FOR:

Unit Log (ICS 214)

SUPPLY UNIT LEADER

Responsible for obtaining personnel, equipment, materials, and supplies required for incident response operations.

SUPPLY UNIT LEADER RESPONSIBILITIES

- ☐ Maintain an inventory of response resources maintained by BP
- ☐ Account for response resources mobilized by field response personnel during initial stage of response operations

- ☐ Receive requests for personnel, equipment, materials, and supplies from Staging Area Manager via Supply Network
- ☐ Provide Staging Area Manager status reports on efforts to obtain requested personnel, equipment, materials, and supplies
- ☐ Interface with other Sections of IMT to obtain information on personnel, equipment, materials, and supply needs
- ☐ Ensure that an effective purchasing network is established
- ☐ Prepare Purchase Orders and service contracts, as needed
- ☐ Ensure that all personnel, equipment, materials, and supplies needed for response operations are located, ordered, received, stored, & distributed in a timely fashion
- ☐ Maintain files on Purchase Orders, contracts, equipment rentals, and other documents that can be used to validate charges
- ☐ Work with Logistics Section to arrange for quickest and most cost-efficient transport of personnel, equipment, materials, and supplies
- ☐ Work with Resource Unit to keep track of personnel, equipment, materials, and supplies "en route" to incident scene
- ☐ Establish central receiving and inspection point(s) for ordered personnel, equipment, materials, and supplies; work with other member(s) of Logistics Section to ensure that adequate warehouse space is available
- ☐ Establish an inventory management and maintenance system for equipment, materials, and supplies stored at central receiving point(s)
- ☐ Work with Procurement Unit to engage and supervise any contract purchasing personnel needed to carry out purchasing operations
- ☐ Provide Finance Section Chief or Support Branch Director with a record of all personnel, equipment, materials, and supplies purchased, leased, and/or rented during incident response operations
- ☐ Assist Planning Section Chief or Plan Development Units in preparation of Incident Action Plans

PRODUCTS SUPPLY UNIT LEADER IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Purchase Orders

FACILITIES UNIT LEADER

Responsible for providing adequate facilities to support the conduct of incident response operations.

FACILITIES UNIT LEADER RESPONSIBILITIES

- ☐ Supervise work of Security Group Supervisor
- ☐ Coordinate with Command Staff and Section Chiefs to determine facility requirements; typical facilities include:
  - Field Operations Base, Incident Command Post
  - Staging area(s) i.e. media, equipment, VIPs, etc.
  - Warehouses and storage areas
  - Sleeping quarters
  - Food service facilities
  - Water supply and sanitation facilities
  - Waste handling and disposal facilities
  - Others, as necessary
- ☐ Work with other member(s) of Logistics Section to ensure that sufficient equipment, communications equipment, and other supply needs are provided to each facility (based on the requirements of other Units)
- ☐ Coordinate activation of facilities with other member(s) of Logistics Section to ensure that adequate security services are available for incident facilities
- ☐ Maintain files on contractors and services utilized by Facilities Unit
- ☐ Ensure that programs are in place to inspect and service equipment, store spare parts, and repair or replace damaged or defective equipment at incident facilities
- ☐ Demobilize incident facilities
- ☐ Assist Planning Section Chief or Plan Development Units in preparation of Incident Action Plans by reviewing draft Field Assignments, determine and address Unit responsibilities concerning provision of incident facilities and personnel support services during NOP

PRODUCTS FACILITIES UNIT LEADER IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Facility Needs Assessment (ICS 235)

SECURITY UNIT LEADER

Responsible for ensuring that adequate security services are provided for incident response personnel and at incident facilities.

SECURITY UNIT LEADER RESPONSIBILITIES

- ☐ Work with Deputy Incident Commander, Security Officer, and Section Chiefs to identify security needs and priorities
- ☐ Develop Security Plan and issue Security Bulletins, as necessary

- ☐ Arrange for security at the following locations:
  - Incident scene (i.e., to secure Isolation Perimeter)
  - Field Operations Base
  - Incident Command Post
  - Camps
  - Staging area(s)
  - Warehouse(s)
  - Other facilities, as necessary
- ☐ Obtain and supervise contract security personnel, as necessary
- ☐ Establish a procedure to ensure authorized personnel have rapid access to secured facilities
- ☐ Maintain record of all visitors to secured facilities
- ☐ Maintain record of security operations

PRODUCTS SECURITY UNIT LEADER IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Security Plan
Traffic Plan
Personnel Check-in List (ICS 211P) - review

GROUND / VESSEL SUPPORT UNIT LEADER

Responsible for providing ground, sea, and air transportation for personnel, equipment, materials, and supplies required for incident response operations.

GROUND / VESSEL SUPPORT UNIT LEADER RESPONSIBILITIES

- ☐ Provide assistance to Logistics Section Chief, Branch Director, or Supply Unit, as needed, on transportation of personnel, equipment, materials, and supplies from points of origination to check in destinations
- ☐ Provide transportation for moving personnel, equipment, materials, and supplies from check in destinations to incident scene
- ☐ Maintain ready access to load limit information for aircraft and airfields; ensure that adequate and appropriate loading/ unloading personnel and equipment are available at central receiving location(s)
- ☐ Prepare Traffic Plans, if needed
- ☐ As needed, provide transportation services at incident scene to support at-the-scene field response operations
- ☐ Ensure that adequate maintenance is performed on transportation equipment; maintain records

- ☐ Manage transportation resources to ensure that they are properly allocated and utilized during incident response operations; develop and maintain schedules
- ☐ Assist Planning Section Chief or Plan Development Units in preparation of Incident Action Plans by reviewing draft Field Assignments to determine and address Unit responsibilities concerning provision of transportation equipment and services

PRODUCTS GROUND / VESSEL SUPPORT UNIT LEADER IS RESPONSIBLE FOR:

Unit Log (ICS 214)
Traffic Plan
Support Vehicle Inventory
Vessel Routing Plan
Vessels Inventory

10. FINANCE SECTION:

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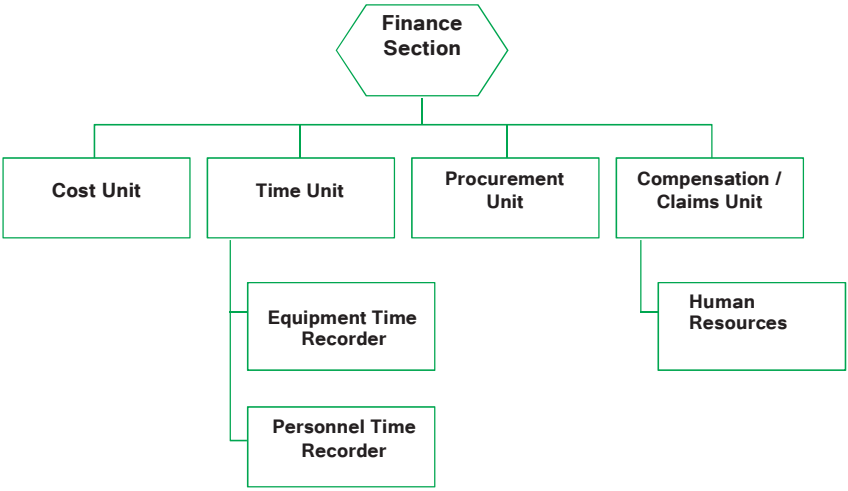
Figure 10
Finance Section Organisation Chart

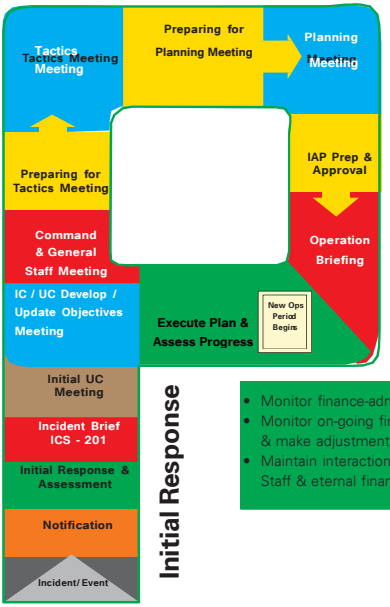


Planning "P" – Finance Activities

- Review resources assigned/ordered to determine proper use depending on funding source restrictions/regulations
- Provide input on resource availability due to contracting/procurement issues
- Procure necessary resources
- Procure necessary resources
- Meet with Unit leaders to determine briefing topics

- Verify support for upcoming plan Brief on
  - Funding source(s)
  - Ceilings
  - Burn rate
  - Contract issues
  - Admin service
  - Claims & claims procedures
- Provide estimates of future finance-admin requirements

- As Necessary:
  - Clarify resource requesting, approval & ordering process, as needed
  - Identify contracting/ procurement issues to be resolved
  - Implement/Review Cost doc process



- Receive IC/UC direction
  - Priorities, limitations & constrains
  - Key decisions
- Provide feedback to IC/UC on focus/direction
- Discuss interagency issues
- Discuss resource requesting, approval, and ordering process
- Discuss Log Section needs
- Discuss support facilities

- Brief on funding issues as appropriate

- Attend ICS-201 brief
  - Current overview
  - Anticipated Fin Section activities
  - Indication of required support
- Determine if funding is required based upon incident/ event
- Determine funding source (FPN, CPN, DPN, ATC-30) & estimate initial ceiling

- Monitor finance-admin section performance
- Monitor on-going finance-admin support & processes & make adjustments as necessary
- Maintain interaction with Command and General Staff & eternal financial contacts

- Arrive & Check-in
- Assess situation
- Receive IC/UC briefing
- Activate Finance Section
- Organise & brief subordinates
- Acquire work materials
- Forecast Requirements

COMMON RESPONSIBILITIES

This section contains Responsibilities that are ***common*** to Section Chiefs and Unit Leaders.

FINANCE SECTION CHIEF RESPONSIBILITIES

- ☐ Obtain initial briefing from Incident Commander (IC), attend daily staff meetings and briefings, and relay relevant information to personnel assigned to function
- ☐ Size up incident, identify function-specific problems and solutions, and break work down into manageable tasks
- ☐ Provide Incident Commander periodic status reports
- ☐ Assist Incident Commander in
  - Analysing incident potential
  - In preparation of Strategic Objectives & response priorities
- ☐ Provide Logistics Section Chief or Supply Unit with information on personnel, equipment, material, and supply needs for Section
- ☐ Attend Assessment Meetings and provide reports on nature and status of work
- ☐ Ensure that Finance Section Chief is advised of all cost commitments by Staff or Section
- ☐ Compile and maintain appropriate documentation
- ☐ IMT Staffing needs:
  - Develop organisation chart with personnel assigned to function or Section
  - Provide Resource Unit with initial and, as necessary, updated organisation chart(s)
  - Maintain proper span-of-control when assigning tasks to Section personnel
  - Consider alternate or backup personnel for extended (24-hour) coverage.
- ☐ Brief IMT Staff personnel on items discussed during meetings; assign Action Items, as appropriate
- ☐ If requested, assist Planning Section Chief in preparation of
  - Incident Potential Worksheet
  - Incident Action Plan
- ☐ Prepare verbal or written transition report for incoming personnel assigned to function

FINANCE SECTION CHIEF

Responsible for managing and supervising all financial and administrative aspects of incident response operations, including: accounting, invoice processing, contracts, cost control, insurance coordination, and financial reporting.

FINANCE SECTION CHIEF RESPONSIBILITIES

- ☐ Work with Logistics Section Chief to institute a requisition procedure
- ☐ Prepare short and long-term cost information for Incident Commander
- ☐ Work with Legal Officer on issues regarding insurance coverage and exclusions, claims management processing, and approach to settlements
- ☐ Facilitate preparation and distribution of guidelines, procedures, forms, and establishment of a data management system necessary to account for expenditures made during incident response operations
- ☐ Review all relevant insurance programs and ensure notification of insurers and appointment of loss adjusters
- ☐ Ensure that appropriate cost and accounting control systems are established
- ☐ Ensure that an expenditure tracking system is utilized and kept current
- ☐ Provide adequate accounting systems, including: auditing, billing, and documenting labour, material, and services used
- ☐ Oversee administration of vendor contracts, and service and equipment rental agreements
- ☐ Ensure that adequate pool of personnel is retained and compensated
- ☐ Provide direct human resources services to response personnel and their families

PRODUCTS FINANCE SECTION CHIEF IS RESPONSIBLE FOR:

Unit Log (ICS 214)

COST UNIT LEADER

Responsible for tracking the cost of the equipment, materials, and supplies utilized during the conduct of incident response operations.

TIME UNIT LEADER RESPONSIBILITIES

- ☐ Develop and review delegations of authority and expenditure approval limits
- ☐ Ensure that system is in place to properly manage financial aspects of incident response operations as they relate to equipment, materials, and supplies
- ☐ Account for equipment, materials, and supplies expenditures; maintain cumulative cost record
- ☐ Coordinate invoice verifications, appropriate charge coding, system input, and delivery to appropriate personnel for processing and payment
- ☐ Work with Logistics Section Chief or Supply Unit to coordinate verification of receipts, invoices, and special payments
- ☐ Establish necessary controls to audit/validate charges for equipment, materials, and supplies

PRODUCTS COST UNIT LEADER IS RESPONSIBLE FOR:

Unit Log (ICS 214)

TIME UNIT LEADER

Responsible for accounting for personnel-related costs.

TIME UNIT LEADER RESPONSIBILITIES

- ☐ Ensure that system is in place to properly manage financial aspects of incident response operations
- ☐ Account for personnel-related expenditures; maintain cumulative cost/financial record
- ☐ Coordinate invoice verifications, appropriate charge coding, system input, and delivery to appropriate office for processing and payment
- ☐ Work with Logistics Section Chief or Supply Unit to coordinate needs for Purchase Orders, verification of receipts, invoices, and special payments
- ☐ Establish necessary controls to audit/validate labour costs chargeable to incident response operations
- ☐ Develop and review delegations of authority and expenditure approval limits

PRODUCTS TIME UNIT LEADER IS RESPONSIBLE FOR:

Unit Log (ICS 214)

PROCUREMENT UNIT LEADER

Responsible for negotiating, renegotiating, and administering all contracts.

PROCUREMENT UNIT LEADER RESPONSIBILITIES

- ☐ Ensure that those providing resources or services under standing contracts are doing so in a manner consistent with terms and conditions of contracts
- ☐ Review standing contracts to ensure terms and conditions are fair and equitable to BP
- ☐ If necessary, renegotiate standing contracts to ensure terms and conditions are fair and equitable to BP
- ☐ Negotiate new contracts; coordinate contract negotiation activities with Legal Officer
- ☐ Work with Time and Cost Unit Leaders to ensure that charges for personnel services and equipment, materials, and supplies are consistent with terms and conditions of applicable contracts
- ☐ If necessary, audit response operations to ensure consistency with terms and conditions of contracts

PRODUCTS PROCUREMENT UNIT LEADER IS RESPONSIBLE FOR:

Unit Log (ICS 214)

COMPENSATION/CLAIMS UNIT LEADER

Responsible for handling all compensation for response-related injuries, and for processing and settling third-party claims which result from the incident and/or the conduct of incident response operations. Also responsible for handling all insurance-related matters.

COMPENSATION/CLAIMS UNIT LEADER RESPONSIBILITIES

- ☐ Supervise work of Legal Group Supervisor and Human Resources Group Supervisor
- ☐ Receive reports of injuries suffered by response personnel from IMT Safety Officer or Medical Unit Leader
- ☐ Interview injured parties to gather complete and accurate information on the nature and severity of injuries
- ☐ Receive and process all Compensation for Injury Claims
- ☐ Ensure that Compensation for Injury Claims are properly handled
- ☐ Establish system for receipt, evaluation, and processing of all third-party claims; consult with Finance Section Chief, and Legal Officer, as necessary
- ☐ Determine BP exposure to third-party claimants
- ☐ Identify and obtain BP and technical experts and contractors to assist in the processing of claims, as necessary
- ☐ Work with Logistics Section Chief or Facilities Unit to create an on-scene centre for claims adjusters and support staff
- ☐ Maintain records on number of claims, settlement costs, etc., and transmit to Finance Section Chief
- ☐ Identify and understand provisions of all applicable insurance policies
- ☐ Provide Command and General Staff with guidance on insurance policy reimbursement guidelines
- ☐ Ensure that cost information is compiled consistent with insurance policy guidelines
- ☐ Consult with insurance representatives, corporate insurance brokers, and underwriters to determine documentation required for insurance purposes

PRODUCTS COMPENSATION/CLAIMS UNIT LEADER IS RESPONSIBLE FOR:

Unit Log (ICS 214)

LEGAL GROUP SUPERVISOR

Responsible for providing advice on legal issues associated with third-party claims and other legal matters associated with incident response operations.

LEGAL GROUP SUPERVISOR RESPONSIBILITIES

- ☐ Serve as legal advisor to Compensation/Claims Unit Leader
- ☐ Serve as legal assistant to Legal Officer
- ☐ Assist Compensation/Claims Unit in establishing and implementing third-party settlement procedures and arranging for adjustment assistance
- ☐ Provide legal guidance to Compensation/Claims Unit on processing of claims
- ☐ Ensure that information that may be relevant to defence and/ or settlement of future claims or litigation is gathered and preserved
- ☐ Periodically review all logs and forms produced by Compensation/Claims Unit to ensure:
  - work is complete
  - entries are accurate and timely
  - work is in compliance with BP requirements and policies
- ☐ Handle all contract-related legal matters
- ☐ Review contracts before their execution, if requested to do so by Logistics Section Chief or Procurement Unit
- ☐ Provide legal guidance to Logistics Section Chief or Procurement Unit on terms and conditions of new or amended contracts
- ☐ Advise Incident Commander, Section Chiefs, and Documentation Unit Leader on type of documentation that must be compiled to support claims, procurement, and other functions
- ☐ Review documentation to ensure that it is being compiled in a manner consistent with documentation guidelines
- ☐ Ensure that Compensation/Claims Unit Leader is advised of all cost commitments

PRODUCTS LEGAL GROUP SUPERVISOR IS RESPONSIBLE FOR:

Unit Log (ICS 214)

HUMAN RESOURCES GROUP SUPERVISOR

Responsible for addressing human resources issues that arise during response operations. Providing Critical Incident Stress Debriefing services, for arranging grief counselling for response personnel adversely impacted by incident and/or response-related injuries and fatalities, and for arranging humanitarian assistance to the families of individuals injured or killed by the incident or during response operations. This group works closely with the HR Officer – and may, report directly to the HR Officer as HR assistants rather than as a group within Logistics

HUMAN RESOURCES GROUP SUPERVISOR RESPONSIBILITIES

- ☐ During a mass casualty incident, serve as a principal advisor to Incident Commander (IC) on measures to handle and treat injured personnel, handle disposition of bodies of dead personnel, interact with families, and interact with government agencies
- ☐ Ensure that all required and appropriate notifications are made to families of injured or dead personnel
- ☐ Ensure that names of injured and dead personnel are protected until notifications of next of kin are completed
- ☐ Implement humanitarian assistance for BP personnel and/or their families impacted by an incident or response operations
  - Provide status updates to IC, Compensation/Claims Unit Leader
  - Coordinate activities through the BP Human Resources Group
  - Request guidance regarding any changes in BP policy and procedures that may impact humanitarian assistance activities
- ☐ Arrange for grief counselling for members of Incident Management Team (IMT), as necessary
- ☐ Activate outside assistance (clergy, psychologists, etc.), as necessary
- ☐ Coordinate with Compensation/Claims Unit Leader, as necessary
- ☐ Assist in notifying BP personnel and contractors as to when/where to report to work
- ☐ Work with Legal Group to establish procedures for handling claims by injured personnel

- ☐ Ensure that all Compensation for Injury and Claims Logs Forms are up-to-date and properly routed for post-incident processing prior to mobilization
- ☐ Develop processes to handle/treat injured personnel, bodies of dead personnel, interact with families, and interact with government agencies

PRODUCTS HUMAN RESOURCES GROUP SUPERVISOR IS RESPONSIBLE FOR:

Unit Log (ICS 214)

SECTION 5 INCIDENT PLANNING

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5.1 Documentation Procedures

Documentation of a spill response provides a historical record, keeps management informed, serves as a legal instrument and a means to account for cleanup details and associated costs.

Documentation shall begin immediately upon spill notification and continue until termination of all operations. Documentation should include forms, checklists, and planning tools within Olympic Pipe Line Company's (Olympic) Facility Response Plan and Field Document and the Northwest Area Contingency Plan (NWACP) as well as any other documentation that is prepared for the incident not included in the list above.

5.2 Incident Command System Forms

Olympic will use the planning process consistent with the NWACP. Hard copies of Incident Command System (ICS) forms can be found in each area: Bayview Products Terminal, Renton Station, and Castle Rock Station. Electronic forms can be found at the following website: United States Coast Guard (USCG) Forms - http://www.uscg.mil/forms/ics.asp?files=0.

Please note that Federal Emergency Management Agency (FEMA) ICS forms in the FEMA ICS Forms Booklet (http://www.fema.gov/pdf/emergency/nims/ics_forms_2010.pdf) will eventually be adopted by the USCG since they are the national standard.

5.3 Site Health and Safety Plan

Incident Safety Plan

Incident Name: _____ Number: _____

Incident Location: _____

Plan Drafted By: _____ Position: _____

Plan Reviewed By: _____ Position: _____

Approved by Incident Commander: ☐ Yes ☐ No

Incident Commander's Signature: _____ Date/Time: _____

This Plan Is Applicable To:

☐ Command Post ☐ Staging Areas ☐ Worksites

☐ Vessels/Docks ☐ Aircraft/Landing Areas ☐ _____

Responding Agencies:

Agency:	Name:
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	

All government and contractor personnel who enter Exclusion Zones or use air purifying respirators must be enrolled in a medical monitoring program.

Weather

- ☐ Air Temperature _____°F (low) _____°F (high)
- ☐ Water Temperature _____°F
- ☐ Wind Speed/Direction _____
- ☐ Precipitation _____
- ☐ Current Speed/Direction _____
- ☐ Sea Heights/Direction _____

Site Hazards

- ☐ Chemical hazards
- ☐ Slips, trips, falls
- ☐ Heat stress
- ☐ Cold stress
- ☐ Weather
- ☐ Drowning
- ☐ Heavy equipment
- ☐ Drum handling
- ☐ Wildlife/plants
- ☐ Hand/power tools
- ☐ Lifting
- ☐ Boats
- ☐ Helicopters
- ☐ Noise
- ☐ Pumps, hoses
- ☐ Steam, hot water
- ☐ Fire/explosion
- ☐ Poor visibility
- ☐ Motor vehicles
- ☐ Confined spaces (see Attachment/Appendix)
- ☐ Ionizing radiation
- ☐ Other_____

Control Measures:

Engineering Controls

- ☐ Source of release secured
- ☐ Valve(s) closed
- ☐ Facility shut down
- ☐ Site secured
- ☐ Other_____

Work Plan: (Buddy System must be used.)

- ☐ Excavation
- ☐ Shoring
- ☐ Appropriate permits issued
- ☐ Other (describe):_____

Specialized Task Assignments:

_____

_____

_____

_____

_____

Levels of Protection Selected:

☐ Level D ☐ Level C ☐ Level B ☐ Level A

Respirator: ☐ None ☐ Air Purifying ☐ Supplied Air

☐ Emergency Escape Breathing Apparatus

Describe: _____

Suit: ☐ Coveralls ☐ Splash Protection ☐ Fully Encapsulating

Describe: _____

Gloves: ☐ Work ☐ Inner ☐ Outer ☐ Specialty

Describe: _____

Boots: ☐ Work ☐ Oil/Hazmat ☐ Waders ☐ Specialty

Describe: _____

Hardhats ☐

Hearing Protection ☐ Describe _____

Eye Protection ☐ Describe _____

Face Shields ☐

Other ☐ Describe _____

Training: (HAZWOPER-Training Program)

Verified site workers trained per Occupational Safety and Health Administration (OSHA) 1910.120.

Description of Task	**Level of Protection (circle appropriate level)**			
Initial Site Survey	A	B	C	D
Entry Team	A	B	C	D
Backup Team	A	B	C	D
Decontamination Team	A	B	C	D

Decontamination

☐ Stations established (See Attachment ____, Site Map)

Sanitation

☐ Facilities provided per OSHA 1910.120(n)

Illumination

☐ Facility provided per OSHA 1910.120(m)

Medical Surveillance

☐ Will be provided per OSHA 1910.120(f)

GENERAL SAFETY RULES AND EQUIPMENT:

1. There will be no eating, drinking or smoking in the Exclusion Zone or the Contamination Reduction Zone.
2. All personnel must pass through the Contamination Reduction Zone to enter or exit the Exclusion Zone.
3. As a minimum, Decontamination Team Members must be one (1) level of protection lower than that of the entry teams.
4. All decontamination equipment and systems must be in place before an entry can be made.
5. All breathing air, if used, shall be certified as Grade D or better.
6. Where practical all tools shall be of the non-sparking type.
7. Firefighting equipment shall be on hand when the situation warrants such support. At a minimum, fire extinguishers shall be available on-scene.
8. Since incident evacuation may be necessary if an explosion, fire or other release occurs, an individual shall be assigned to sound an alert and notify the responsible command personnel and public officials, if required. The evacuation signal shall be _ until all personnel are known to be evacuated.
9. An adequately stocked Emergency Medical Services Unit shall be on site at all times.
10. The location & telephone number of the nearest medical facility shall be posted and known to all personnel.

GENERAL SAFETY BRIEFING:

Before any incident actions are taken, a briefing will be conducted with all personnel present. Personnel will sign a log sheet, attesting to being present at the pre-Incident briefing. Topics discussed should include known and unknown hazards and the goals and objectives of the operation.

EMERGENCY ACTION CONDITIONS:

Code Green:

All conditions are normal and incident work may continue.

Code Red:

All or specific work activities must cease at once due to the following:

1. Indications of emissions from the incident such as combustible gas indicator (CGI) readings of 10% or greater, less than 19.5% oxygen (O_2) or of 1 Mr/Hr of ionizing radiation is present.
2. Current or projected meteorological data indicates that a probable impact on working conditions could occur.
3. If background readings obtained during cessation of activities worsen, reassessment of the findings should be confirmed. Actions to lower levels of contaminant or contingencies for further incident monitoring must take place.
4. If any of these conditions exist, on-site personnel will immediately notify command staff.

Officials making evacuation/public health decisions will address the need for a public health advisory to potentially affected areas, since incident control methods may or may not reduce the source of contamination or threat to the general public.

If needed, a Temporary Sheltering or Evacuation Plan should be considered until levels of contamination are reduced or contained and deemed safe by all responsible authorities. Confirmation of these levels will

be done by generally approved monitoring methods agreed to by the authorities in charge.

Sheltering/Evacuation Plan:

Ordered By:

EMERGENCY PROCEDURES:

In the event of fire or explosion:

In the event of on-site medical emergency:

In the event of additional on-site spill or material release:

EMERGENCY SERVICES:

Emergency Medical Facility:

Ambulance Service:

HAZARD ASSESSMENT:

Attach Hazardous Materials Safety Data Sheets (or other reference materials) for materials involved to this document.

MONITORING PROCEDURES:

Monitoring the incident to identify concentration of contaminants in all media. List the instruments to be used and what areas to be monitored.

Exclusion Zone

Contamination Reduction Zone

Support Zone

MEDICAL MONITORING: (What procedures to be used to monitor personnel for evidence of personal exposure).

PERSONNEL POTENTIALLY EXPOSED TO HAZARDOUS MATERIALS:

Name	Position	Date & Time

DECONTAMINATION PROCEDURES:

(Contaminated personnel, surfaces, materials, instruments, and other equipment.)

DECONTAMINATION SOLUTIONS USED:

DISPOSAL PROCEDURES:

Authorized By:

EQUIPMENT DECONTAMINATION:

	Clothing	Self-Contained Breathing Apparatus (SCBA)/Resp	Monitoring
Disposed:			
Cleaned:			
No Action:			

Specify: _____

_____

Date Prepared: _____ Prepared By: _____

Reviewed By: _____

Assistance in preparing this Safety Plan can be obtained from Haz Mat personnel.

Attachment (___): Hazardous Substance Information Sheets

Spill/Leak Information Data Sheet (SLID)
All Products (Except Benzene Line)

Physical Hazard Potential:

- Flammable &/or Combustible
- Potential of Immediately Dangerous to Life and Health (IDLH) conditions

Health Hazard:

- Inhalation of Benzene, Toluene, Xylene, Gasoline Vapors
- Skin penetration by Benzene
- Contact Dermatitis

Symptoms of Overexposure:

- Excessive exposure to vapors may produce headaches, dizziness, nausea, drowsiness, irritation of eyes, nose and throat and central nervous system depression.

Respiratory Equipment Requirement:

- Half Mask Air Purifying Respirator with Organic Cartridges shall be worn until notified by the Site Manager that respiratory protection is no longer necessary. If monitoring equipment alarms, evacuate and refer to (e) and (f) of the Site Entry Procedures in the BP pipelines (NA) Business Unit Contingency Plan (See "Site Entry Procedures: All Products (Except Benzene)" on page 6.9.1-4).

Personal Protection Equipment (PPE):

- Type of Gloves: Neoprene Rubber
- Type of Boots: Rubber
- Type of Body Suit: Rain Suit or Polycoated Tyvek if product is spraying out of the line.

Monitoring Equipment Levels:

- Combustible Gas/Oxygen (O_2) monitor:

Hazardous IDLH:

- Lower Explosive Limit (LEL): 10-19% - Evacuate, then evaluate PPE, ventilation and safety for re-entry
- Greater or equal to 20% - evacuate, do not enter
- O_2: < 19.5% Evacuate or use Self-Contained Breathing Apparatus (SCBA)
- > 23.5% Evacuate, evaluate mitigation options

Benzene Pump Detector Tube:

- Greater than 1 ppm, Don Half Mask Air Purifying Respirator
- Greater than 10 ppm, Don SCBA

Note: The Spill/Leak Information Data Sheet (SLID) is not meant to replace the appropriate Safety Data Sheet (SDS). Always consult the SDS when other specific questions arise.

Attachment (___): Hazard Info for Oils Containing Benzene, Toluene, Xylene, Hexane, Napthalene and/or Naptha

Oils and products that contain benzene include: crude oils, gasoline, military JP4, commercial JET B, aviation gasoline, gas oils and feed stocks.

- These oils/products are composed of an indefinite petroleum distillate mixture. They may contain n-hexane, benzene, toluene, xylene, naphthalene and poly aromatic hydrocarbons (PAHs) in concentrations that may vary widely depending on the source of the oil, weathering and aging.
- HAZARD DESCRIPTION: These oils/products may cause dermatitis by skin contact; nausea by inhalation; and eye irritation. Benzene is a hematologic toxin (it affects the blood and blood forming organs) and is a carcinogen. The most important potential benzene, toluene, or xylene hazard is in poorly ventilated areas (such as pits or under docks), or around fresh spills. Benzo(a)pyrene is a skin contact hazard that may cause skin cancer. As oil weathers and ages, benzo(a)pyrene becomes more concentrated because it evaporates more slowly than other chemicals in the mixture.
- BASIC PRECAUTIONS: Stay away from, or upwind of, fresh spills; wear chemical resistant clothing as necessary to protect against skin or eye contact; periodically change protective clothing; immediately change clothing that is showing evidence of product penetration or is torn; and wash skin with soap and water before changing into street clothing, before eating/drinking, or before exiting a contamination reduction zone. Flush eyes with water if oil gets in them. If ingested do not induce vomiting, contact a physician. Urine phenol should be tested as soon as possible (and not later than 72 hours after exposure) if there is a suspected exposure to benzene.
- MONITORING/EVALUATION INFORMATION FOR CERTAIN ASSOCIATED VAPOR HAZARDS (Taken from National Institute for Occupational Safety and Health [NIOSH] Pocket Guide to Chemical Hazards--1990 Department of Health and Human Services (DHHS)-NIOSH Pub. No. 90-117). The following information is provided for some of the more significant components of crude oil and high vapor pressure petroleum products that produce some degree of vapor hazard. Most of these chemicals are found in small quantities in crude oil and evaporate quickly so that their hazard is most significant during the first hours/days of a spill and diminish rapidly with weathering.

Benzene		**Health Effects/Symptoms**
CAS:	71-43-2	Irritant, hematologic toxin, CNS toxin and carcinogen. Irritation of eyes, nose and respiratory system; giddiness; headache; nausea; staggered gait; fatigue; anorexia; dermatitis; and depression of the bone marrow.
PEL (8 hr):	1 ppm (OSHA)	
STEL (15 min):	5 ppm (OSHA)	
IDLH:	3000 ppm	
Vapor Pressure:	75 mmHg	
Flash Point:	12 deg F.	
LEL/UEL:	1.3% -- 7.9%	
Ionization Potential:	9.24 eV	

Toluene		**Health Effects/Symptoms**
CAS:	108-88-3	CNS/liver/kidney/skin toxin. Fatigue; weakness; confusion euphoria; dizziness; headache; dilated pupils; lacrimation (watery eyes); nervousness; muscular fatigue; insomnia; paresthesia (burning, tingling, or numbness); and dermatitis.
PEL (8 hr):	100 ppm (OSHA)	
STEL (15 min):	150 ppm (OSHA)	
IDLH:	2000 ppm	
Vapor Pressure:	20 mmHg	
Flash Point:	40 deg F.	
LEL/UEL:	1.2% -- 7.1%	
Ionization Potential:	8.82 eV	

Xylene (o-, m-, p- isomers)		**Health Effects/Symptoms**
CAS:	1330-20-7	CNS/GI tract/liver/kidney/blood/skin/ eye toxin. Dizziness; excitement; drowsiness; in-coordination; staggering gait; irritation of the eyes, nose and throat; corneal vacuolization (formation of small spaces in the cornea); anorexia; nausea; abdominal pain; and dermatitis.
PEL (8 hr):	100 ppm (OSHA)	
STEL (15 min):	150 ppm (OSHA)	
IDLH:	1000 ppm	
Vapor Pressure:	7/9 mmHg (varies with isomer)	
Flash Point:	63/84 deg F.	
LEL/UEL:	1.0% -- 7.0%	
Ionization Potential:	8.44 or 8.8.56 eV	

n-Hexane (Hexane or Normal Hexane)		**Health Effects/Symptoms**
CAS:	110-54-3	Skin/eye/respiratory system toxin. Light headedness; nausea; headache; numbness of the extremities; muscular weakness; irritation of the eyes and nose; chemical pneumonia; giddiness and dermatitis.
PEL (8 hr):	50 ppm (OSHA)	
IDLH:	5000 ppm	
Vapor Pressure:	150 mmHg	
Flash Point:	-7 deg F.	
LEL/UEL:	1.1% -- 7.5%	
Ionization Potential:	10.18 eV	

Naphthalene (White Tar)		**Health Effects/Symptoms**
CAS:	91-20-3	CNS/GI tract/liver/kidney/blood/skin/ eye toxin. Dizziness; excitement; drowsiness; lack of coordination; staggering gait; irritation of the eyes, nose and throat; corneal vacuolization (formation of small spaces in the cornea); anorexia; nausea; abdominal pain; and dermatitis.
PEL (8 hr):	10 ppm (OSHA)	
STEL (15 min):	15 ppm (OSHA)	
IDLH:	500 ppm	
Vapor Pressure:	0.08 mmHg	
Flash Point:	174 deg F.	
LEL/UEL:	0.9% -- 5.9%	
Ionization Potential:	7.30 eV	

Petroleum Distillate (Naphtha)		**Health Effects/Symptoms**
CAS:	8002-05-9	Irritant, CNS/respiratory toxin. Irritation of eyes, nose and throat; dizziness; drowsiness; headache; nausea; dermatitis.
PEL (8 hr):	1600 mg/M^3 (OSHA)	
REL (8 hr):	350 mg/M^3 (NIOSH)	
IDLH:	10,000 ppm	
Vapor Pressure:	40 mmHg (varies with mixture)	
Flash Point:	-40 to -86 deg F.	
LEL/UEL:	1.1% -- 5.9%	
Ionization Potential:	varies	

CNS = central nervous system; IDLH = Immediately Dangerous to Life and Health; LEL = Lower Explosive Limit; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit; REL = Recommended Exposure Limit; STEL = Short Term Exposure Limit; UEL = Upper Explosive Limit

Attachment (___): Hazard Info for Oils (Without Benzene)

Some oils that generally do not contain benzene (except as a minor constituent or contaminant), include: kerosenes, diesels, military JP5, commercial JET A, bunker C, & fuel oils (1 thru 6).

- These oils are composed of an indefinite petroleum distillate content typically including poly aromatic hydrocarbons (PAHs). The concentration of these products will vary widely depending on the source of the oil, weathering, and aging.
- HAZARD DESCRIPTION: May cause dermatitis by skin contact; nausea by inhalation; and eye irritation by contact. Benzo(a)pyrene is a skin contact hazard and potentially may cause skin cancer.
- BASIC PRECAUTIONS: Wear chemical resistant clothing as necessary to protect against skin or eye contact; periodically change protective clothing; immediately change clothing that is showing evidence of product penetration or is torn; and wash skin with soap and water before changing into street clothing, before eating/drinking, or before exiting a contamination reduction zone. Flush eyes with water if oil gets in them. If ingested do not induce vomiting—contact a physician.

Attachment (___): Heat Stress Considerations (taken from National Institute for Occupational Safety and Health [NIOSH] 86-112)

- **HEAT STRESS CONSIDERATIONS**: The Site Safety Officer or Site Safety Supervisor for the entire response should make heat stress determinations throughout the day. If it is determined that a heat stress hazard exists, an alert should be passed to all teams to implement mandatory rest periods. The Site Safety Officer/Supervisor should generally be guided by the American Conference of Governmental Industrial Hygienists (ACGIH) guidelines in determining work/rest periods. Fluids should be available at all times and encouraged during mandatory rest periods.
- **SAFETY CONCERNS**: Certain safety problems are common to hot environments. The frequency of accidents, in general, appears to be higher in hot environments than in more moderate environmental conditions. One reason is that working in a hot environment lowers the mental alertness and physical performance of an individual. Increased body temperature and physical discomfort promote irritability, anger, and other emotional states which sometimes causes workers to overlook safety procedures or to divert attention from hazardous tasks.
- **HEALTH CONCERNS**: Excessive exposure to a hot work environment can bring about a variety of heat-induced disorders.
  - **Heat Stroke**:
    - Signs and Symptoms: Heat stroke is the most serious of health problems associated with working in hot environments. It occurs when the body's temperature regulatory system fails and sweating becomes inadequate. The body's only effective means of removing excess heat is compromised with little warning to the victim that a crisis stage has been reached.
      - A heat stroke victim's skin is hot, usually dry, red or spotted
      - Body temperature is usually 105 degrees F or higher
      - The victim is mentally confused, delirious, perhaps in convulsions, or unconscious
    - Medical Attention: Unless the heat stroke victim receives quick and appropriate treatment, death can occur.

    Any person with signs or symptoms of heat stroke requires immediate hospitalization.

    SEND SOMEONE TO GET MEDICAL ASSISTANCE/EMERGENCY MEDICAL TECHNICIAN (EMT) IMMEDIATELY!

    While waiting for medical assistance first aid should be immediately administered. This includes:
      - Removing the victim to a cool area
      - Thoroughly soaking the clothing with water
      - Vigorously fanning the body to increase cooling
  - **Heat Exhaustion**: Heat exhaustion includes several clinical disorders having symptoms which may resemble the early symptoms of heat stroke. Heat exhaustion is caused by the loss of large amounts of fluid by sweating, sometimes with excessive loss of salt.
    - Signs and Symptoms: A worker suffering from heat exhaustion:
      - Still sweats; but
      - Experiences extreme weakness or fatigue, giddiness, nausea, or headache

      In more serious cases:
      - The victim may vomit or lose consciousness

- The skin is clammy and moist
- The complexion is pale or flushed
- The body temperature is normal or only slightly elevated

o Medical Attention. General treatment:

- Notify the site EMT
- Have the victim rest in a cool place
- Have the victim drink plenty of liquids

Victims with mild cases of heat exhaustion usually recover spontaneously with this treatment. Those with severe cases may require extended care for several days. There are no known permanent effects.

CAUTION—PERSONS WITH HEART PROBLEMS OR THOSE ON A "LOW SODIUM" DIET WHO WORK IN HOT ENVIRONMENTS SHOULD CONSULT A PHYSICIAN ABOUT WHAT TO DO UNDER THESE CONDITIONS.

– **Heat Cramps**:

- Signs and Symptoms: Heat cramps are painful spasms of the muscles that occur among those who sweat profusely in heat, drink large quantities of water, but do not adequately replace the body's salt loss.
- Medical Attention: Cramps may occur during or after work hours and may be relieved by taking salted liquids by mouth.

CAUTION—PERSONS WITH HEART PROBLEMS OR THOSE ON A "LOW SODIUM" DIET WHO WORK IN HOT ENVIRONMENTS SHOULD CONSULT A PHYSICIAN ABOUT WHAT TO DO UNDER THESE CONDITIONS.

– **Fainting**: A worker who is not accustomed to hot environments and who stands erect and immobile in the heat may faint.

- Signs and Symptoms: With enlarged blood vessels in the skin and in the lower part of the body due to the body's attempts to control internal temperature, blood may pool there rather than return to the heart to be pumped to the brain.
- Medical Attention: Upon lying down, the worker should soon recover. By moving around, and thereby preventing blood from pooling, the patient can prevent further fainting.

– **Heat Rash**: Heat rash, also known as prickly heat, is likely to occur in hot, humid environments where heat is not easily removed from the surface of the skin by evaporation and the skin remains wet most of the time.

- Signs and Symptoms: The sweat ducts become plugged, and a skin rash soon appears. When the rash is extensive or when it is complicated by infection, prickly heat can be very uncomfortable and may reduce a worker's performance.
- Medical Attention: Workers can prevent this by resting in a cool place part of each day and by regularly bathing and drying the skin.

– **Transient Heat Fatigue**: Transient heat fatigue refers to the temporary state of discomfort and mental or psychological strain arising from prolonged heat exposure. Workers unaccustomed to the heat are particularly susceptible and can suffer, to varying degrees, a decline in task performance, coordination, alertness and vigilance.

- **PREPARING FOR WORK IN THE HEAT**: One of the best ways to reduce the heat stress of workers is to minimize heat in the workplace. However, at oil spills heat is difficult to control, while working outdoors and exposed to various weather conditions.

Humans are, to a large extent, capable of adjusting to the heat. This adjustment to heat, under normal circumstances, usually takes about 5 to 7 days, during which time the body will undergo a series of changes that will make continued exposure to heat more endurable.

Workers who return to work after vacation or extended illness may be affected by the heat in the work environment. Whenever such circumstances occur, the worker should be gradually reacclimatized to the hot environment.

- **MECHANIZATION**: Heat stress depends, in part, on the amount of heat the worker's body produces while a job is being performed. The amount of heat produced during hard, steady work is much higher than that produced during intermittent or light work. Therefore, one way of reducing the potential for heat stress is to make the job easier or lessen its duration by providing adequate rest time. Mechanization of work procedures can often make it possible to isolate workers from the heat source and increase overall productivity by decreasing the time needed for rest.
- **WORK/REST PERIODS**: Rather than be exposed to heat for extended periods of time during the course of a job, workers should, wherever possible, be permitted to distribute the workload evenly over the day and incorporate work-rest cycles or regular (and enforced) breaks. Work-rest cycles give the body an opportunity to get rid of excess heat, slow down the production of internal body heat, and provide greater blood flow to the skin.

  Providing cool rest areas in hot work environments considerably reduces the stress of working in those environments. Rest areas should be as close to the work area as possible, and provide shade. Shorter but frequent work-rest cycles are the greatest benefit to the worker.
- **DRINKING FLUIDS**: In the course of a day's work in the heat, a worker may produce as much as 2 to 3 gallons of sweat. Because so many heat disorders involve excessive dehydration of the body, it is essential that water intake during the workday be about equal to the amount of sweat produced.

  Most workers exposed to hot conditions drink less fluid than needed because of an insufficient thirst drive. A worker, therefore, should not depend on thirst to signal when and how much to drink.

  5 to 7 ounces of fluids should be consumed every 15 to 20 minutes to replenish the necessary fluids in the body.

  There is no optimum temperature of drinking water, but most people tend not to drink warm or very cold fluids as readily as they will cool ones.

  Heat acclimatized workers lose much less salt in their sweat than do workers who are not adjusted to the heat. The average American diet contains sufficient salt for acclimatized workers even when sweat production is high. If for some reason, salt replacement is required, the best way to compensate for the loss is to add a little extra salt to the food.

  Salt tablets SHOULD NOT be used.

  CAUTION—PERSONS WITH HEART PROBLEMS OR THOSE ON A "LOW SODIUM" DIET WHO WORK IN HOT ENVIRONMENTS SHOULD CONSULT A PHYSICIAN ABOUT WHAT TO DO UNDER THESE CONDITIONS.
- **PROTECTIVE CLOTHING AND HEAT STRESS**: Clothing inhibits the transfer of heat between the body and the surrounding environment. Therefore, in hot jobs where the air temperature is lower than skin temperature, wearing clothing reduces the body's ability to lose heat into the air. When air temperature is higher than skin temperature, clothing helps to prevent the transfer of heat from the air to the body. The advantage of wearing additional clothes, however, may be nullified if the chemical protective clothes interfere with the evaporation of sweat.

Attachment (___): Cold Stress & Hypothermia

Frostbite and hypothermia are major hazards of working in cold temperatures. A cold environment can reduce the temperature of the body and cause shivering, reduced mental alertness, and even loss of consciousness. However, a healthy worker who is properly protected and takes reasonable precautions can function efficiently and safely in cold environments.

- **FACTORS AFFECTING COLD EXPOSURES**
  - Important factors contributing to cold injury:
    - Exposure to humidity and high winds, contact with moisture or metal, inadequate clothing, age and general health.

    Physical conditions that worsen the effects include:
    - Fatigue, allergies, vascular disease, smoking drinking and certain specific drugs or medicines.
  - Important Warnings:
    - Pain in the extremities may be the first warning of dangerous exposure to cold.
    - Severe shivering must be taken as a sign of danger requiring removal from the cold exposure.
    - A worker should go immediately to a warming shelter if any of the following symptoms occur:
      - pain in the extremities (or frostnip), onset of heavy shivering, excessive fatigue, drowsiness
      - euphoria

    A litter should be used if possible for all but the mildest cases.
    - Hypothermia/Cold Stress victims must be re-warmed, but must not be re-warmed too fast. In particular, victims should not be re-warmed by submersion in water at any temperature.
- **HYPOTHERMIA**: Hypothermia is an abnormally low body temperature caused by exposure to cold in air or in water. Hypothermia results as the body looses heat faster than it can produce it. Air temperature alone is not enough to judge the cold hazard of a particular environment. Hypothermia cases often develop in air temperatures between 30-50 degrees Fahrenheit. When you figure in such factors as wind chill, the effective temperature can be significantly lower.
  - Early warnings of hypothermia are:
    - Uncontrollable shivering and the sensation of cold.
    - The heartbeat slows and sometimes becomes irregular, the pulse weakens, and the blood pressure changes.
    - Fits of shivering, vague or slurred speech, memory lapses, incoherence, or drowsiness are some symptoms which may occur.
    - Other symptoms which may be seen before unconsciousness are cool skin, slow, irregular breathing, low blood pressure, apparent exhaustion, and inability to get up after a rest.
  - First aid for hypothermia: The main objective in handling potential cases of hypothermia is re-warming the body core evenly and without delay. However, doing it too rapidly can disrupt body functions such as circulation.
    - The outer layer of clothing should be removed when entering a warm shelter.
    - The remaining clothing should be loosened to permit sweat to evaporate.
    - Alcohol should not be consumed while in the warm environment.
    - Anyone on medications such as blood pressure control or water pills should consult a physician

about possible side effects of cold stress.

- If medical help is not immediately available:
  - Keep the person quiet, but keep them awake, if possible.
  - Avoid unnecessary movement. If it's necessary to move a hypothermia victim, use a litter the exertion of walking could aggravate circulation problems.
  - In a case of mild hypothermia where the person is conscious, the body may be packed with heat packs or warm towels at the neck, groin and armpits.
  - As the extremities begin to recover warmth give conscious victims sweet, warm drinks. Avoid caffeine or alcoholic drinks.
  - Don't re-warm the core and the extremities at the same time. The sudden return of the cool blood pooled in the extremities to the heart can cause shock.

- Water Immersion Victims: Flotation is the most important factor in water immersion survival, but may not be available if not provided in advance (see protective clothing notes below).
  - It is especially important to keep your head dry.
  - Avoid thrashing about and assume the HELP position (Heat Escape Lessening Posture) by crossing your wrists over your chest and drawing your knees close to your chest to avoid losing excess body heat. By using the HELP position, the head, neck, armpit and groin areas are protected which are all high heat loss areas.
  - If others are in the water with you, huddle together to reduce heat loss, aid in rescue, and boost morale.

- OTHER COLD STRESS INJURIES:
  - Frostbite
    - Symptoms:
      - Whitened areas on skin
      - Burning sensation at first
      - Blistering
      - Affected part cold, numb and tingling
    - Treatment:
      - Cover the frozen part
      - Provide extra clothing and blankets
      - Bring person indoors
      - Place the part in warm water or rewarm with warm packs
      - If no water is available, wrap gently in a sheet and blanket or place frostbitten fingers under armpits
      - Discontinue warming when the affected part becomes flushed and swollen
      - Exercise part after rewarming but do not allow the person to walk after the affected part thaws
      - Give sweet warm fluids to conscious person
      - If feet are affected, put on dry socks over footwear
      - If cheeks are affected, cover cheeks with warm hands

- Do not rub the part with anything
- Do not use heat lamp, hot water bottles, place part near stove or break blisters
- Obtain medical assistance ASAP

– Chilblain
  - o Symptoms:
    - Recurrent localized itching, swelling and painful inflammation of the fingers, toes, or ears
    - Severe spasms
  - o Treatment:
    - Remove to warmer area
    - Consult physician

– Frostnip
  - o Symptoms:
    - Skin turns white
  - o Treatment:
    - Remove to warmer area
    - Refer to treatment for frostbite

– Acrocyanosis
  - o Symptoms:
    - Hands and feet are cold, blue and sweaty
  - o Treatment:
    - Remove to warmer area
    - Loosen tight clothing
    - Consult physician

– Trench Foot
  - o Symptoms:
    - Edema (swelling) of the foot
    - Tingling, itching
    - Severe pain
    - Blistering
  - o Treatment:
    - Remove to warmer area
    - Refer to frostbite treatment
    - Consult physician

– Raynaud's Disease
  - o Symptoms:
    - Fingers turn white and stiff

        - Intermittent blanching and reddening of the fingers and toes
        - Affected area tingles and becomes very red or reddish purple
    - Treatment:
        - Remove to warmer area
        - Consult physician

- **PREVENTING COLD STRESS**
    - Reduce manual work loads
    - Prevent dehydration
    - Provide warm locations for breaks
    - Provide wind breaks & shelters
    - Schedule coldest work for the warmest part of the day
    - Move work to warmer areas whenever possible
    - Assign extra workers to highly demanding tasks
    - Relief workers available for workers needing a break
    - Enforce the Buddy System
    - Minimize sitting/standing still for long periods
    - Older workers need to be extra careful in the cold
    - Sufficient sleep and good nutrition are important for maintaining a high level of tolerance to cold
    - Provide appropriate protective clothing/equipment
        - Priority clothing includes protection of feet, hands, head and face. Keeping the head covered is important because as much as 40% of body heat can be lost when the head is exposed.
    - Ensembles for work when water immersion may occur:
        - Flotation (personal or throwable devices).
        - Air trapped between layers of clothing will provide buoyancy and heat insulation, but Personal Flotation Devices (PFDs) offer the best chance for survival in cold water. Type III PFDs include float coats and mustang suits which provide floatation and thermal protection.
        - Preposition throwable floatation devices in boats or work areas near water.

Attachment (___): Sanitation Requirements

- **POTABLE WATER**: An adequate supply of potable water, or other drinking fluids, shall be maintained at all times throughout the site. Containers for drinking fluids shall be capable of being tightly closed, and equipped with a tap. These containers must also be labeled in such a manner that the contents are not accidentally used for other purposes. Where single service cups are supplied, the unused cups shall be maintained in sanitary containers; and a separate disposal container provided for used cups.
- **NON-POTABLE WATER**: Water intended for uses other than drinking or washing shall be identified in a way that it is not accidentally used for drinking, washing, or cooking. There shall be no cross-connection of potable and non-potable water supplies.
- **TOILET FACILITIES**: Toilet facilities shall be provided at a minimum in accordance with Table H-120.2 (Toilet Facilities) of 29 Code of Federal Regulations (CFR) 1910.120(n).

20 or fewer people	1 facility
20-200 people	1 toilet seat and 1 urinal per 40 persons
more than 200 people	1 toilet seat and 1 urinal per 50 persons

  - Toilets shall be provided such that they are readily accessible from all work areas. Mobile crews with ready access to toilet facilities using their own transportation, do not need to have toilet facilities located at their temporary work sites.
  - Sewage shall be handled in accordance with local health codes using one of the following means:
    - Sanitary sewer
    - Chemical toilets
    - Recirculating toilets
    - Combustion toilets, or flush toilets
- **FOOD HANDLING**: shall be conducted in accordance with the requirements of local jurisdiction.
- **WASHING FACILITIES**: Washing facilities shall be readily accessible by all employees. In addition to sanitary cleaning, these facilities shall be so equipped that they can be used to remove oily residues from the skin. Washing facilities shall be maintained free of contaminants above exposure limits, and as free as practical from oily residues.
- **SHOWERS**: For operations lasting more than 6 months, showers and changing rooms must be provided in accordance with 29 CFR 1910.120(n)(7); and 29 CFR 1910.141(d)(3) and 1910.141(e).

Attachment (___): Confined Space Entry Checklist

These are strictly guidelines for use by field personnel based on National Institute for Occupational Safety and Health (NIOSH) pub 87-113 “A Guide to Safety in Confined Spaces”; and National Fire Protection Association (NFPA)-306 Control of Gas Hazards on Vessels.

Oxygen (O_2) must be greater than 19.5% and less than 21.0% (There should be no unexplained deflection from the calibrated setting for ambient air—typically 20.9%--outside of normal instrument variability.)? Atmospheres less than 19.5% should be treated as an Immediately Dangerous to Life and Health (IDLH) atmosphere for purposes of respiratory protection selection. Atmospheres greater than 21% should be treated as a flammable atmosphere hazard (enhances flammability of other materials).

Combustible atmospheres—where flammable/combustible gases and vapors may be present—must be less than 10% of the LEL (Lower Explosive Limit) (There should be no unexplained deflection from the calibrated zero setting without assessment of potential toxic hazards associated with the atmosphere).

Toxic hazards (per NFPA 306 concentrations should not exceed total weight average (TWA) exposure limits such as Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL), American Conference of Governmental Industrial Hygienists [ACGIH] Threshold Limit Value [TLV], or NIOSH REL). If exposure limits are exceeded, consider additional engineering controls such a ventilation or cleaning. If other controls are not effective/feasible, appropriate respiratory protection should be used above exposure limits.

Is Entry Necessary? Yes / No

Preliminary Monitoring			
O_2	**LEL**	**Toxicity**	**Radiation**

MONITORING:

When considering monitoring requirements, personnel should consider such things as the potential for sudden changes in atmospheric conditions (e.g., gas sources in or adjacent to the confined space); and environmental or work activities which may change conditions over time (e.g., hot sunny weather increases vapor generation; welding/cutting/painting/curing consume O_2; and internal combustion engines consume O_2 and produce O_2 displacing gases).

Appropriate monitoring is established as follows:

___LEL:

___continuous,

___as directed by safety supervisor,

___daily or when safety supervisor changes watch,

___every ___ hour(s)

___O_2:

___continuous,

___as directed by safety supervisor,

___daily or when safety supervisor changes watch,

___every ___ hour(s)

___OTHER

HAZARD: _____

MONITORING EQUIPMENT: _____

___continuous,

___as directed by safety supervisor,

___daily or when safety supervisor changes watch,

___every ___ hour(s)

Checklist items on this page completed by: _____

Date/Time: _____ Signature: _____

VENTILATION:

Adequate ventilation has been established as follows:

_____ air changes prior to entry (minutes:_____),

_____ continuous ventilation during entry,

Location/type/ducts (diagram & description):

Source of air being blown into space is free of hazards? YES / NO

Contaminated air is exhausted into a safe location? YES / NO

Checklist items on this page completed by: _____

Date/Time: _____ Signature: _____

CONFINED SPACE ENTRY PERMIT:

Marine chemist certificate or equivalent issued? YES / NO

Chemist Name: _____ License No.: _____

Date Issued: _____ Period Covered: _____

Emergency phone numbers (see site safety plan—also available on scene).

Checklist items on this page completed by: _____

Date/Time: _____ Signature: _____

INITIAL TESTING AND PERMIT (See Attached Checklist Pages 1 through 5)

Confined / Hazardous Space Entry Authorized: Yes / No
Hotwork Authorized: Yes / No
Location and Description of Space:_____
Date: _____Time: _____
Permit Expires: _____
Entry Team Supervisor: (See Attached Checklist)

Special Requirements Met (See Also Checklist Pages 1 through 5)

Lock-Out	Yes / No / NA
De-Energize	Yes / No / NA
Lines Broken, Capped/Blanked	Yes / No / NA
Purge, Flush & Vent	Yes / No / NA
Ventilation	Yes / No / NA
Secure Area	Yes / No / NA
Respiratory Protection Adequate	Yes / No / NA
Personal Protective Equipment Adequate	Yes / No / NA
Escape/Rescue Adequate	Yes / No / NA
Fire Suppression Equipment	Yes / No / NA
Lighting	Yes / No / NA

**********Pre-Entry Tests and Monitoring Follow Up Testing********

******(see also monitoring requirements pages 1 thru 5):*******

Monitoring Log					
Test	**Limits**	**Preliminary Results**	**Date/Time**	**Date/Time**	**Date/Time**
% O_2					
% LEL					
CO					
CO_2					
H_2S					
Benzene					
Other					
Other					
Other					

CO = carbon monoxide; CO_2 = carbon dioxide; H_2S = hydrogen sulfide; LEL = Lower Explosive Limit; O_2 = oxygen

Checklist items on this page completed by: _____

Date/Time: _____ Signature: _____

Attachment (___): Simplified Work Plan

This form should be used to quickly document plans during the initial phases of emergency/post-emergency response operations, or as a means to readily modify general plans provided in the Comprehensive Work Plan.

ENTRY OBJECTIVES:

1. _____

_____

2. _____

_____

3. _____

CHEMICAL HAZARD EVALUATION FOR OPERATION:

Latest Monitoring Sheet(s) provided as Attachment: _____.

Hazard (chemical name)	Primary hazard(s) and special notes:	Info sheet attached:
		__Generic info sheet __CHRIS __SDS __Other
		__Generic info sheet __CHRIS __SDS __Other
		__Generic info sheet __CHRIS __SDS __Other
		__Generic info sheet __CHRIS __SDS __Other

CHRIS = Chemical Hazard Response Information System; SDS = Safety Data Sheet

Decon considerations and special procedures:

Decon layout provided as attachment:

Attachment (___): Air Monitoring Log

Site Name: _____ Date: _____

Instrument Calibration Record:

Instrument/Type	Date/Time Calibrated	Person Conducting Calibration	Comments

Location of Reading	Time of Reading	O_2 Reading	LEL Reading	H_2S Reading	CO Reading	Other	Other	Other

CO = carbon monoxide; H_2S = hydrogen sulfide; LEL = Lower Explosive Limit; O_2 = oxygen

Attachment (___): Safe Work Practices for Helicopters

Basic Safe Work Practices for all Passengers/Ground Crews:

- Passengers should receive a safety briefing from helicopter operators including safety features and equipment, their location on the individual aircraft, water landing procedures when appropriate, and emergency information cards before taking off.
- Passengers or ground crew members approaching helicopters shall stay in a crouched position, and shall be in clear view of the pilot while approaching or departing a helicopter.
- Passengers and ground crew should approach/depart from the front of the helicopter only when signaled by the pilot; and should never walk under or around the tail.
- Loose fitting clothing, hats, hard hats, or other gear which might be caught in rotor down wash must be secured or removed within 100 feet of operating helicopters.
- Passengers shall maintain a distance of 50 feet from helicopters while rotors are turning. Ground crew should also maintain this distance unless specific work practices are developed for closer work.
- Passengers shall wear seat belts at all times.
- Passengers and ground crew shall wear hearing protection (including communications headsets or helmets) at all times around operating helicopters.
- Passengers shall generally assist the pilot in watching for other traffic or ground obstacles as directed by the pilot.
- During emergency landings in water:
  - Do not exit until rotor blades stop turning or pilot signals all clear
  - Do not inflate life preservers until outside of the helicopter

Safe Work Practices for Cargo Handling are found in 29 Code of Federal Regulations (CFR) 1910.183 and Include:

- Use proper slings and tag lines in accordance with 29 CFR 1910.183(c) and 1910.184.
- Testing and use of cargo hooks and electrically operated cargo hooks shall be performed in accordance with 29 CFR 1910.183(d) and (i).
- Static charge on suspended loads shall be dissipated with a grounding device before ground crew touch the suspended load unless protective rubber gloves are being worn.
- External loads shall not be lifted unless determined to be within the helicopter manufacturer's recommended rating.
- Communications shall be maintained in accordance with 29 CFR 1910.183.
- Ground and flight crew members shall be familiar with, and use the manual signaling system described in 29 CFR 1910.183.

Attachment (___): Safe Work Practices for Small Boats

Ensure that all boats comply with the appropriate state and federal regulations. In addition to the items discussed below certain types of vessels will require such items as United States Coast Guard (USCG) approved fire extinguishers, backfire flame control, powered ventilation, sound signaling devices (different from emergency signals), navigation lights/ signals, pollution placards, and marine sanitation devices.

Boat operators should familiarize themselves, and passengers with safety features and equipment on their boats.

Boats should be operated by qualified individuals.

Life jackets, work vests, mustang suits, or other appropriate USCG approved Personal Flotation Devices (PFDs) should be worn by personnel in small boats.

- Use of mustang suits are particularly critical under conditions of cold stress
- Types of PFDs:
  - TYPE I. Off-shore life jacket provides the most buoyancy. It is effective for all waters and intended specifically for open, rough or remote waters where rescue may be delayed.
  - TYPE II. Near-shore buoyancy vests are intended for calm, inland water or where there is a good chance of quick rescue.
  - TYPE III. Flotation aids are good for calm, inland water, or where there is a good chance of quick rescue. Examples: float coats, fishing vests and ski vests.
  - TYPE IV. These are throwable devices, not intended to be worn or to replace those that are worn.
  - TYPE V--SPECIAL USE. These are intended for specific activities (according to the conditions on the labels). Some examples: deck suits, mustang suits, work vests and hybrid PFDs below.
  - TYPE V--HYBRID INFLATABLES. These PFDs contain a small amount of inherent buoyancy and an inflatable chamber. Performance equals that of a Type I, II, or III PFD (as noted on the label) WHEN INFLATED.

Small boats should generally not be operated for oil recovery after sunset. If this is required or poses minimal risk, routes of operations should be carefully prescribed, individual boats should maintain a communication schedule with a shore base; and should be fully equipped with appropriate running lights, emergency signals, and personnel onboard should be wearing emergency night signaling devices.

Distress signals (three or more for day and three or more for night) should be carried onboard all vessels. These devices may be required by regulation. They may be stored onboard or issued to individuals. If stored onboard they should be in a sealed, watertight, orange container marked "DISTRESS SIGNALS".

- USCG approved pyrotechnic visual distress signals include red flares (hand-held or aerial), orange smoke (hand-held or floating) and launchers (for aerial red meteors or parachute flares).

Pyrotechnic Devices Should Not Be Used Near Flammable Product Spills.

- Non-pyrotechnic distress signals are not approved individually but need to meet certain requirements. They should be in serviceable condition, readily accessible, and certified by the manufacturer as complying with USCG requirements. These devices include orange distress flags and electric distress lights.
- Distress flags are day signals only. They must be at least 3 x 3 feet with a black square and ball on an orange background.
  - Electric distress lights are for night use only. These devices automatically flash the international

SOS code (... _ _ _ ...) so a flashlight IS NOT considered a distress signal. Under inland navigation rules a high intensity strobe light is considered a distress signal.

- It is a violation of regulations to display visual distress signals on the water except when assistance is required.

Boat operators must keep their supervisors informed of their area of operations, especially when they change their work area (if plans call for a boat to move to another location during a shift, the operator should advise their supervisor of their actual time of departure).

Boat operators should never anchor their boats by the stern. This is typically the lowest point on the boat due to design and/or loading, and is often squared off making it vulnerable to swamping.

Portable fuel tanks should be filled outside of the boat. All sources of ignition in the area of fueling (e.g., engines, stoves or heat producing equipment and electrical equipment) should be secured while fueling.

Strict adherence to the buddy system must be observed in small boats; and all boats should be in direct visual or radio contact with a shore base at all times.

To avoid slipping on wet decks or falling in small boats, personnel should remain seated while boat is underway. Horseplay and speeding must be strictly prohibited. Personnel should keep their center of gravity as low as possible while working in small boats.

Boat operators must also ensure that boats are not overloaded. The capacity should be marked on a label on the boat. If it is not a general rule of thumb is:

LENGTH x WIDTH / 15 = PEOPLE (150 lbs)

Since equipment adds to the weight it should be considered as well. Weight should be distributed evenly.

Personnel working in or operating small boats should be equipped with appropriate shoes/boots designed to help maintain traction on wet surfaces.

Safety sunglasses, and hearing protection should be worn by personnel working in or operating small boats where appropriate.

Fixed ladders or other substantial access/egress should be provided at boat transfer locations exceeding several feet.

Depending on the specific nature of the operations (e.g., work in remote areas), other emergency equipment which should be considered such as: anchors, radios, bailers, first aid kits, and additional means of propulsion (e.g., paddles).

Workers should be cautioned about using their legs as fenders, or getting their hands, arms, or legs between vessels or between vessels and docks or fixed structures.

Attachment (___): On-Site Medical Monitoring (Entry Team)

Entry team personnel (including all personnel potentially entering controlled areas in LEVEL A/B/C) are to be monitored for blood pressure (B/P), pulse rate, temperature (oral) and body weight.

There are numerous factors which effect allowable ranges so that each individual must be evaluated on a case-by-case basis by the site emergency medical technician (EMT) (or other medical personnel), site safety officer and site supervisor.

The following typical values are provided only as a starting guideline:

Max B/P:	140 diastolic/100 systolic
Max Pulse Rate:	100 beats per minute (bpm)
Body Temperature:	99.2 deg.F (Max) / 98.0 deg.F (Min) or +/- 0.6 deg.F from normal
Body Weight Loss:	1.5% (rule of thumb)

Site Name:						**Date:**					
Medical Monitoring Log											
Pre-entry						**Post-entry**					
Name	**Temp**	**B/P**	**Pulse**	**Weight (1st entry only)**	**Time**	**Temp**	**B/P**	**Pulse**	**Weight (last entry only)**	**Time**	**Site Safety Officer's Initials**

Attachment (___): Site Safety Plan Evaluation Checklist

Name of Plan Reviewed:

_____

Plan Drafted By (Name/Organization):

_____

Plan Reviewed By: _____

Date of Review: _____

Review Includes (check those appropriate):

(__) Comprehensive Workplan (post-emergency)

(__) Safety & Health Program (for planning not site-specific)

(__) Site-Specific Site Safety & Health Plan (post-emergency)

(__) Emergency Response Plans (ERP) (emergency phase & routine sites)

I. Comprehensive Workplan (1910.120(b)(3)):

[ ] Work tasks, and objectives defined

[ ] Methods of accomplishing tasks & objectives defined

[ ] Personnel requirements for work plan accomplishments

[ ] Training requirements identified (see 1910.120(e))

[ ] Informational programs implemented (see 1910.120(i))

[ ] Medical surveillance program (see 1910.120(f))

II. Safety and Health Program (1910.120(b)). (NOTE: This is not the same as the site-specific plan addressed in III. below.)

A. General:

[ ] A written safety and health program (1910.120(b)(1)) may be incorporated in other documents

[ ] Organizational Structure (1910.120(b)(1)(ii)(A)

[ ] Workplan (B) checklist above (see I. above)

[ ] Site-Specific Safety & Health Plan (C) (see III. below)

[ ] Safety and Health Training Program (D)

[ ] Medical surveillance program (E)

[ ] Employer Standard Operating Procedure (SOP) on Safety and Health (F)

B. Organization Structure (1910.120(b)(2)):

[ ] Chain of command identified

[ ] Responsibilities of supervisors and employees

[ ] Identifies supervisor (A)

[ ] Identifies site safety and health supervisor(s) (B)

[ ] Other personnel; functions and responsibilities (C)

[ ] Lines of authority/responsibility/communications (D)

III. Site-Specific Site Safety & Health Plan (1910.120(b)(4):

For spill response operations (as opposed to those that start from a remedial action) these plans will vary in detail as the response progresses. During the initial emergency phase responders rely on generic ERPs—contingency plans--while a site-specific plan is being developed. As the response progresses into post-emergency phase recovery operations a basic site-specific plan is used and may become quite detailed for prolonged or large cleanups. Finally, a spill may become a fully controlled site cleanup (e.g., remedial cleanups) where a fully developed site-specific plan is developed, including detailed ERPs for on-site emergencies.

A. General:

[ ] Risks for each task in work plan assessed

[ ] Protective equip identified for each task/objective

[ ] Frequency and types of air monitoring identified

[ ] Frequency and types of personnel monitoring identified

[ ] Air monitoring instruments to be used identified

[ ] Maintenance and calibration for instrumentation (E)

[ ] Use of "buddy system" identified

[ ] Safe working practices identified

[ ] Decontamination procedures identified (G)

[ ] ERP identified (H)

[ ] Spill Containment Program identified (J)

[ ] Pre-entry briefings provided for (1910.120(b)4)(iii))

[ ] Provisions for continual evaluation of plan made (iv)

[ ] Employee training assignments made

[ ] Medical surveillance requirements

[ ] Site control measures identified (F)

[ ] Sampling techniques identified

[ ] Site map identified

[ ] Work zones identified

[ ] Alerting means for emergencies

[ ] Nearest medical assistance identified

[ ] Confined space entry procedures (I)

B. Site Characterization and Analysis (1910.120(c))

[ ] Hazardous waste sites shall be evaluated to identify specific site hazards and determine appropriate safety and health controls

C. Preliminary Evaluation:

[ ] Performed prior to site entry

[ ] Performed by a qualified person

[ ] Protection methods and site controls identified

[ ] All inhalation/skin hazards identified

[ ] Location and approximate size of site

[ ] Description of response activity

[ ] Duration of response activity

[ ] Site topography and accessibility identified (include air and ground accessibility)

[ ] Safety and health hazards anticipated listed

[ ] Pathways for hazardous substance dispersion identified

[ ] Status of emergency response units identified (rescue, fire, hazmat)

[ ] Hazardous substances listed and associated hazards

[ ] If Self-Contained Breathing Apparatus (SCBA) is not used and potential for inhalation hazard might exist: an EEBA shall be used with 5 minutes of air

D. Risk Identification (1910.120(c)(7))

[ ] Employees on site shall be informed of identified risks

[ ] All information concerning the chemical physical and toxicological properties of each substance available to the employer shall be made available to the employee

E. Detailed Evaluation (1910.120(c)(2))

[ ] Immediately after preliminary evaluation a detailed evaluation will be conducted to determine safety controls and protection needed

F. Monitoring (1910.120(h))

[ ] Monitoring is required during initial entry

[ ] Monitoring is required periodically

[ ] Personnel monitoring is also required

G. Illumination Requirements: (1910.120(m))

[ ] Areas accessible to employees shall be lighted not less than the intensities outlined in Table H-120.1

H. Sanitation Requirements: (1910.120(n))

[ ] Water containers shall be tight top closed and equipped with a tap and clearly labeled for use. A disposal unit must be provided for used cups and a sanitary unit for unused cups (1)(i-iv). They shall not be crossed connected to non-potable water containers.

[ ] Non-potable water must be clearly marked per (n)(2)

[ ] Toilet facilities must be provided per (n)(3)

[ ] Washing facilities must be in proximity per (n)(6)

[ ] Showers and change rooms per (n)(7)

[ ] Employers shall ensure that employees shower at the end of when leaving the hazardous waste site

IV. Emergency Response Plans (1910.120(l) and (q)) for emergency response operations (e.g., contingency plans used prior to site safety plan development), and routine sites (e.g., emergency plans for remedial sites).

A. Purpose is to prepare for anticipated emergencies

[ ] Shall be written and available for inspection

B. Elements: (1910.120(l)(2)(i-xi))

[ ] Shall address pre-emergency planning

[ ] Personnel roles, lines of communication identified

[ ] Emergency recognition and prevention addressed

[ ] Safe distances and places of refuge established

[ ] Site security and control addressed

[ ] Evacuation routes and procedures established

[ ] Emergency medical treatment and first aid

[ ] Emergency Decontamination procedures identified

[ ] Emergency alerting and response procedures identified

[ ] Critique of response and follow up

[ ] Personal protective equipment (PPE) and emergency equipment identified

C. Additional Elements: (1910.120(l)(3)(i)(A-B))

[ ] Site topography, layout and prevailing weather

[ ] Procedures for reporting incidents to local, state, and federal government agencies

D. Additional Requirements: (1910.120(l)(3)(ii-viii))

[ ] ERP shall be a separate section

[ ] ERP must be compatible with fed, state & local plans

[ ] The ERP shall be rehearsed as part of onsite training

[ ] The ERP shall be current

[ ] An employee alarm system shall be installed to notify persons of an emergency situation

Attachment (___): Motor Vehicle Safety Briefing

One of the most dangerous operations performed by pollution response personnel is driving to and from the spill site. This is particularly true when driving vehicles that you are unfamiliar with such as motor pool and rental vehicles.

Familiarize yourself with your vehicle before driving. Walk around and check the outside condition, familiarize yourself with the interior as well, and make all adjustments before driving a vehicle.

Get your attitude right before driving.

- Pollution response personnel must function with "deliberate speed"... not reckless speed.
- Forget schedules while driving! The road is no place to make up lost time.
- Settle down. Do not bring frustrations into the vehicle with you.
- Make up your mind to be the most courteous driver on the road. Forget about getting even with bad drivers on the road. Forget about competing with other drivers.
- Expect other drivers to make stupid mistakes and prepare to deal with their mistakes.
- Having the right-of-way is no substitute for being alive. Expect the other drivers to break the rules.

Use your parking lights only when parked. Use your headlights during all conditions of reduced visibility (dawn, dusk, fog).

Do not drive under the influence of alcohol or drugs. Coffee, cold showers, fresh air, or other "remedies" will not make you sober. Only time will make you sober.

Coffee is also a drug and may actually cause hallucinations.

Take frequent breaks about every hour or 100 miles. If you decide to take a nap, pull over at a well-lighted rest stop and keep your doors locked while you are sleeping.

Conditions that increase the likelihood of highway hypnosis include:

- Driving too long without a break
- Driving at night
- Staring straight ahead instead of scanning all directions

Look ahead for problems and maintain a safe distance behind the car in front of you.

Slow and steady is the best pace for driving on snow, ice, or other slippery road surfaces. Do not hit your brakes hard or accelerate quickly.

Do not stare into the headlights of oncoming traffic.

Attachment (___): Drum Handling and Spill Containment

Detailed regulations regarding drum handling and spill containment can be found at 29 Code of Federal Regulations (CFR) 1910.120(j).

- Handling Drums
  - Drums shall be inspected and given a unique identification prior to being moved.
  - Movement of drums must be kept to a minimum.
  - To the greatest extent possible, drums shall not be moved by unaided manual methods. __ Safe manual lifting procedures are provided as attachment _____.
  - Prior to shipment, each drum must be in good condition (or overpacked) and properly labeled in accordance with 49 CFR requirements.
  - A log shall be maintained to keep track of sampling, repacking/overpacking, bulking/consolidation, on -site movement, off-site shipment, and any other significant events related to each individual drum.
  - Bulking or product consolidation is allowed only after individual product contents have been characterized.
  - Metal detectors, ground penetrating devices/systems, or other detection methods shall be used to determine the location of buried drums before excavation at sites.
- Opening and sampling drums
  - If airlines are used, they must be located to prevent physical damage or contamination.
  - When opening drums, the minimum number of employees shall be allowed in the work area.
  - To the extent possible drums shall be opened remotely or with a suitable shield for personnel. In particular drums showing signs of being pressurized (high pressure or vacuum), containing flammable, or explosive materials must be opened with appropriate remote opening equipment and shields.
  - When opening potentially flammable product drums spark proof tools shall be used. Fire suppression equipment must be located nearby in a shielded/protected location ready for use.
  - A specific work plan shall be developed for handling of drums or containers involving radioactive or shock sensitive materials, and lab packs. Lab packs must be opened, and inner packages characterized only by personnel familiar with lab pack hazards, inspection, and classification. Crystallized materials on inner packages in lab packs shall be handled as shock sensitive until characterized otherwise.
  - Specific equipment to be used for sampling drums shall be noted in the work plan.
- Staging and containment areas
  - Pathways for hazardous substance dispersion:

    __Pathways are depicted on the site safety map provided as Attachment _____
  - When drums are moved from their original locations to a work area or staging area, a spill containment area must be constructed for those locations. The containment should be able to contain the maximum loss from any of the containers in the area.
  - Safe access and egress points must be provided to all staging areas. Adequate room and ramps must be provided for heavy equipment used to handle drums (e.g., bobcats with drum grapplers). A secondary emergency egress point must also be identified.

5.4 Site Security Measures

Due to the large amount of public attention created at an oil spill site, additional security measures are required. Several measures should be planned in advance to prepare security personnel for various possible scenarios including the potential of simultaneous spills. A checklist for site security is included in Figure 5.1. A model Site Security Plan is provided in Figure 5.2.

Figure 5.1: Site Security Checklist

Site Security Checklist	Initials	Date & Time Started	Date & Time Completed
Restrict access to the site.			
Direct traffic away from the site.			
Request assistance from local law enforcement to: • Establish road blocks where necessary, to secure the area • Divert local traffic away from the spill area • Provide access for spill response equipment and personnel			
Coordinate rescue operations with the local fire department paramedics.			
Request, through the Federal On-Scene Coordinator (FOSC), the Federal Aviation Administration (FAA) restrict air space over the site.			
Contract for additional security personnel, as needed.			
Maintain strict control over all personnel and vehicular traffic entering the site.			
Position security personnel to effectively control non-response personnel.			
Barricade lesser traveled points with appropriate signs warning against entry.			
Establish check points at barricaded points to verify security effectiveness.			
Maintain a log that documents all security related incidents and observations made at the spill site.			
Establish a pass system and distribute pre-prepared security passes to all spill related personnel.			
Ensure all response equipment is safeguarded.			

Figure 5.2: Site Security Plan

Incident Name:_____ Location:_____

Effective Date:_____ Effective Time Period: _____

Spill Location:_____ Prepared By:_____

1. Perimeter (safety zone) around the spill is as follows: (Describe geographic boundaries)

2. Locations requiring security: (streets, Emergency Operations Center [EOC] entrances, waterfronts, air space, etc.)

3. System for controlling access to spill site is as follows: (pass system, barricades, etc.)

4. System to safeguard equipment is as follows:

5. Personnel required on-scene to maintain site security:

Organization/Agency	Number of Personnel	Assignment

5.5 Waste Management

A major oil spill response would generate significant quantities of waste materials ranging from oily debris and sorbent materials to sanitation water and used batteries. All these wastes need to be classified and separated (i.e., oily, liquid, etc.), transported from the site, and treated and/or disposed of at approved disposal sites. Each of these activities demands that certain health and safety precautions be taken, which are strictly controlled by federal and state laws and regulations. This section provides an overview of the applicable state regulations governing waste disposal, and a discussion of various waste classification, handling, transfer, storage, and disposal techniques.

All waste management operations will be conducted in accordance with the NWACP Disposal Guidance for Washington State (Section 9405). BP will provide recovered oil and waste records to the Washington Department of Ecology (WDOE) upon request. Please refer to the NWACP, Section 9405 for additional Disposal Guidance for Washington and Oregon State. The NWACP can be found at the following website: www.rrt10nwac.com/NWACP.

5.5.1 Waste Handling

A primary concern in the handling of recovered oil and oily debris is contaminating unaffected areas or recontamination of already cleaned areas. Oily wastes generated during the response operations would need to be separated by type and transferred to temporary storage areas and/or transported to incineration or disposal sites. Proper handling of oil and oily wastes is imperative to ensure personnel health and safety.

In Figure 5.3, there are some examples of temporary storage methods for various types of products. Ensure debris is stored on impermeable sheeting to prevent penetration into the soil should a breach of the container occur.

Temporary storage sites should be located on level parking areas or undeveloped lots with good access to cleanup operations as well as nearby streets and highways. Sites should be at least three meters above mean sea level. A 1- to 1-1/2 meter high earth berm should be constructed around the perimeter of the site and the site lined with an impermeable liner to the top of the berm.

Temporary storage sites should be regularly monitored to ensure that oil is not escaping the berm. Free oil accumulating in the bermed area should be removed as soon as possible.

Oil and oily waste disposal methods are described in Figure 5.4. A general waste containment and disposal checklist is provided in Figure 5.5.

5.5.2 Waste Tracking

Waste management data is used to assess the progress of the response and to determine the potential response needs. The Environmental Unit will continually report and update the Situation Unit with waste management data utilizing ICS Form 209, which includes volumes recovered, stored, and disposed of. The Environmental Unit, in conjunction with the Situation Unit, must assure that this information is accurately reported. Clear lines of communication between the Operations and Environmental Units should be established quickly to ensure that waste is being adequately tracked. BP will initially utilize the Waste Management Tracking Forms found in Appendix 9405 A of the NWACP (Figure 5.6, Figure 5.7, Figure 5.8). Subsequent variations of waste tracking forms may be developed to meet the needs of the response. All waste tracking will be conducted in accordance with the NWACP Disposal Plan Guidance (Section 9405).

Figure 5.3: Temporary Storage Methods

	Product						
Containment	**Oil**	**Oil/Water**	**Oil/Soil**	**Oil/Debris (Small)**	**Oil/Debris (Medium)**	**Oil/Debris (Large)**	**Capacity**
Drums	X	X	X	X			.2-.5 yd^3
Bags			X	X	X		1-2 yd^3
Boxes			X	X	X		1-5 yd^3
Open Top Rolloff	X	X	X	X	X	X	8-40 yd^3
Roll Top Rolloff	X	X	X	X	X	X	15-25 yd^3
Vacuum Box	X	X					15-25 yd^3
Frac Tank	X	X					500-20,000 gal
Poly Tank	X	X					200-4,000 gal
Vacuum Truck	X	X	X				2,000-5,000 gal
Tank Trailer	X	X					2,000-4,000 gal
Barge	X	X					3,000+gal
Berm, 4 ft	X	X	X	X	X	X	1 yd^3
Bladders	X	X					25-1,500 gal

Figure 5.4: Oil and Oily Waste Disposal Methods

Waste Type	**Natural Degradation**	**Pit Burial**	**In-Situ Burning**	**Open Pit Burning**	**Portable Incineration**	**Recycling**	**Reclaim**
Fresh Oil	X	X	X	X	X	X	X
Emulsified Oil	X	X		X	X	X	
Weathered Oil	X	X		X	X	X	
Oily, Small, Light (Sorbent, Snakes, Cups, Leaves)	X	X		X	X		
Oily, Large, Heavy (Logs, Boards, Seaweed Mats)	X	X		X	X		
Oily Sand and Gravel	X	X			X		
Quantity	<100 bbls	>1000 bbls	>1000 bbls	>1000 bbls	>1000 bbls	>1000 bbls	>1000 bbls

bbls = barrels

Figure 5.5: General Waste Containment and Disposal Checklist

Consideration	Yes/No/NA
Is the material being recovered a waste or reusable product?	
Has all recovered waste been containerized and secured so there is no potential for further leakage while the material is being stored?	
Has each of the discrete waste streams been identified?	
Has a representative sample of each waste stream been collected?	
Has the sample been sent to an approved laboratory for the appropriate analysis, i.e. hazardous waste determination?	
Have the appropriate waste classification and waste code numbers for the individual waste streams been received?	
Have a temporary United States Environmental Protection Agency (USEPA) identification and generator numbers been received, if they are not already registered with USEPA?	
Have the services of a registered hazardous waste transporter been contracted if waste is hazardous?	
If the waste is nonhazardous, is the transporter registered?	
Is the waste being taken to an approved disposal site?	
Is the waste hazardous or Class I nonhazardous?	
If the waste is hazardous or Class I nonhazardous, is a manifest being used?	
Is the manifest properly completed?	
Is the Land Disposal Form properly completed?	
Are all federal, state, and local laws/regulations being followed?	
Are all necessary permits being obtained?	
Has a disposal plan been submitted for approval/review?	
Have personal protective equipment (PPE) and waste-handling procedures been included in the Site Safety Plan to protect the health and safety of waste handling personnel?	

Figure 5.6: Waste Management Tracking Form

Incident Name: _____

Date: _____Time:_____

Recovery Location(s)	Time Recovered		Volume (gallons/cubic yards)	Waste Type	Interim Storage Location
	From	To			

Figure 5.7: Interim Storage Tracking

Interim Storage Location(s)	Received from Location(s)	Time Received	Volume (gallons/cubic yards)	Waste Type

Figure 5.8: Final Disposal Tracking Form

Disposal Facility Location(s)	Received from Location(s)	Time Received	Volume (gallons/cubic yards)	Waste Type

5.5.3 Waste Disposal Plans

This section describes how and where recovered spill material and residual wastes associated with a release and release response activities will be transported/disposed. It must be noted that all transportation and disposal of spill waste/residuals will be conducted in full compliance with the federal Resource Conservation and Recovery Act (RCRA) and with all state and local regulations, where applicable. A Sample Incident Disposal Plan can be found in Figure 5.9.

5.5.4 Recovered Product

All recovered product will be contained within baker tanks for inland responses and will be removed by a third party contract service utilizing a vacuum truck. The contractor will be appropriately licensed to remove and transport the recovered product to an appropriately licensed or permitted disposal or recovery facility. For marine responses, barges and bladders will be utilized. Recovered oil can be transferred to on-shore baker tanks or directly to vacuum trucks for final disposal. Baker tanks can be acquired through 3rd party contractors such as Western Refinery Services (WRS) or directly through Baker.

5.5.5 Contaminated Soil

Contaminated soil will be excavated by a licensed contractor and subsequently transported by a licensed waste hauler to an appropriately licensed or permitted disposal facility.

5.5.6 Contaminated Equipment

Contaminated equipment will be decontaminated for reuse when practicable. If decontamination is not possible, contaminated equipment will be contained in United States Department of Transportation (USDOT) approved containers for transport by a licensed contractor/waste hauler to an appropriately licensed or permitted disposal facility.

5.5.7 Personnel Protective Equipment

Contaminated personal protective equipment (PPE) will be decontaminated for reuse when practicable. If decontamination is not possible, contaminated PPE will be contained in USDOT approved containers for transport by a licensed contractor/waste hauler to an appropriately licensed or permitted disposal facility.

5.5.8 Decontamination Solutions

Decontamination solutions will be contained in USDOT approved containers for transport by a licensed contractor/waste hauler to an appropriately licensed or permitted disposal facility.

5.5.9 Absorbents

Absorbents will be contained in USDOT approved containers for transport by a licensed contractor/waste hauler to an appropriately licensed or permitted disposal facility.

Figure 5.9: Sample Incident Disposal Plan

Responsible Party: _____

Spilled Material: _____

Spill Volume (estimate): _____

Spill Location: _____

Spill Date/Time: _____

Report Update Time: _____

Disposal Plan Authorization

This plan is written at the request of the Incident Command. The maximum feasible amount of oil spilled during the incident will be recovered. In addition an unknown quantity of oily waste debris (including debris, sediment, etc.) will be recovered. All applicable state, local and federal laws and regulations will be followed when recycling or disposing of the recovered material. Disposed material will be tracked to provide an accurate means of estimating total oil recovered. All materials will be categorized and itemized for safe and efficient collection, staging, storage and recycling or disposal. Materials will be tracked to provide an accurate means of estimating the quantities of disposed or recycled materials. Each section of this incident specific disposal plan addresses and corresponds with the waste disposal "Guideline" found in Section 9620 of the Northwest Area Contingency Plan (NWACP).

This plan may be amended as necessary to ensure compliance with all applicable laws and regulations, as new materials or waste streams are encountered, or alternative means of disposal are needed. Amendment may occur only upon mutual agreement of the responsible party, the Federal On-Scene Coordinator (FOSC) (United States Coast Guard [USCG]/United States Environmental Protection Agency [USEPA]), and/or the State On-Scene Coordinator (SOSC) (Washington Department of Ecology [WDOE]/Oregon Department of Environmental Quality [ODEQ]).

Submitted By: _____ Date: _____

Approved by WDOE: _____ Date: _____

Reviewed by USCG/USEPA: _____ Date: _____

Approved by Responsible Party: _____ Date: _____

Approved by other Local Government Representative(s):

_____ Date: _____

Approved by other Tribal Government Representative(s):

_____ Date: _____

The Disposal Plan has been developed by the Environmental Unit in coordination with the Operations Section for incorporation into the Incident Action Plan. Changes or amendments to the Disposal plan based on lessons learned from the Operations Section will be incorporated into this plan as needed.

SECTION I: WASTE MANAGER AND WASTE HANDLERS

Describe the contractors assigned and key roles staffed to support disposal. Describe the responsibilities of each role. Roles may include:

- Disposal Group Supervisor
- Waste Tracking Coordinators
- Technical Specialists

Describe the licensed transporters and approved treatment and disposal facilities to be used for waste handling and disposition. Only approved and licensed facilities are to be used unless otherwise directed by Incident Command. Describe how all waste handlers will be briefed and working in accordance with this plan.

Name of Company	Disposal Functions	Company Representative (Name, Phone #)

SECTION II: DESIGNATION

The spilled material was deemed (non-) dangerous waste based on the following:

Describe whether the recovered product will be handled as a hazardous waste based on Toxic Substances Control Act (TSCA)/Resource Conservation and Recovery Act (RCRA), state or other regulations, and explain the basis for the decision.

SECTION III: INTERIM SOTRAGE, SEGREGATION, AND TRACKING

A. INTERIM STORAGE OF SOLID MATERIAL

Interim storage sites will be located at:

Provide a description each site, lined roll-off boxes, etc. Describe processes for managing waste at each interim storage site. Describe how each site was constructed, bermed, covered, etc. to minimize infiltration of rainwater and prevent leaching. Describe measures that will be taken to return sites to their original condition.

B. SEGREGATION

Describe measures taken to ensure material recovered was properly segregated. Material recovered must be segregated in the following manner unless otherwise directed by Command:

- Oil collected from sources other than state waters/shorelines (e.g. on vessels or pier)
- Oil and oil/water mixtures recovered from state waters/shorelines
- Oiled organic debris: wood, aquatic vegetation, etc. Oily debris should be placed in clear plastic bags for ease of identifying contents and segregation. To the extent possible efforts should be made to homogenize recovered organic debris, e.g. heavily oiled eel grass should be kept separate from dissimilar debris.
- Oiled sorbent material: oil snares, pads, and booms
- Personal protective equipment (PPE) and other typically non-sorbent materials
- Other

C. WASHINGTON STATE OIL RECOVERY CREDIT FOR NATURAL RESOURCE DAMAGES

Detail measures taken to ensure segregation as per oil spill recovery credit. See Washington Department of Ecology (WDOE) document "Compensation Schedule Credit for Oil Recovery, RDA Committee Resolution 96-1".

D. TRACKING

Describe the waste tracking system used during this response. Include copies of waste tracking forms, (See Appendix 1 for example). Develop a process to communicate the waste tracking information from the field to the Command Post.

E. DECANTING

Describe decanting operations, if applicable. Decanting authorization form (if approved) should be attached.

SECTION IV: DECONTAMINATION

Describe the areas designated for decontamination including location, set up, and pollution prevention measures. Example text:

“A hot/decontamination/exclusion zone will be set up at each staging area. The decontamination area will be plastic lined to prevent pollution from oiled PPE and equipment. Oiled PPE and equipment will be collected in plastic barrels.”

SECTION V: WILDLIFE OPERATIONS

A. Wildlife Rehabilitation

Oiled wildlife search and collection and rehabilitation activities generate various liquid and solid wastes. Examples include oily PPE, towels, caging, and wash water. Material generated from oiled wildlife response activities must be incorporated into the spill response waste management system.

B. Wildlife Carcasses

The disposal of animal carcasses may need to be addressed in the disposal plan. Carcass collection

activities are overseen by the Wildlife Branch. The collection of migratory birds and sea otter carcasses is overseen by the United States Fish and Wildlife Service (USFWS) and the collection of marine mammals other than sea otters is overseen by National Oceanic and Atmospheric Administration (NOAA) Fisheries. The Washington Department of Fish and Wildlife will assist USFWS and NOAA Fisheries in carcass collection management and activities. Prior to the cleanup of any beach, an agent of the joint trustees should coordinate the removal of oiled carcasses. No oiled carcasses shall be disposed of until authorized by the Wildlife Branch.

SECTION VI: WASTE DISPOSITION AND FINAL DISPOSAL

Refer to ICS form 209 for a summary of recovered waste volumes.

Include copies of waste tracking forms and waste profiles used for final disposal. Also, include copies of receipts from disposal facilities.

A. RECOVERABLE OIL

Oil recovered will be transported by _____ to _____

Company Names and contacts

_____

_____

B. BURNABLE MATERIAL

Burnable material includes oil wood, debris, PPE, sorbents, oil snares, and other suitable organic material collected during cleanup operations. The debris will be transported from the interim storage site by _____to _____.

Transporters	Facility
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

5.6 Response Technologies

Though mechanical cleanup and recovery is always the initial and primary response tool, other response technologies are considered by the Region X Regional Response Team (RRT) and Northwest Area Committee to be integral components of effective spill response that should be available for use, as appropriate, in a timely and efficient manner. The use of response technologies such as in- situ burning, dispersants, and other oil spill cleanup agents should be considered when the environmental benefit of their use is expected to outweigh adverse effects.

Olympic, through its contract with Marine Spill Response Corporation (MSRC), has available inventory and experience to deploy response technologies in a timely and efficient manner so that they are most effective. A checklist for various response technologies can be found in Figure 5.10.

Figure 5.10: Response Technologies Checklist

Response Technologies (oil spills only)	**Initials**	**Date & Time Started**	**Date & Time Completed**
Mechanical recovery			
Sorbents			
In-situ burning			
Dispersants/surfactants			
Flood and flush			
Bioremediation/nutrient application			
Gelling/solidifying agents			
No Response			

5.6.1 Dispersants

While physical removal is the most common method for eliminating spilled oil from the environment, mechanical removal may be limited by equipment capability, weather, sea conditions, and spill magnitude. Dispersants can be used to disperse the oil into the water by breaking it into small droplets and suspending them in the water. This process occurs naturally very slowly but can be accelerated by the application of a dispersant.

A dispersant is an agent (surfactant) which reduces the surface tension of the oil and water and allows them to mix more readily. In the presence of sufficient mixing energy supplied by waves, wind, or man-made turbulence, the oil can remain suspended in the water column resisting resurfacing and recoalescing. Dispersants may be effective in area where environmental or logistical considerations do not allow the deployment of cleanup equipment and personnel and may reduce the overall level of effort and manpower requirement and personnel necessary for responding to major spills.

The success of a dispersant operation depends on many variables, including:

- Type of dispersant used,
- Dosage of dispersant,
- Application technique,
- Type and condition of oil,

- Size of area to be treated,
- Weather and water conditions, and
- Time available to complete the operation.

The most important element for successful implementation of a dispersant is time. The moment oil is spilled in the water; it begins to weather causing the oil properties to change. Evaporation removes the lighter ends of the oil leaving the more viscous fraction behind. As its viscosity and other properties change, it becomes less likely that dispersant use will be successful.

Olympic operates in a No Dispersant Use Zone, as defined by Section 9460.4 of the NWACP. Dispersants may only be used in this area if, in the judgment of the Federal On-Scene Coordinator (FOSC), they are required to prevent or substantially reduce a hazard to human life. If the FOSC determine that dispersant application is necessary, the tools in the procedures and tools outlined in Section 9460.4 of the NWACP will be utilized.

As a Marine Preservation Association (MPA) member that has signed MSRC's Service Agreement and its Dispersant Addendum, BP has access to the MSRC Dispersant Program. See Appendix E of MSRC's Primary Response Contractor (PRC) Application for details on types of dispersant available, locations of dispersant stockpiles that can be accessed and description of operational support and application methods.

Refer to Section 4610 of the NWACP for dispersant use policies and procedures. The NWACP can be found at the following website: www.rrt10nwac.com/NWACP.

To apply for dispersant approval, use the FOSC Dispersant Authorization Checklist in Section 9406 of the NWACP.

Please note that there is a No Dispersant Use Zone in marine waters that are both less than three nautical miles from the coastline and less than or equal to 10 fathoms (60 feet) in depth; in marine waters south of a line drawn between Point Wilson (48º 08' 41" N, 122º45' 19" W) and Admiralty Head (48º 09' 20" N, 122º 40' 42" W); and in freshwater environments.

5.6.2 In-Situ Burning

It is the policy of the Northwest Area Committee to use, and in certain cases, encourage in-situ burning, provided that requirements specified have been met. A primary consideration in the decision to burn is the protection and safety of human life. The authority to approve a burn rests with the Unified Command (UC), who must determine that an application to burn conforms to the guidelines in the NWACP. The decision to burn or not burn must be made expeditiously.

Pre-approval areas are areas more than three miles from significant population centers (100 people per square mile). All other areas will be considered on a case-by-case basis. Monitoring and sampling will be conducted where there is the potential for people to be exposed to the smoke. As general guidance, people should not be exposed to small particles (PM-10) in concentrations that exceed 150 micrograms per cubic meter averaged over 24 hours.

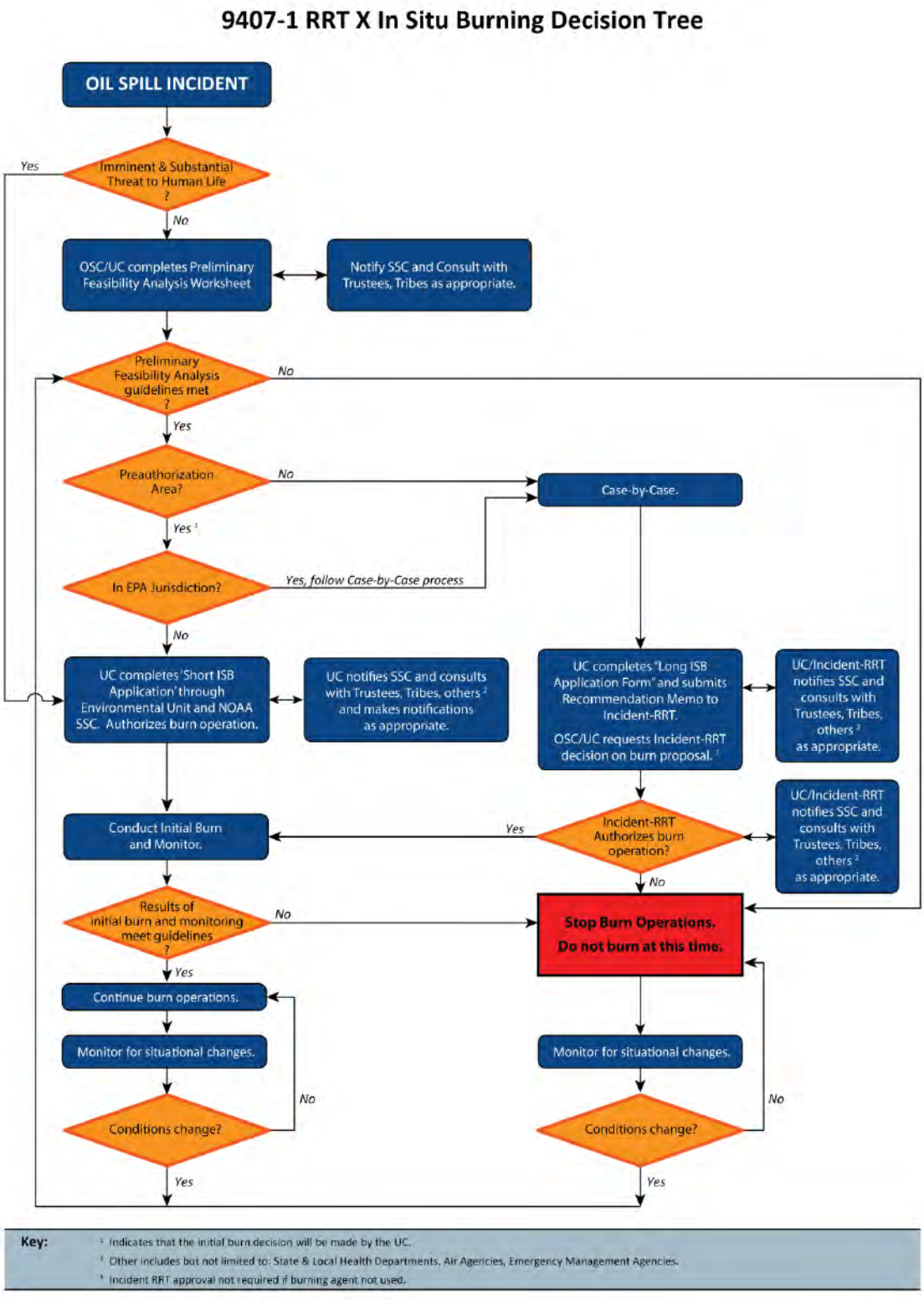
Authorization procedures will differ depending upon whether the spill location is in a pre-approval area or is decided on a case-by-case basis. Regardless of location, the UC directs actions that will provide for maximum environmental protection while ensuring human safety. Authorization to use in situ burning rests with the UC. Figure 5.11 summarizes the process for making a preliminary burn decision.

While no geographic areas have been excluded from the consideration to use in-situ burning, it is very unlikely that it would be approved in a heavily populated area such as inner Puget Sound or on the Columbia River near Portland because of the increased potential for exposing people to high levels of particulates. However, even in highly populated areas, burning may still be approved in unique circumstances, especially when the volatiles from the unburned oil pose a serious threat to human health.

To apply for in-situ burning approval, see Sections 4617 and 9407 of the NWACP.

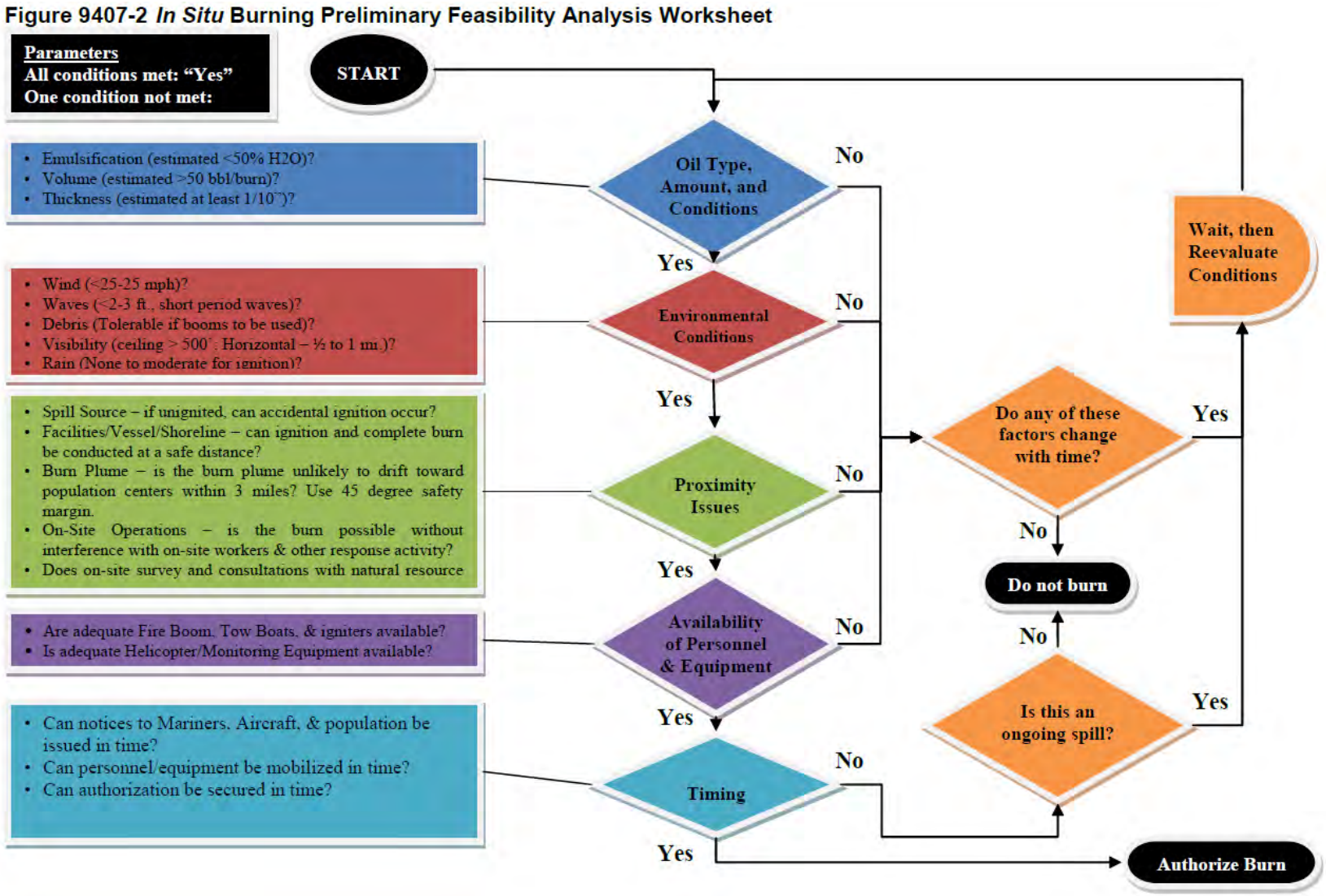
The application process begins with a preliminary feasibility analysis (Figure 5.12). If the analysis concludes that in-situ burning may be feasible, the application form (Section 9407 of NWACP) should be completed. Note that the application form must be updated for each new burn scenario proposed. It is important to note that even if the feasibility analysis fails to show that in-situ burning is appropriate at one point in time (i.e., a “NO” answer), changes in environmental or other factors may make in-situ burning a feasible option at a later time.

Figure 5.11: In-Situ Burn Decision Tree*



*Northwest Area Contingency Plan (Section 9407)

Figure 5.12: Preliminary Feasibility Analysis for In Situ Burn*



*Northwest Area Contingency Plan (Section 9407)

5.6.3 Bioremediation

The use of bioremediation in open water is an unproven technology that currently shows little or no promise of removing significant quantities of oil from the surface of the water prior to shoreline impact or natural dispersion. Bioremediation by nutrient enhancement or seeding of biodegrading organisms is therefore not allowed on the surface of open water.

Seeding of exotic organisms for pollution response is prohibited in Response Region Team. This is due to unproven efficacy of such procedures and the unknown ecological effects resulting from the implementation of such.

Bioremediation is an effective technique for the encouragement of oil biodegradation on some contaminated shorelines. Bioremediation should be used as the primary treatment only when oil concentration are low (less than 15 grams of oil for every kilogram of sediment) and conventional forms of cleanup (heavy equipment use or manual cleaning) are likely to do more damage than good. Bioremediation should be considered as a polishing technique after gross contamination is removed by conventional means.

The use of bioremediation for oil spill cleanup will be allowed only on a case-by-case basis. The Bioremediation Checklist in Figure 5.13 can be used to present to UC if bioremediation is a viable option.

Figure 5.13: Bioremediation Checklist

Bioremediation Checklist	
Spill Data/Incident Information	
Cause (specific):	
Date/Time:	
Location:	
Volume and Type of Release (cont., intermittent):	
Potential Volume to be Released:	
Confidence in Data (high, medium, low):	
Characteristic of Spilled Oil	
Oil Type/Name:	
Specific Gravity:	Flash Point:
Pour Point:	Viscosity:
% Aromatics:	% Saturates:
% Asphaltenes:	
Weather and Water Conditions/Forecast (48-Hr)	
Water Temp:	Air Temp:
Current Info:	Wind Speed:
Salinity:	Wind Direction:
Water Depth:	Sea State:
Tide Info:	
Comments:	

Bioremediation Checklist			
	Product 1	**Product 2**	**Product 3**
Name			
Manufacturer			
USEPA Listed			
State Licensed			
Stockpile Location			
Point of Contact			
When Available			
Amount Available			
Amount Needed			
Amount on Hand			
Toxicity			
Type (concentrate/mix)			
Physical Reactivity			
Applicability on Oil			
Efficiency (% projected)			
Application Means			
Positive Dosage Control			
Dosage Rate Settings			
Dosage Charts Available			
Bioremediation Application Information/Evaluation:			
Proposed Bioremediation Application Plan:			

5.7 Decanting

During spill response operations, mechanical recovery of oil is often restricted by a number of factors, including the recovery system's oil/water recovery rate, the type of recovery system employed and the amount of tank space available on the recovery unit to hold recovered oil/water mixtures. In addition, the longer oil remains on or in the water, the more it mixes to form an emulsified mousse or highly mixed oil/water liquid, which sometimes contains as much as 70% water and 30% oil, thus consuming significantly more storage space. Decanting is the process of draining off recovered water from portable tanks, internal tanks, collections wells or other storage containers to increase the available storage capacity of recovered oil. When decanting is conducted properly most of the petroleum can be removed from the water.

5.7.1 Pre-Approved Oils

Pre-approval for on water decanting is authorized when pumping recovered oil and water ashore is not practical during the first 24 hours after initial spill discovery. Decanting authorization is granted for the oil products listed below.

- All crude oils;
- Vacuum gas oils;
- Atmospheric gas oils;
- Recycle oils not containing distillates;
- Bunker fuels;
- No. 6 fuel oils;
- Cutter stocks; and
- Coker gas oils.

Decanting of the listed oils is pre-approved if the following conditions are met:

- Pre-Approval is for the first 24 hours after spill discovery. Decanting requests for all the remaining operational periods will need to be completed and submitted to UC. The Responsible Party must fill out the NWACP decanting request and seek UC approval prior to any additional decanting approvals from the second operational period on;
- The Incident Commander must be notified within one hour of decanting being initiated and must then immediately notify the UC;
- The Responsible Party assures the UC that they are quickly obtaining adequate oil storage and skimming capacity within the first 24 hours and the responding PRCs are expeditiously getting sufficient storage and skimming capacity on site to alleviate the need for prolonged decanting.

Please use the Decanting Authorization Form Figure 5.14 for criteria that must be met prior to decanting for pre-approved oils.

Shore-side container decanting (i.e., vacuum truck, portable tanks, etc.) is not authorized for Pre-approval under this policy. Decanting in areas where vacuum trucks, portable tanks, or other collection systems are used for shore cleanup will be subject to filling out the decanting form in the NWACP prior to authorization and must comply with the same rules as vessels.

5.7.2 Oils Requiring Approval

During a response, when decanting has not been pre-approved for lighter oils, which are not listed above, it will be necessary for response contractors or the responsible party to request from the UC written authority to decant while recovering oil so that response operations do not cease or become impaired. The UC will consider each request for decanting of lighter oils on a case-by-case basis

Other activities related to possible oil discharges associated with an oil spill event such as actions to save a vessel or protect human life which may include such actions as pumping bilges on a sinking vessel are not covered by this policy.

Please use the Decanting Authorization Form Figure 5.14 for oils that require approval by UC.

Figure 5.14: Decanting Authorization Form

Decision Memo

Decanting Approval Plan

Name of Spill Incident:		Name of Requester:	
Federally Defined Response Area:		Product Spilled:	
Effective Date(s) of Approval:		Current Storage Capacity on Site:	

The Federal and State On-Scene Coordinators (OSCs), under the authority of Revised Code of Washington (RCW) 90.56.320(l) and Washington Administrative Code (WAC) 173-201A-110 (in Washington) or Oregon Revised Statutes (ORS) 468B.305 (in Oregon), hereby approve the use of decanting as a means of expediting the recovery of oil during the above mentioned spill clean-up operation. The following approval provides authority to conduct decanting of oil so that response operations do not cease or become impaired. Federal On-Scene Coordinator (FOSC) authorization is required in all cases, and State On-Scene Coordinator (SOSC) authorization is required for decanting within state waters. The OSC should acknowledge that recovery operations enhanced by decanting will actually reduce the overall quantity of pollutants in a more timely and effective manner to facilitate cleanup operations.

The following criteria should be followed in order for decanting to proceed in an efficient manner:

1. All decanting should be done in a designated “response area” within a collection area, vessel collection well, recovery belt, weir area, or directly in front of a recovery system.
2. Vessels employing sweep booms with recovery pumps in the apex of the boom should decant forward of the recovery pump.
3. All vessels, motor vehicles and other equipment not equipped with an oil/water separator would allow retention time for oil held in internal or portable tanks before decanting commences.
4. A containment boom must / need not (circle one) be deployed around the collection area to minimize loss of the decanted oil or entrainment.
5. Visual monitoring of the decanting area shall be maintained so that discharge of oil in the decanted water is detected promptly.
6. Tanks used for decanting will be tested prior to use to ensure there are no contaminates from previous activities and that the water is safe to discharge back into the environment.
7. Settling times for oil water separation on board skimmers is estimated to be _____.
8. Additional conditions:

Approval: (check one)	Yes	No	
Environmental Unit (Planning)			
FOSC			
SOSC			
Reason for disapproval:			

5.8 Decontamination Plan

Incident Name:		Plan Location:	
Effective Date of Plan:		Effective Time Period of Plan:	
Spill Location:		Plan Prepared By:	

1. Decontamination Zones:

   Work areas will be divided into three zones;

   - o Clean Zone (Cold Zone)
   - o Contamination, Reduction Zone (Warm Zone)
   - o Exclusion Zone (Hot Zone)

   These zones are to be identified at each work area by signs and/or barrier tape or other means. Decontamination is performed in the Contamination Reduction Zone. Each time cleanup workers exit the Exclusion Zone they must perform decontamination procedures.

   Crews are available to assist in decontamination procedures as needed. The crews must wear appropriate PPE. The crews are responsible for packaging and labeling of contaminated PPE.

2. Decontamination Stations:

   Decontamination is performed at a series of stations within the Contamination Reduction Zone. The floor of each station is covered with polyvinyl chloride (PVC) sheets to prevent contamination of the soil. Dikes are installed under these sheets to prevent contaminated runoff from impacting soil.

Maximum Measures for Level C Decontamination

(See Figure 5.15)

STATION 1:	Segregated Equipment Drop	1. Deposit equipment used on site (tools, sampling devices and container, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool down station may be set up within this area.
STATION 2:	Boot Cover and Glove Wash	2. Scrub outer boot cover and gloves with decontamination solution or detergent and water
STATION 3:	Boot Cover and Glove Rinse	3. Rinse off decontamination solution from Station 2 using copious amounts of water.
STATION 4:	Tape Removal	4. Remove tape around boots and gloves and deposit in container with plastic liner.
STATION 5:	Boot Cover Removal	5. Remove boot covers and deposit in containers with plastic liner.
STATION 6:	Outer Glove Removal	6. Remove outer gloves and deposit in container with plastic liner.
STATION 7:	Suit and Boot Wash	7. Wash splash suit, gloves, and safety boots. Scrub with long-handled scrub brush and decontamination solution.
STATION 8:	Suit and Boot, and Glove Rinse	8. Rinse off decontamination solution using water. Repeat as many times as necessary.
STATION 9:	Canister or Mask Change	9. If worker leaves exclusion zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot covers donned, and joints taped, worker returns to duty.

Maximum Measures for Level C Decontamination

(See Figure 5.15)

STATION 10:	Safety Boot Removal	10. Remove safety boots and deposit in container with plastic liner.
STATION 11:	Splash Suit Removal	11. With assistance of helper, remove splash suit. Deposit in container with plastic liner.
STATION 12:	Inner Glove Rinse	12. Wash inner gloves with decontamination solution.
STATION 13:	Inner Glove Wash	13. Rinse inner gloves with water.
STATION 14:	Face Piece Removal	14. Remove face piece. Deposit in container with plastic liner. Avoid touching face with fingers.
STATION 15:	Inner Glove Removal	15. Remove inner gloves and deposit in lined container.
STATION 16:	Inner Clothing Removal	16. Remove clothing soaked with perspiration and place in lined container. Do not wear inner clothing off-site since there is a possibility that small amounts of contaminants might have been transferred in removing the fully-encapsulating suit.
STATION 17:	Field Wash	17. Shower if highly toxic, skin-corrosive or skin-absorbable materials are known or suspected to be present. Wash hands and face if shower is not available.
STATION 18:	Redress	18. Put on clean clothes.

Minimum Measures for Level C Decontamination

(See Figure 5.16)

STATION 1: Equipment Drop	1. Deposit equipment used on site (tools, sampling devices and container, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool down station may be set up within this area.
STATION 2: Outer Garment, Boots, and Gloves Wash and Rinse	2. Scrub outer boots, outer gloves and splash suit with decontamination solution or detergent and water. Rinse off using copious amounts of water.
STATION 3: Outer Boot and Glove Removal	3. Remove outer boots and gloves. Deposit in container with plastic liner.
STATION 4: Canister or Mask Change	4. If worker leaves exclusive zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot covers donned, joints taped, and worker returns to duty.
STATION 5: Boot, Gloves and Outer Garment Removal	5. Boots, chemical-resistant splash suit, inner gloves removed and deposited in separate containers lined with plastic.
STATION 6: Face Piece Removal	6. Face piece is removed. Avoid touching face with fingers. Face piece deposited on plastic sheet.
STATION 7: Field Wash	7. Hands and face are thoroughly washed. Shower as soon as possible.

Figure 5.15: Decontamination Procedures: Maximum Decontamination Layout

Level C Protection

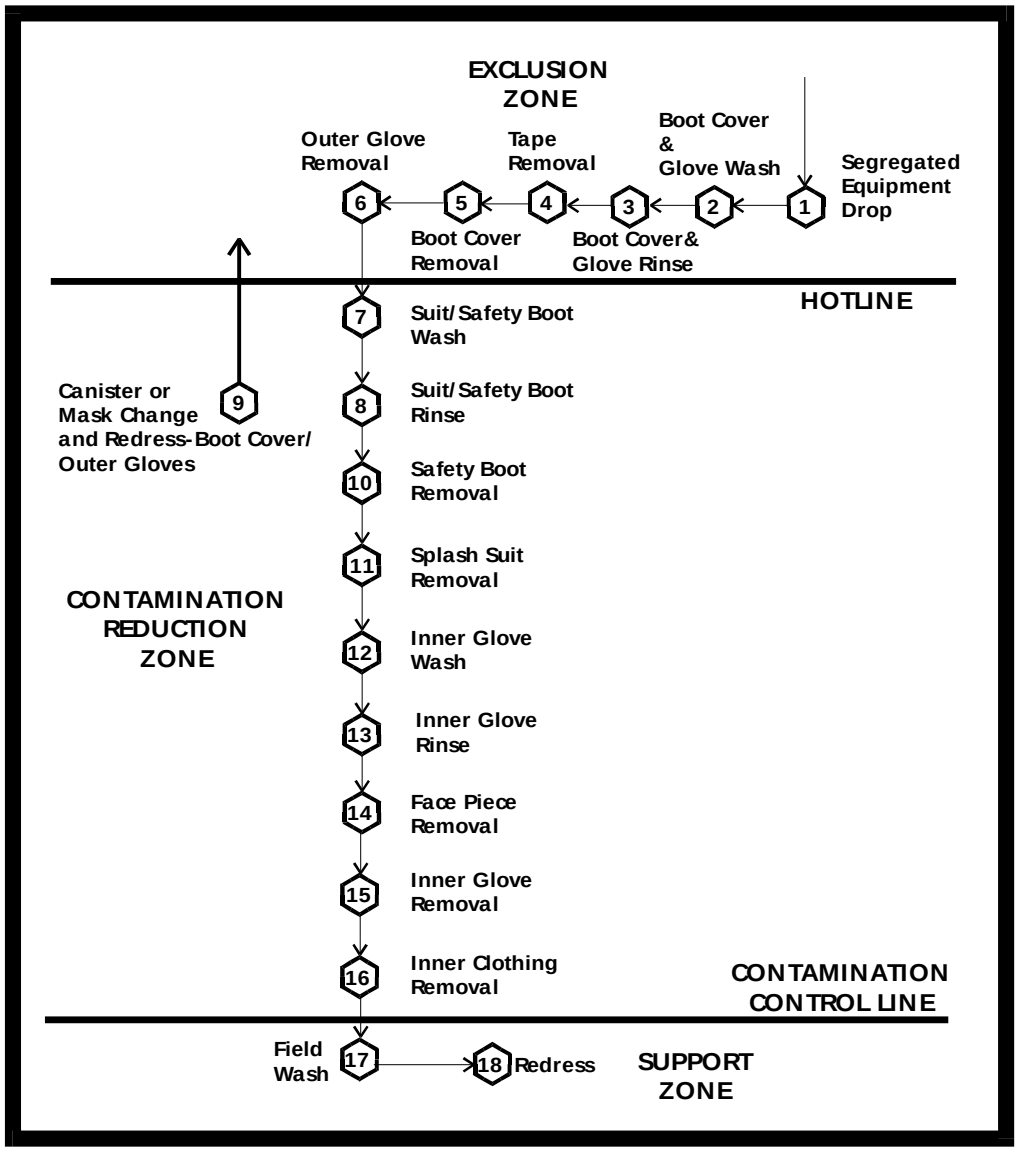
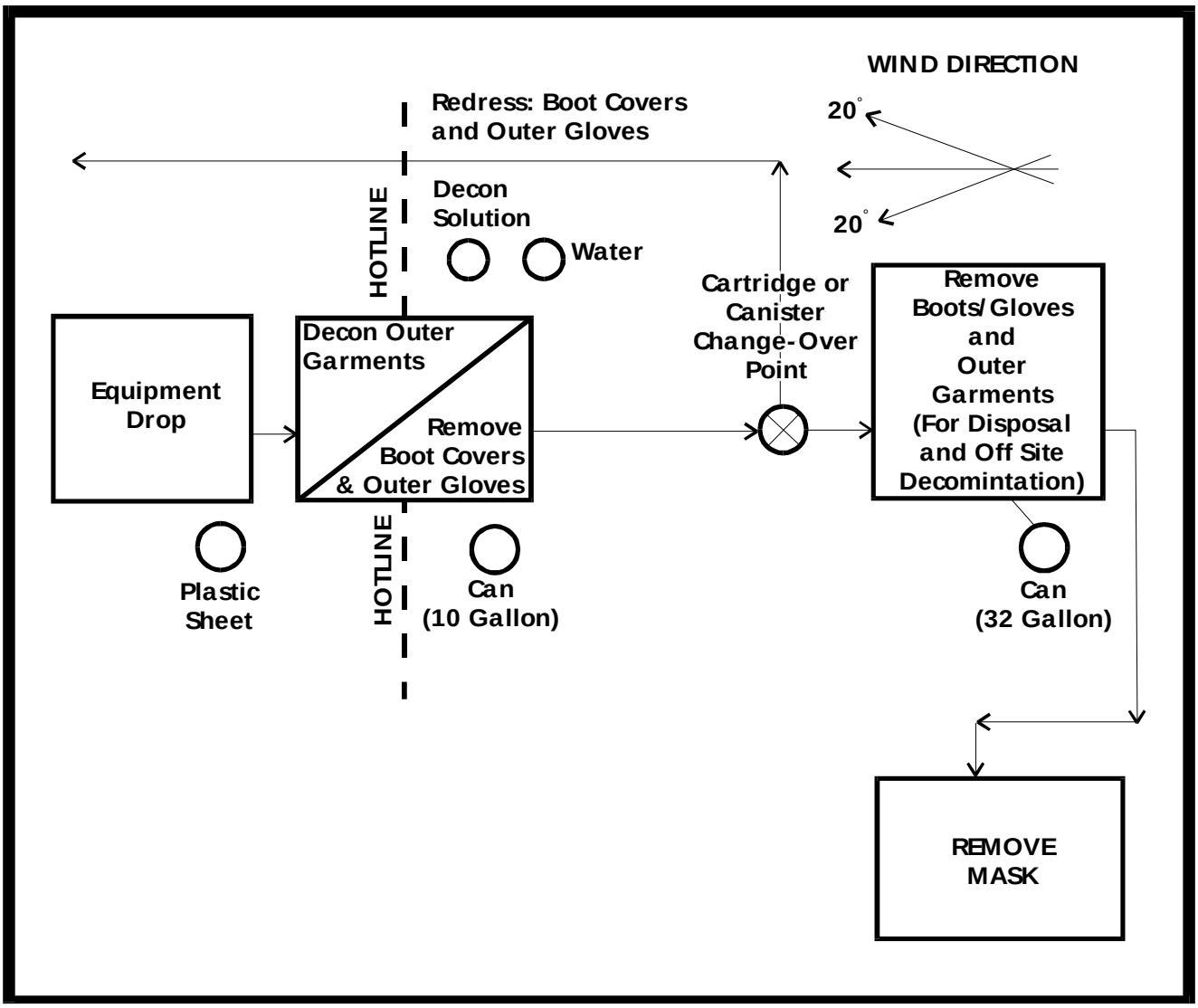


Figure 5.16: Decontamination Procedures: Minimum Decontamination Layout

Level C Protection



SECTION 6 SENSITIVE AREAS / RESPONSE TACTICS

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6.1 Introduction

In the event of an oil spill, it may be necessary to protect nearby sensitive areas if it appears that local containment and recovery efforts will not be sufficient to control the entire spill. A critical initial step in protecting sensitive resources is identifying the presence and types of resources in the likely path of the oil. Once these resources have been identified, decisions need to be made as to the proper protection techniques for each locale and the priority for application of resources to each sensitive site. Figure 6.1 presents an implementation sequence for protection of sensitive areas.

This section describes in general terms different ecologically and culturally/economically sensitive areas. Specific sensitive resources which may be impacted by an off-site spill from the Olympic Pipeline are provided in the Northwest Area Committee Geographic Response Plans (GRPs). Methods for protecting these sensitive resources are also discussed in Appendix F and discussed in the Northwest Area Contingency Plan (NWACP).

6.2 Types of Sensitive Resources

Key resources requiring protection from oil spills include fish and wildlife species, sensitive habitats, and recreationally, culturally, and economically important areas. Examples of sensitive species include shore birds and other water fowl, seals and other marine mammals, shellfish, and commercially important finfish, as well as species with limited distribution or populations. Sensitive habitats range from protected bays with marshes and tidal flats to open coast areas used as marine mammal or bird breeding sites. Areas of more direct importance to humans include native lands, waterfront parks and recreational areas, as well as harbors and anchorages. These sensitive resources are discussed below and in Appendix F with a presentation of National Oceanic and Atmospheric Administration's (NOAA) Environmental Sensitivity Index (ESI) classification scheme.

6.2.1 General Sensitive Resources

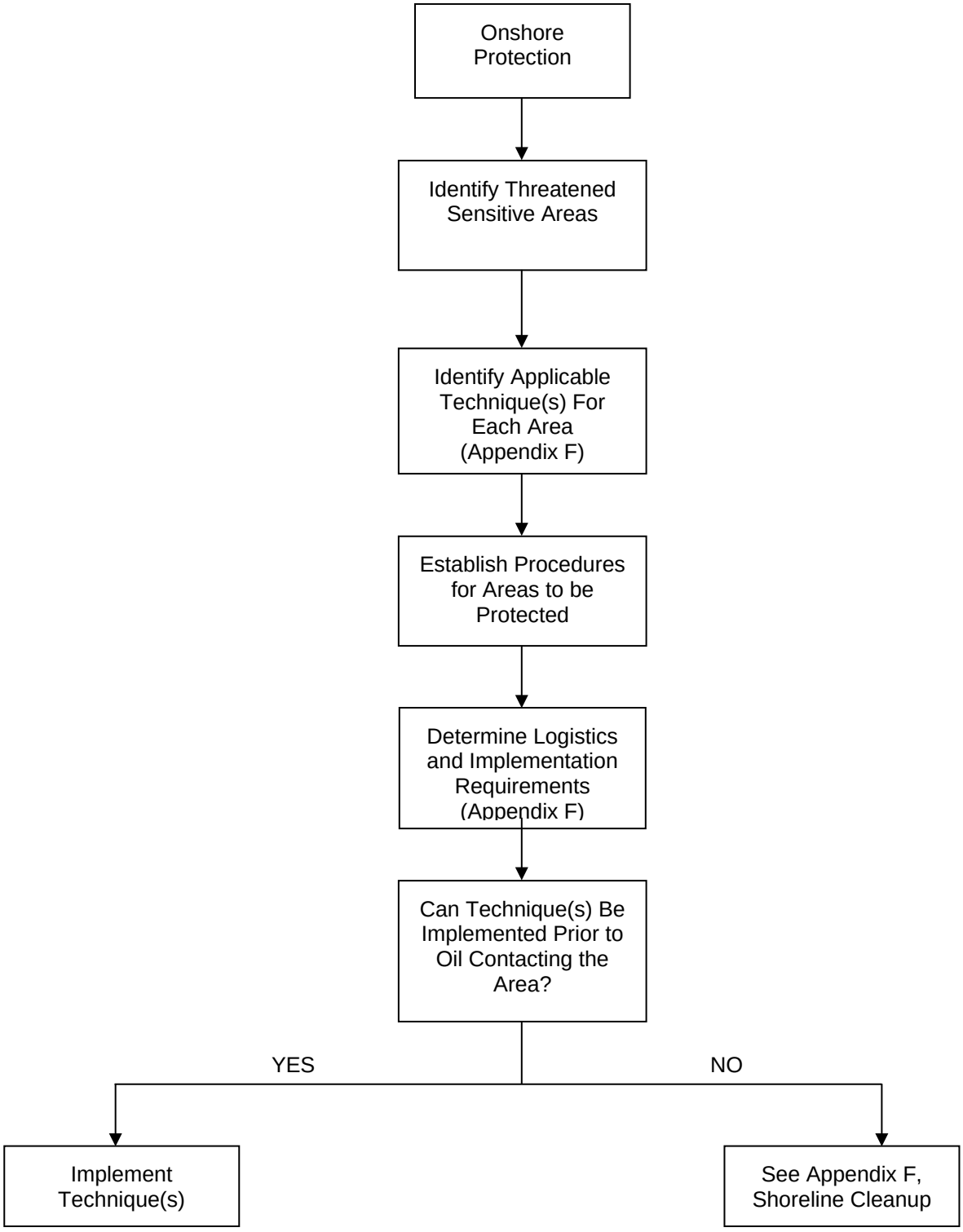
For shoreline areas that are not associated with a particular sensitivity, a general sensitivity ranking system known as the ESI has been adopted by NOAA and can be used for prioritization. The ESI system ranks various shoreline types in order of their increasing potential for long-term persistence and biological damage (i.e., an ESI ranking of 2 has a higher overall sensitivity than a ranking of 1). A summary of shoreline types and associated rankings is provided in Appendix F.

Protection strategies should also consider the impact of oil on the general intertidal biological community. The level of impact is often dependent on the type of shoreline as different shoreline/substrate types support different intertidal communities. Shore types affects oil deposition within the intertidal area as well as oil persistence. Description of the most common types of shorelines, their associated biological communities, and the potential impacts of oil spills are provided in Appendix F. Shoreline types indicative of the area may be found in the NWACP.

6.2.2 Environmental Factors Effecting Response

Seasonal variations in precipitation, temperature, wind, tides and hours of available daylight will affect response efforts. Precipitation, wind and temperature will all affect the behavior of the spilled product as well as the function of recovery equipment and crews. The lunar variation in the tide cycles depending on the location of the release will dictate many aspects of shoreline cleanup and protection efforts. Tide information needs to be immediately accessible to the response team for spill trajectory analysis and deployment planning. Annual variation in the hours of daylight in this region can extend the working day to greater than 15 hours in the summer or reduce the day to less than 8 hours in the winter. The winter months of December through March combine the lowest temperatures, highest winds, likelihood of precipitation with the shortest daylight working hours of the year. All factors will challenge response efforts and make response planning more important.

Figure 6.1: Sensitive Area Protection Implementation Sequence



6.3 Wildlife Response Plan

Wildlife Response Service Provider		
FOCUS Wildlife	Chris Battaglia	(800) 578-3048
Primary Response Contractor		
National Response Corporation Environmental Services Inc.	Sophie Todd	(800) 337-7455
Marine Mammal Monitoring and Deterrence		
National Oceanic and Atmospheric Administration (NOAA)	Lynn Barre	(206) 718-3807
Washington Department of Fish and Wildlife (WDFW)	Oil Spill Team	(360) 534-8233
IOSA	Patrick Kirby	(360) 378-7454
Trustee Agency Resources		
Washington Dept. of Fish and Wildlife Oil Spill Team	Duty Officer pager	(360) 534-8233
Washington Dept. of Fish and Wildlife, State Veterinarian	Kristin Mansfield, Kristin.mansfield@dfw.wa.gov	(509) 998-2023
Oregon Dept. of Fish and Wildlife, State Veterinarian	Colin Gillin, Colin.m.gillin@state.or.us	(541) 757-5232
US Fish and Wildlife Service Permit Biologist	Leslie Henry	(503) 872-2715
NOAA West Coast Regional Stranding Coordinator	Kristin Wilkinson, Kristin.wilkinson@noaa.gov	(206) 526-4747
NOAA National Stranding and Emergency Response Coordinator	Sarah Wilkin, sarah.wilkin@noaa.gov	(301) 427-8402

6.4 Wildlife Response Purpose and Organization

The primary goals of the Wildlife Response Plan are to ensure that oiled wildlife response:

- Is conducted in a safe and effective manner for responders, animals, and the public.
- Is fully integrated into the overall spill response and ICS structure.
- Provides resources in a timely manner to minimize the impacts of an oil spill to wildlife.

- Provides best achievable capture and care for spill impacted wildlife based on the specific objectives of the Unified Command for the incident.

Additionally, the plan is designed to:

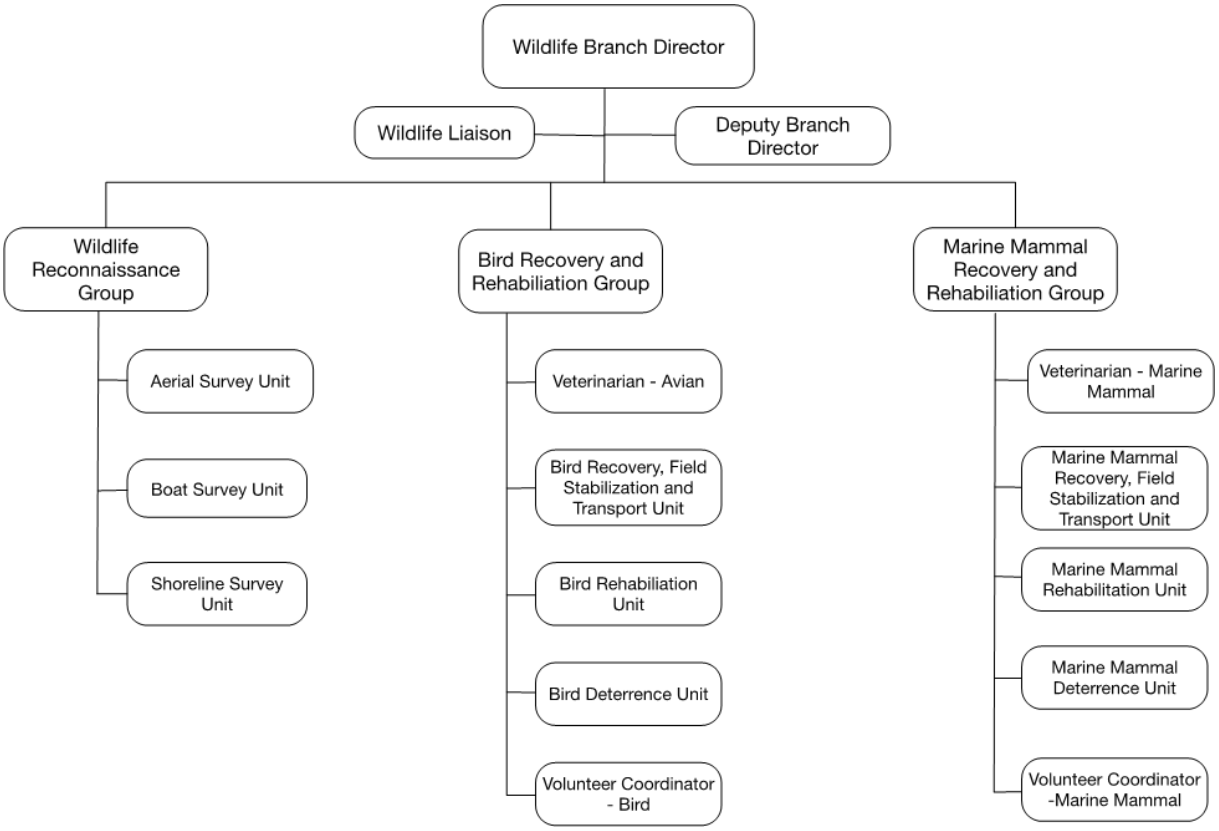
- Meet all requirements of WAC 173-182-540, and WAC 220-450-100 Planning standards for wildlife response and WDFW rehabilitation requirements.
- Provide clear details on the primary response contractor and wildlife response service provider resources required; including personnel, equipment and facilities under contract with Olympic to be available to carry out the incident specific plan that is developed by the Wildlife Branch and approved by the Unified Command.
- Outline tactical options that the plan holder's contractors are skilled in executing and that can be used in developing the incident specific plan.

6.4.1 Plan Organization

The Plan is organized to be consistent with both the Olympic Facility Response Plan (FRP) and the NWACP in general, and the sections applying to wildlife specifically. These include Sections 9310 - Northwest Wildlife Response Plan, 9311 NW Area Wildlife Deterrence Resources, 9312 Oil Spill Marine Mammal Resources, 9313 Wildlife Branch Position Descriptions, and 9314 Potential Mobile Bird Rehabilitation Unit Deployment Locations in Coastal Counties.

6.5 Wildlife Response Organization

This plan is designed to be easily integrated into and consistent with the NWACP and utilizes the same organizational structure for Wildlife Response as laid out in Section 9310 v.21. It is not meant to duplicate or provide detailed information on all aspects of oiled wildlife response in an incident. It is intended to provide a high-level overview and refer to existing documents recognized and utilized by NW Area Committee and response community for more detailed information. The Wildlife Branch operates within the Operations Section with close cooperation and communication with the Environmental Unit within the Planning Section. Wildlife Response is divided into three groups under the direction of and reporting to the Wildlife Branch Director. As shown in the Wildlife Branch Organizational Chart below (following the NW Wildlife Response Plan) the groups are: 1. Wildlife Reconnaissance, 2. Bird Recovery and Rehabilitation, and 3. Marine Mammal Recovery and Rehabilitation. Each of these groups have a number of responsibilities and may be broken into a number of units to address the unique needs of each response.



The Wildlife Branch will work utilizing oiled wildlife response protocols that are recognized as best practice and have been utilized and improved in hundreds of responses throughout the world over the last 30 years. These protocols are consistent with the NWACP and are repeatedly referenced within it. They are also consistent with the National Wildlife Rehabilitators Association and International Wildlife Rehabilitation Council's Minimum Standards for Wildlife Rehabilitation (4th edition 2012). They include NOAA's Pinniped and Cetacean Oil Spill Response Guidelines (2015), Oil Spill Emergency Response Killer Whale – Hazing Implementation Plan (2014) and Supporting Information for the Killer Whale Section of the Northwest Wildlife, and FOCUS Wildlife Protocols for the Care of Oil Impacted Wildlife.

6.6 Initial Response Actions

Under the NWACP, the Wildlife Branch is activated when an oil spill is in the vicinity of wildlife resources or has a trajectory that puts them at risk. Initial activation may be only a Wildlife Branch Director if the risk is thought to be low at the outset. The policy of the NW Area Committee is that USFWS will fill the role of Director and Deputy Director of the Wildlife Branch unless they delegate those roles to other parties. As stated in the NW Area Wildlife Plan, "unless otherwise indicated by USFWS, the Wildlife Branch Director position will be delegated to the WDFW for spills that occur within the legal boundaries of Washington State. FOCUS Wildlife, an authorized Wildlife Response Service Provider (WRSP) recognized by Washington Department of Ecology can provide staff experienced as Director and Deputy Director of the Wildlife Branch. Based on the staffing policy of the NWACP, WRSP personnel could take the role of deputy Wildlife Branch Director working alongside a branch director from WDFW. Once a Wildlife Branch Director is in place, they will determine the specific immediate priorities. The following actions are typical initial priorities in oiled wildlife response.

6.6.1 Determine Current Known Impacts to Wildlife

Initial data collation efforts will include actively collecting and evaluating any current reports of oiled wildlife.

In some incidents the initial responders, members of the public, or local agencies may see or even collect some oiled wildlife before the Wildlife Branch is activated. An initial decision will be made on how to respond to both reports and animals in hand. The state of Washington has an oiled wildlife hotline 800-22-BIRDS tied to a voice mail system. Plan holders may also notify the Washington Emergency Management Division prior to an ICP being established at (800) 258-5990 for generic reporting of oiled wildlife. Activate Focus Wildlife to provide reputable end-to-end oiled wildlife response solutions at (800) 578-3048. Once activated, this can be quickly supported by live personnel to provide near real time reports of oiled animals to wildlife field personnel.

6.6.2 Development of Initial Wildlife Reconnaissance and Monitoring Plan

An early priority will be acquiring real time information on species and number of animals in the response area. This should include species activities such as feeding, breeding, nesting and daily movements throughout the area if possible, but the highest priority will be to quickly gain a broad overview to help in the planning and prioritization of initial deterrence and recovery efforts. Aerial surveys will provide a good general picture - especially if the observer is experienced in identifying wildlife from the air are considered best practice. If dedicated aerial wildlife resources are not available, a seat on an overflight conducting spill trajectory observations may be observed. Spill surveillance guidelines are provided as Section 2.3.

6.6.3 Evaluations of Wildlife Deterrence Options

In many responses, there may be opportunities to keep wildlife from becoming oiled. Keeping animals away from oil is always a better alternative than recovery and rehabilitation. A number of factors will determine the likely success of deterrence including species, species' activities, topography, places of refuge, and availability of equipment and personnel. While the Wildlife Deterrence Units as defined in the NW Wildlife Response Plan will probably not be immediately up and running, much of this information can be gathered and prioritized during initial assessment/reconnaissance and can be evaluated quickly by the Wildlife Branch Director or Trustee Agency personnel in the Environmental Unit. Even if it is determined that there are no viable deterrence strategies initially available, there should be continuous evaluation throughout the response to ensure opportunities to prevent oiling are not missed. Details on avian deterrence techniques can be found in Bird Hazing Manual: Techniques and Strategies for Dispersing Birds from Spill Sites, Gorenzel and Salmon, University of California Agriculture and Natural Resources Publication 21638. A link to the downloadable pdf can be found at https://anrcatalog.ucanr.edu/pdf/21638.pdf. The contracted WRSP (insert name) and PRC (insert name) maintains wildlife deterrence resources such as flags, effigies, and canons. Staging locations and equipment details can be found on the WRRL and in the state approved applications.

6.6.4 Evaluation of the Use of Preemptive Capture Options

Preemptive capture is another method for keeping animals from becoming oiled. It involves capture and either holding animals in captivity or translocated outside of the projected response area until the risk of oiling is gone. As described in the NW Wildlife Response Plan, preemptive capture may be considered in cases where there are very high priority species that can be safely captured and maintained in captivity or if translocated will not immediately return to the site of the response

6.6.5 Evaluate Potential for Impacts Across State Borders

If the possibility of impacts to wildlife across state borders (including wildlife oiled on one side that then travels to the other side) a contact should be implemented to determine how best to ensure an efficient response while meeting expectation of both the trustee agencies of both states. Selected contacts for the Oregon Depart of Wildlife are shown in the contact table. If there is a recognized threat, there may already be representatives present in the Environmental Unit.

6.6.6 Draft Initial Wildlife Response Plan for Submission to Planning Section

An initial response plan will most likely be drafted by the Wildlife Branch Director based on initial information from the callout or notification if animals have already been reported to be oiled or in the area. Ideally this person will be familiar with the NWACP - specifically Section 9310 which provides a wealth of information

to assist in development of the initial plan.

This initial plan should include resources needed for the initial assessment, deterrence, recovery of oiled wildlife, transport, field stabilization and primary care based on the current needs and, if possible, the anticipated needs of the first 24-72 hours. It should include all wildlife taxa and species for all Wildlife Branch activities and should be based on a real-time assessment of needed and available resources. Specifically, it should:

- Identify site(s) for staging of Deterrence, Recovery, Transport and if appropriate Field Stabilization.
- Provide for activation of initial personnel and equipment resources.
- Gather initial resources at risk information through the Environmental Unit, ICS form 232 or directly from Chapter 6 of the appropriate GRP. Links to specific Washington Department of Ecology GRPs can be found at https://www.oilspills101.wa.gov.
- Identify site(s) for Wildlife Rehabilitation Facilities.
- List initial prioritized tasks expected to be carried out in the operating period.
- Provide a Wildlife Branch Organization Chart (ICS 203).
- Include a Wildlife Branch-specific safety plan.
- The Wildlife Response plan must be evaluated on a regular basis and updated throughout the response to reflect the changing information, circumstances and priorities as the response evolves.

6.7 Considerations for Oiled Marine Mammals

Seals, otters, and other marine mammals may be coated with oil if spills occur. Only skilled persons with appropriate training in animal handling should attempt to capture or clean marine mammals that are coated with oil. These animals can kill or inflict serious injury to humans.

These animals are likely to be under stress. Hence, improper handling could increase their mortality rate. Responsibility to ensure the proper capture, transport, cleaning, rehabilitation, and release of oiled marine mammals rests with the Olympic and its contractors. The procedures to be followed during an actual oil spill incident will be subject to determination and modification at the discretion of the responsible government agencies. They will, however, consist of the following basic components:

1. If the responsible government agencies decide to conduct offshore capture operations, they will be carried out by teams of State Fish and Wildlife and USFWS personnel. These agencies will also direct and participate in onshore capture operations; however, during onshore capture operations they may be accompanied by non-agency personnel. In either case, actual capture operations (i.e., the handling of animals) will be carried out by experienced agency personnel so as to ensure compliance with all applicable federal and state laws and regulations, as well as the safety of the animals and those engaged in capture operations.
2. It may be necessary to transport mammals a number of times during the course of response operations. As with all procedures involving mammals care, transport operations will be supervised by experienced personnel to ensure that operations are conducted in a fashion which minimizes the amount of stress experienced by the animals. Vehicles, aircraft, and/or vessels can be utilized for transport operations. The choice of transportation mode will depend on the availability of the mode, access to the capture site, access to the collection station, distance to be traveled, access to a cleaning/rehabilitation center, the health of the animals, and cost.
3. The cleaning and rehabilitation will be supervised by responsible government agencies and conducted by personnel trained and permitted in wildlife rehabilitation. For each animal, sedation, washing, rinsing, and sedation reversal activities will be necessary. A cleaning team will generally consist of four people (i.e., one person to hold the animal's head, two people to wash and rinse the animal, and one animal care specialist). In addition, a veterinarian will be present to examine animals upon their arrival at the center, administer drugs and medicine, monitor cleaning operations, and

observe the animals in the hours following cleaning.

4. Cleaned mammals will be held for rehabilitation if, after cleaning, they cannot be released to a temporary holding facility or their natural environment. The goal of rehabilitation will be returned fully recovered, healthy animals to their natural environment as quickly as possible. During rehabilitation, procedures must be carried out in a way which minimizes stress and avoids, to the maximum extent possible, the acclimation or "imprinting" of animals to human beings. If a pup is found during capture operations and cannot be reunited with its mother, it will be considered orphaned. Orphaned pups will require longer term care and more specialized handling. When caring for a pup, the objective will be to mimic the animal's natural environment and behavior as closely as possible.

5. Mammals will be ready for release to their natural environment as soon as the normal physiological state is restored. When an animal appears ready for release, the veterinarian will examine it. If the veterinarian concurs that the animal is ready for release, the responsible government agencies will be notified so that a release "team" can be assembled. Prior to release, an identification tag will be attached to the animal unless it is already wearing one. Also, each animal's file card will be consulted to determine whether the noted area of capture is "free" of oil. If so, the animal will be released at or near the capture point. Animals captured from sites which are still contaminated will be held until these sites are cleaned or relocated to a clean site.

6.7.1 Killer Whale Reconnaissance, Monitoring, and Deterrence

Southern Resident killer whales are listed as endangered both by the state and the federal government. Minimizing any impacts from an oil spill is an extremely high priority. The WAC 173-182-540 (2) b-d regulations list specific requirements for a plan covering area of potential impacts of whales which may include Southern Resident killer whales. It requires the ability to provide reconnaissance and monitoring of whales outside of the immediate spill area, which has been defined by NOAA as within 20-30 miles relative to the spill or spill trajectory. Identification of whales to the level needed to effectively respond requires specialized personnel and the proper equipment. Both boat and air surveys should be anticipated. Section 9310.10.2.4 of the NW Wildlife Plan provides guidance on killer whale response and links to further guidance documents provided by NOAA to the NW Area Committee that detail appropriate personnel and methods. These include Supporting Information for the Killer Whale section of the Northwest Wildlife Response Plan, which provides contact details for organizations able to identify killer whales to ecotype, pod and individual as well as contact details for deterrence equipment stored at NOAA offices in Seattle, and Oil Spill Emergency Killer Whale Hazing Implementation Plan, which provides guidance on methods for deterrence including pre-approved methods in situations where immediate action is necessary. Such pre-approved methods include helicopters, Oikomi pipes and underwater firecrackers (seal bombs). Information on resourcing this equipment is provided in Section 5.1.1 Specialized Equipment Resources Killer Whale Reconnaissance, Monitoring and Deterrence.

6.8 Post Emergency Phase Response Actions

Much of an oiled wildlife response occurs in what can be considered the post emergency phase once the initial plan has been approved, resources are in place, and the range of Wildlife Branch activities appropriate to the incident are taking place. These activities include:

6.8.1 Reconnaissance

Daily reconnaissance activities should be done to identify oiled and unoiled wildlife in the spill response area as well as surrounding areas to identify opportunities for deterrence of unoiled wildlife and recovery of oiled wildlife and document impacts of the oil spill and the response on animals in the region. In addition to normal reconnaissance activities, in some areas there will be the need for monitoring of whales, including Southern Resident killer whales well beyond the immediate operational area of the response. Whale deterrence beyond the area of normal operations may be required to minimize impacts and to increase chances of desired outcomes.

6.8.2 Preventing Secondary Oiling Impacts

Preventing secondary oiling impacts should always be done where possible through deterrence and collection of oiled carcasses that may attract predators and/or scavengers. This should include consistent evaluation of opportunities to keep animals from becoming oiled and effectively execute incident specific appropriate techniques keeping unimpacted animals out of the impacted area.

6.8.3 Documenting Impacts

Wildlife impacts must be documented through reconnaissance and collection and processing of oiled carcasses and of live oiled animals. Wildlife recovery teams should be supervised and deployed in an effective and efficient manner utilizing all available information on wildlife movements and activities and matching that information with appropriate techniques, personnel and equipment. Safety and effectiveness of alternative techniques should be continually evaluated, such as on water capture, night operations and trapping.

6.8.4 Field Stabilization

Decisions on whether to institute stabilization care in the field followed by transport to designated rehabilitation facilities, or simply have recovery personnel transport animals directly, must be made and enacted. Early field stabilization begins to reverse the effects of oiling as quickly as possible. Whenever transport is undertaken, appropriate vehicles to safely transport oiled wildlife to the primary care facility must be used (e.g., climate-controlled enclosed vehicles for oiled birds). The PRC has a stabilization trailer to support this function. Trailer details and staging information can be found in the WRRL.

6.8.5 Rehabilitation Care

Details on taxa-specific rehabilitation techniques are documented in other protocols, but all must accomplish the following:

- Document oil impacts and evaluate physical condition for each individual animal.
- Provide stabilization care to ensure fitness for removing oil.
- Remove oil, all cleaning solution residue, and dry plumage or pelage.
- Restore the condition of oiled animals to promote survival and normal behavior in the wild.
- Evaluate fitness for release, in consultation with trustee agencies determine site of release and place permanent marking as appropriate and permitted.
- Transport to release site and release.

6.8.6 Post-release Studies

In collaboration with trustee agencies, post release study opportunities and priorities, such as radio telemetry or color marking, should be discussed as early in the response as feasible. Even where active post-released studies are ruled out, permanent marking of released wildlife should be done following USFWS and NOAA guidelines.

6.8.7 Demobilization

A plan for demobilization or downscaling of the Wildlife Branch should be begun midway through the response. Due to the nature of the impacts of oiling on different species the Wildlife Branch may last longer than most other areas of the response, continuing until all wildlife has been released from the rehabilitation facility or determined to be un-releasable and transferred to permanent care or euthanized. There should be regular evaluation to ensure that the Wildlife Branch is right sized to meet the current objectives of the Unified Command for the Wildlife Branch.

6.9 Wildlife Response Resources

6.9.1 Personnel Resources for Wildlife Response

Major oil spills can adversely impact wildlife that may be in the vicinity of the spill. Per the NWACP, the Wildlife Branch of the Incident Command System (ICS) will be managed by the United States Fish and Wildlife Service (USFWS), or their designee. Olympic and its contractors will assist under WDFW guidance and in compliance with Washington Administrative Code (WAC) 220-450-210.

Finally, Section 9312 of the NWACP - Marine Mammal Resources lists organizations and personnel that have significant experience and expertise in marine mammal capture, handling, deterrence, transport and husbandry.

6.9.2 Specialized Personnel Resources for Killer Whale Reconnaissance, Monitoring, and Deterrence

Sections 9311 and 9312 of the Northwest Area Plan list a number of resources to provide marine mammal specialist personnel to be utilized in killer whale Reconnaissance, Monitoring and Deterrence. Cascadia Research Collective located centrally in Olympia; Washington can be reached at 360-943-7325. Cascadia Research Collective has extensive experience to provide capable personnel in this area.

6.9.3 Wildlife Equipment and Facilities Resources

Some of the equipment and facility resources needed in oiled wildlife response are very specific to wildlife and some (such as boats and aircraft) are utilized in many areas of the response. Contracts with primary response contractors provide access to a wide range of equipment and supplies including boats, aircraft and personal protection equipment (PPE) that can be utilized for oiled wildlife response. Olympic contracts with FOCUS Wildlife, NRCES, and Marine Spill Response Corporation (MSRC) include the use of their wildlife response equipment. These wildlife equipment stockpiles include specialized equipment for use in recovery and rehabilitation of oiled wildlife. While the equipment has been selected to meet initial needs for birds it can be utilized for a variety of species. A detailed equipment list can be accessed via the Worldwide Response Resource List (WRRL) at www.wrrl.world.

6.9.4 Field Stabilization

Field Stabilization is generally the first step in reversing the effects of oiling and requires space and equipment to evaluate wildlife, provide first aid such as supplemental heat and fluids and hold them safely prior to transport to the wildlife rehabilitation facility.

6.9.5 Mobile Rehabilitation Units (MRU)

Marine Spill Response Corporation (MSRC) and National Response Corporation Environmental Services Inc. (NRCES) jointly maintain Mobile Rehabilitation Units (MRU) and equipment that can be made available within 24 hours of spill notification. The terms of Olympic's cooperative response contracts with MSRC and NRCES can be found in Appendix B.

6.9.6 Specialized Equipment for Killer Whale Reconnaissance, Monitoring, and Deterrence

Olympic in contract with NRCES provides air support that could be used for Wildlife Monitoring and Deterrence. The WRRL also lists Washington Department of Fish and Wildlife's Partenavia P68C/TC, a model which is regularly used by a number of trustees for wildlife surveys.

Deterrence equipment - The three methods for killer whale deterrence that have been pre-approved by NOAA Fisheries in certain circumstances are herding/hazing by helicopter, Oikomi pipes, and underwater firecrackers. A set of Oikomi pipes owned by NOAA are stored at IOSA in Friday Harbor. IOSA's can be contacted through Patrick Kirby 360 378-7454. WDFW has additional pipes stored in Olympia. NOAA has underwater firecrackers and other marine mammal deterrence equipment in Seattle and can be contacted through Lynne Barre at (206) 718-3807.

6.10 Area Description

There are environmentally, economically and culturally important sites in the vicinity of this pipeline. The marine and estuarine waters within the San Juan Islands and Puget Sound are among the most biologically rich and sensitive areas of the State of Washington. A wide diversity of shoreline and marine habitats (estuaries, rocks, reefs, and islands), abundant food resources, and exceptional water quality all contribute to making this area especially valuable to wildlife.

This region contains a number of small to medium-sized seabird nesting colonies, a multitude of marine mammal breeding and resting sites, rearing and feeding habitat for marine fish, and one of the most impressive arrays of marine invertebrates in the world. The region is also a temporary home to many species of marine birds and mammals that are seasonal residents or pass through the area during migration. Flight restriction zones exist in the area to protect sensitive wildlife species. Zones immediately along the pipeline are provided in the NWACP.

The following sections provide an overview of the most vulnerable resources that could be impacted by a spill from the pipeline. This includes detailed maps of key vulnerabilities in the immediate vicinity of the pipeline (Section 6.4). Detailed environmental sensitivity maps for the region that document specific locations of key habitats, species ranges, and socio-economic and cultural resources are available from federal and state agencies.

6.10.1 Marine Mammals

Common species of whales and dolphins found within the area include gray whale, orca, Dall's porpoise and harbor porpoise. The orca, also known as the Southern Resident Killer Whale, is listed as an Endangered Species. In addition, the harbor seal is a permanent resident of the area. Three additional species occur as regular seasonal residents or migrants: the Steller sea lion, California sea lion, and northern elephant seal. This region also supports a large population of river otters which are largely marine in their habits.

The islands, nearshore rocks, and beaches of the region provide pupping and resting sites for harbor seals. The largest concentrations are found in the vicinity of Boundary Bay and Padilla Bay. Other smaller sites are scattered throughout the entire area. Nearshore waters are used as feeding areas by seals, sea lions, gray whales, harbor porpoise, and river otters.

6.10.2 Birds

Many species of marine birds and shorebirds are either residents or seasonal visitors with this area. Much of the seabird nesting is scattered throughout the region on offshore rocks, exposed rocky coasts or on pilings.

Bald eagles and peregrine falcon's nest in the area and are closely associated with the marine ecosystem because of their feeding habits and choice of nesting sites. These birds are either listed as Threatened or Endangered and are therefore of particular concern. This area hosts a large wintering population of bald eagles.

Marbled murrelets are unique among the area's seabirds because they nest inland in old-growth forests yet spend much of their time feeding and resting on marine waters in the nearshore environment. This species is of special concern since it's been shown to be highly vulnerable to oil spills and is listed as a Threatened or Endangered species.

Other species of note in the area include the ancient murrelet, which is unique among seabirds in rearing its chicks entirely at sea and is therefore considered highly vulnerable to oil spills. The common loon and western grebe are listed as species of concern at the state level in Washington.

In addition to supporting a wide variety of resident birds, Puget Sound is recognized as one of the most important waterfowl wintering areas on the Pacific Flyway for waterfowl. This area has been identified as a key component in the North American waterfowl plan.

Bird Colonies

Most of these species follow the coast during their southward movement; many species winter around these bays, while others stop briefly to rest and feed before continuing their migration to Southern California, Mexico, Central America or South America. During fall and spring migration, as well as winter, large populations of shorebirds and waterfowl inhabit nearshore areas. Consequently, in the event of a spill, certain protective measures may be required to minimize the effect on waterbirds. For example, during a critical spill situation, initial efforts should attempt to repel birds from the site with equipment such as bird canons. Depending on the species involved, some repelling devices will successfully deter individuals from the affected area while others will be ineffective.

Subsequent efforts can be reorganized on the basis of these results. The degree of effectiveness decreases as birds become accustomed to the sound system; this process is referred to as habitation. Activities such as people, boats, and machinery usually are the most effective deterrents.

6.10.3 Eelgrass and Kelp

Eelgrass meadows in protected bays provide food sources for variety of species within the marine food chain. Additionally, it provides habitat and protection and acts as a nursery for many marine species. In the event of an oil spill near eelgrass meadows, protective measures should be implemented to reduce the impact.

Kelp forests are also found extensively in coastal areas in the region providing a dynamic ecosystem for a wide variety of marine species. In the event of an oil spill near kelp forest, protective measures should be implemented to reduce the impact.

Measures such as booms may be effective when conditions permit deployment. If placed from shore, minimize trampling and dragging equipment over the habitat.

For cleanup, natural cleansing is still preferable to most cleanup methods. Manual removal results in the removal of sediments and organisms and should be used in the “wade zone” only. Trampling and dragging of equipment over the habitat should be minimized.

Substrate removal may delay or prevent re-establishment of the original ecosystem and vacuum pumping may result in removal of organisms and sediment. Both methods are not advisable. In intertidal areas, low pressure flushing may be viable. Vegetation cropping should be avoided since it modifies the habitat and may kill important habitat plants.

6.10.4 Inlets, Intakes, Harbors, and Marinas

Inlets, intakes, harbors and marinas are inhabited by a variety of fish, invertebrates, and waterbirds that would be at risk if an oil spill occurs near any of these facilities. Marinas have a great potential for public exposure to hazards and damage claims and should be boomed to exclude oil. Intakes for commercial, industrial and municipal water usage areas are subject to impact due to safety hazards, loss of use and damage claims. Protective measures could include exclusionary booming to prevent or exclude oil from entering these areas. Many of the entrances or channels have tidal currents exceeding 1 knot in the opening. In these cases, booms should be deployed landward from the entrance in quiescent areas. Booms should be placed at an angle to the current to guide oil to an area where it can be recovered. The deployment of a second boom behind the first may be desirable to contain any oil that escaped under the primary boom.

Diversion booming should be used where the water current in an area is greater than 1 knot or if the areas are too large to boom with available supplies. Diversion booms are deployed at an angle from the shoreline closest to the leading edge of the approaching oil slick to deflect oil toward shore, where pickup of pooled oil is more effective.

Since the area is predominantly environmentally sensitive, recommended response strategies are to attempt to limit the extent of shoreline fouling and to limit the area covered by the slick to the maximum extent possible. Since oil is the primary product handled, containment booming operations will be initiated. In addition, shoreline protection boom may be utilized in an attempt to prevent fouling of shorelines.

It is also important to recognize that while certain immediate environment protection response strategies must be planned for in advance, the ongoing protection and cleanup during a major spill would involve professional input from the company's oil spill advisors and the Federal and State On-Scene Coordinators.

Recreational Areas

Publicly accessible recreation areas generally have good water/shoreline access for logistical purposes.

6.10.5 Salmon and other Spawning Streams

Numerous streams throughout the area have been identified as environmentally sensitive due to the presence of spawning areas for salmon and other species. Specific species found within each stream are documented in the NOAA ESI database.

The following factors are detrimental to spawning fishes, their nests and eggs:

- Changes in water temperature
- Increased siltation or turbidity
- Increased amount of dissolved gases in the water column
- Physical destruction of habitat by personnel and/or equipment

To reduce the impact of an oil spill and response activities to streams identified as spawning habitat, the following steps would be taken:

- Attempt to contain spilled product as far upstream of spawning areas as possible
- Minimize or eliminate the use of overflow dams
- Minimize the number of personnel working at each response site
- Minimize use of heavy equipment at each response site
- Eliminate warm/hot water flushing tactics at response sites

Significant instream work will require obtaining an emergency Hydraulic Project Approval (HPA) from Washington Department of Fish and Wildlife (WDFW).

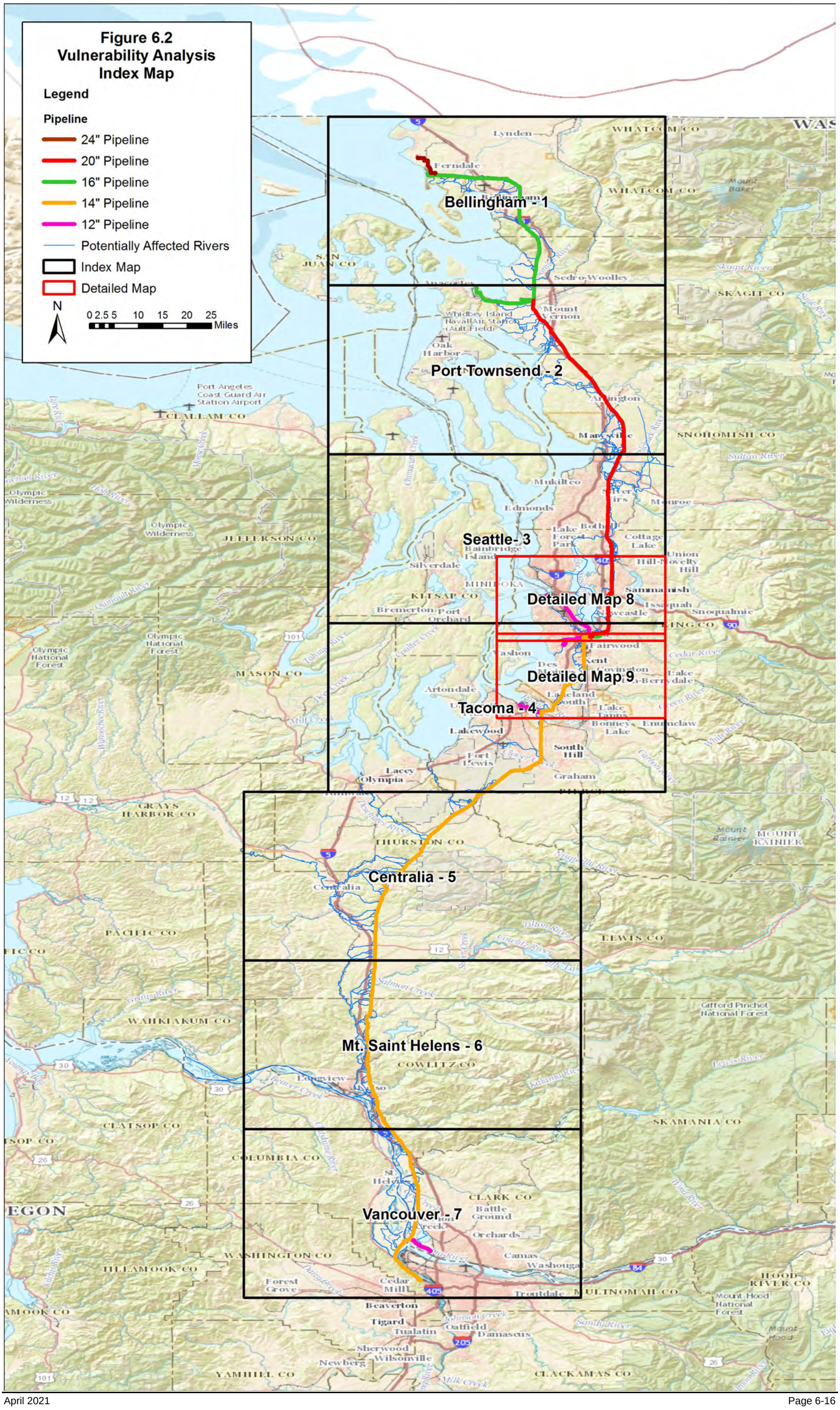
6.11 Vulnerability Analysis

The ESI maps and database provided by NOAA provide detailed locations of resources sensitive to oil spills throughout the region. To supplement this existing mapping a vulnerability analysis of the pipeline was performed to document sensitivities downstream of the pipeline including:

- Potentially affected public drinking water intake, lake, river, and stream within a radius of 5 miles
- Potentially affected environmentally sensitive area within a radius of 1 mile
- Downstream reach of major rivers crossed by the pipeline and adjacent coastal areas within a radius of 5 miles of river estuaries.

The following vulnerability maps identify sensitivities within this area. Refer to the ESI maps for the breakdown of habitat types and species presence. Additional information can be obtained from the appropriate Washington State GRPs that exist in the vicinity and downstream of the pipeline right-of-way.

Figure 6.2: Vulnerability Analysis



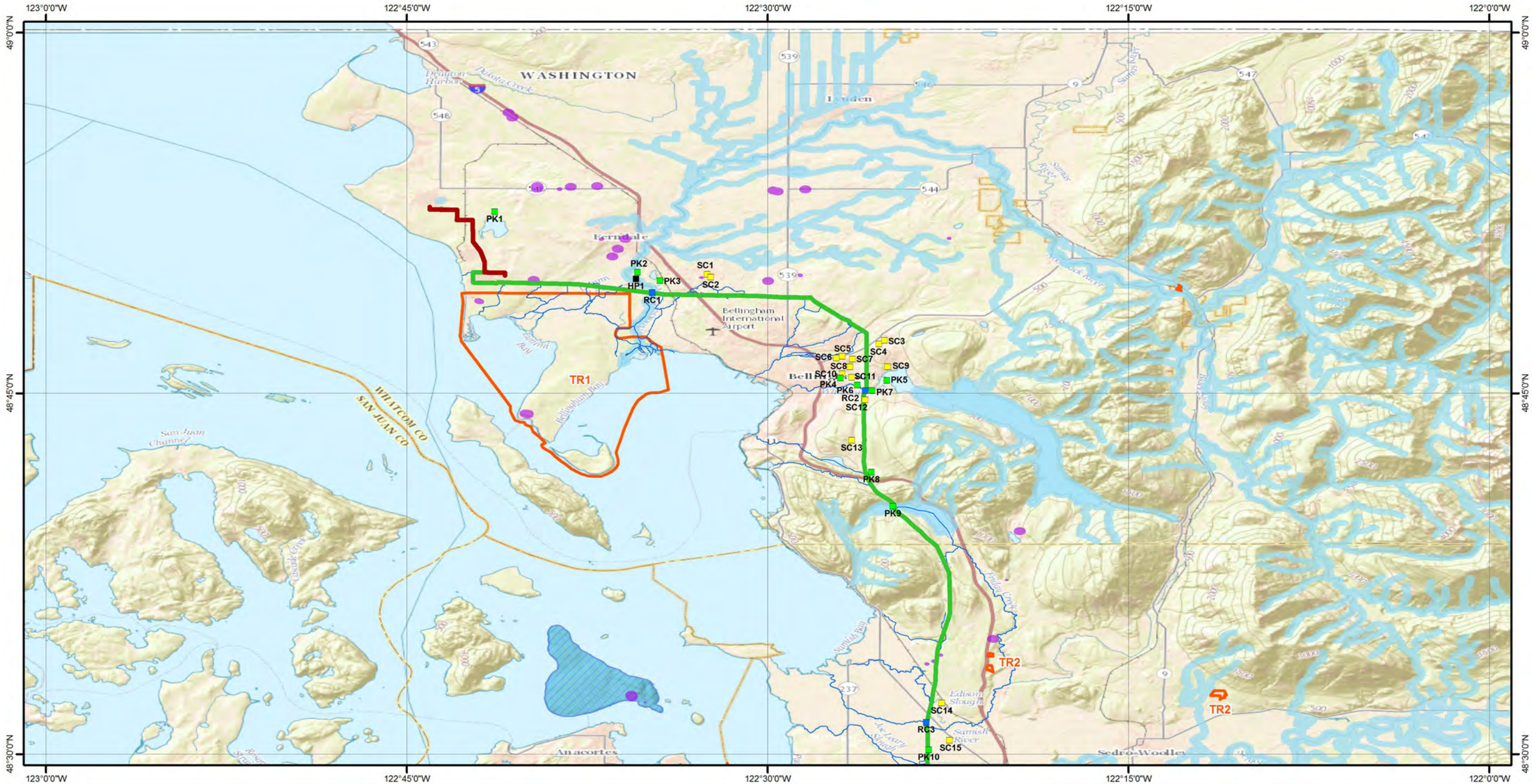
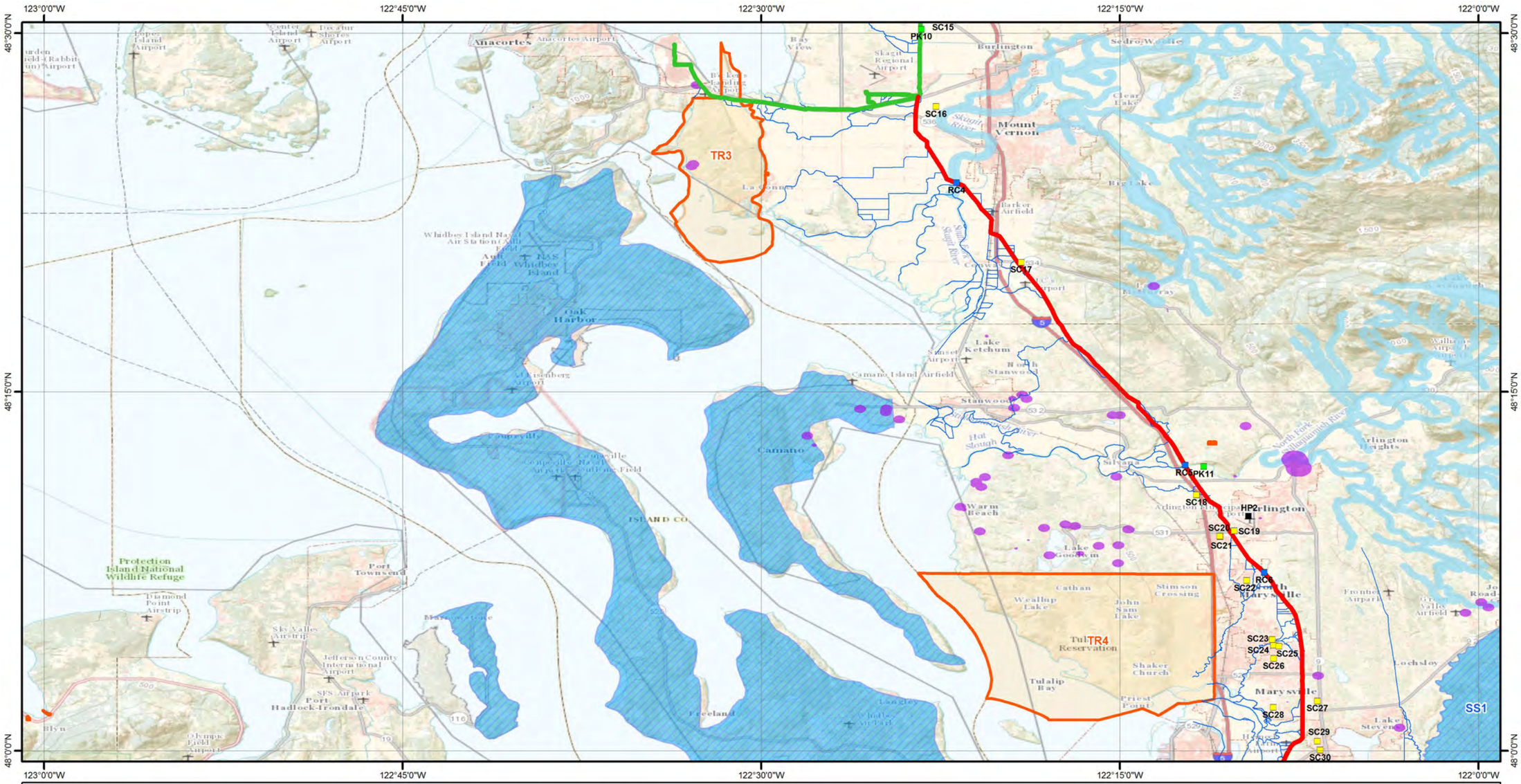


Figure 6.2
Vulnerability Analysis
Map 1



Legend

Pipeline			
20" Pipeline	Sole Source Aquifers	Tribal Reservation	
16" Pipeline	Surface Water Protection Area	Historic Buildings	
14" Pipeline	Wellhead Protection Areas	Schools	
12" Pipeline	Potentially Affected Rivers	Parks	
	Major River Crossings		

NOTES:
1. Only vulnerable resources within the vicinity of the pipeline are shown and numbered for clarity (see accompanying table for description).
2. Water resources are shown within 5 miles of the pipeline and within 5 miles of any potentially impacted waterway (based on oil spill modeling results). Wellhead protection areas are limited to Group A systems with over 100 connections.
3. Social and cultural resources are shown within 1 mile of the pipeline only.
4. Environmental Sensitivity Index (ESI) Maps provided and maintained by NOAA provide details of sensitive habitats and species both onshore and in marine waters.

0 2.5 5 10 Miles

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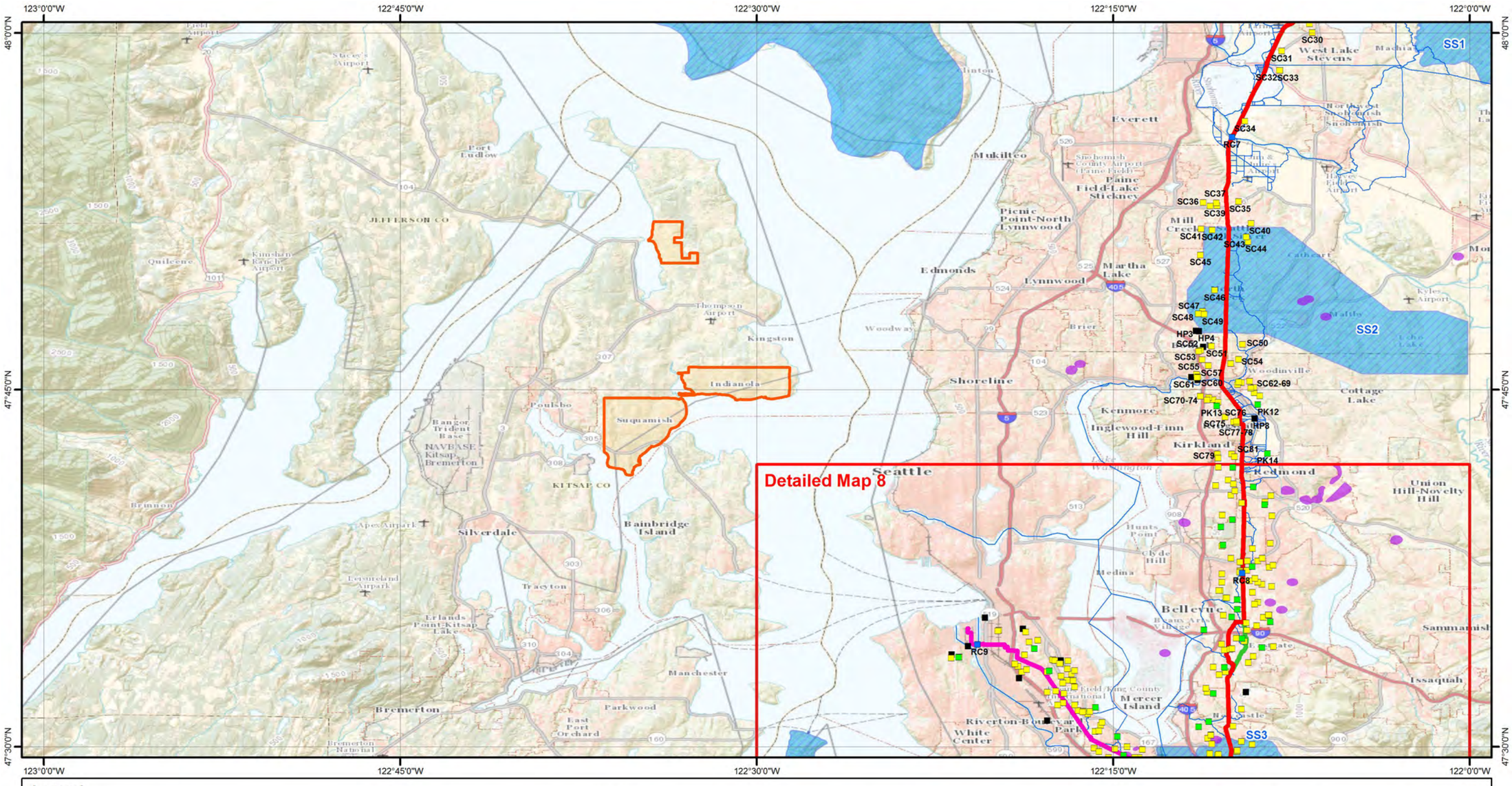
Figure 6.2
Vulnerability Analysis Map 2

ERM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Detailed Map 8
SS1
SS2
SS3
RC7
RC8
RC9
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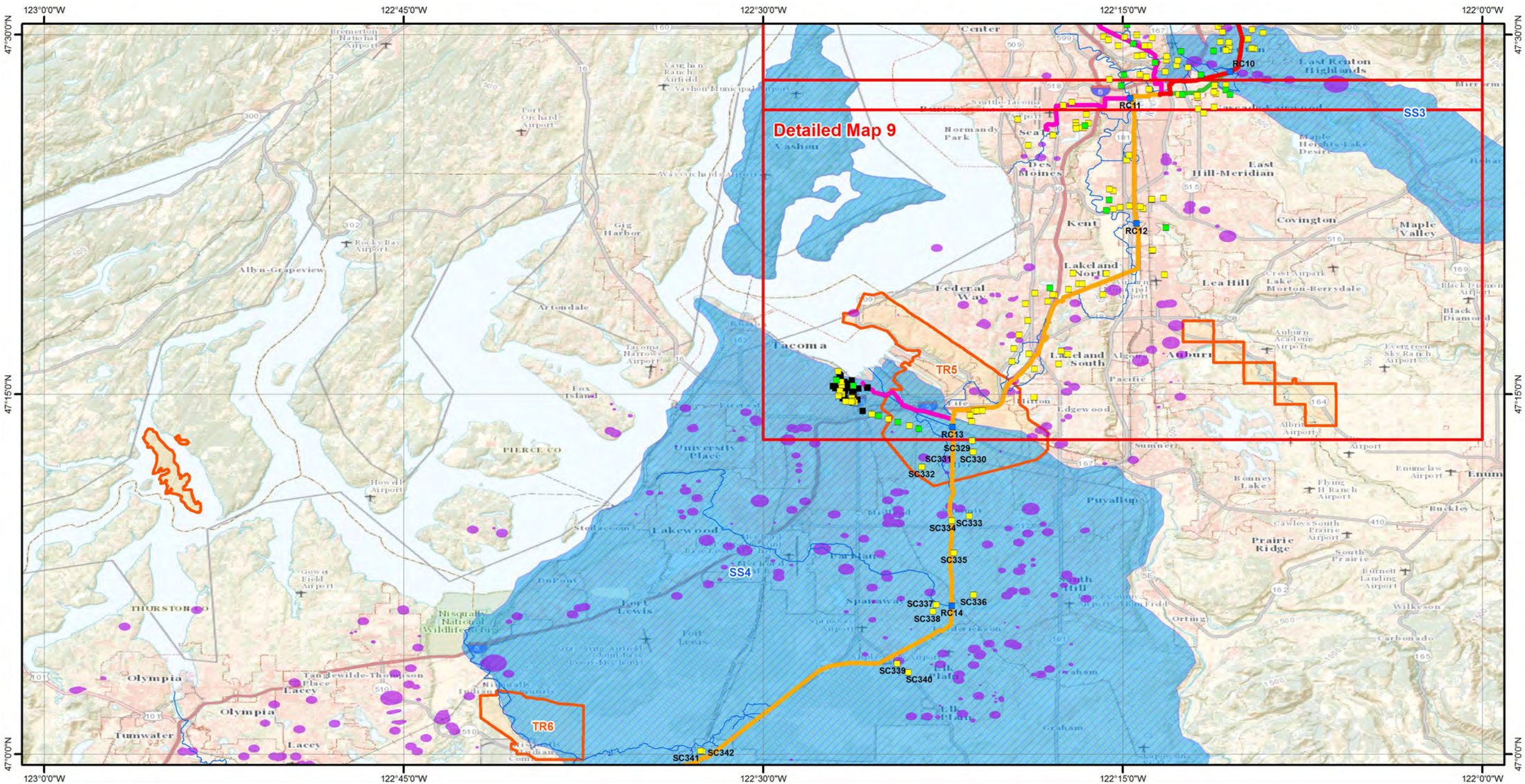
Mukilteo
Edmonds
Lynnwood
Shoreline
Seattle
Kenmore
Kirkland
Redmond
Bellevue
Mercer Island
Issaquah
Bremerton
Silverdale
Bainbridge Island
Port Orchard
Poulsbo
Kingston
Indianola
Suquamish
Tracyton
Manchester
Parkwood
Port Ludlow
Quilcene
JEFFERSON CO
KITSAP CO
Picnic Point-North Lynnwood
Mill Creek
Martha Lake
Woodway
Brier
Inglewood-Finn Hill
Juanita
Woodinville
Cottage Lake
Union Hill-Novelty Hill
Hunts Point
Clyde Hill
Medina
Sammamish
White Center
Riverton-Boulevard Park
Bangor Trident Base
NAVBASE Kitsap Bremerton
Paine Field-Lake Stickney
Snohomish County Airport (Paine Field)
Boeing Field/King County International
Renton
Kyles Airport
Thompson Airport
Kingston
Kinsham Karcher Airport
Stacey's Airport
Apex Airpark
Bremerton National
Eatonville Airpark
Legend
Pipeline
20" Pipeline
16" Pipeline
14" Pipeline
12" Pipeline
Sole Source Aquifers
Surface Water Protection Area
Wellhead Protection Areas
Potentially Affected Rivers
Major River Crossings
Tribal Reservation
Historic Buildings
Schools
Parks
NOTES:
1. Only vulnerable resources within the vicinity of the pipeline are shown and numbered for clarity (see accompanying table for description).
2. Water resources are shown within 5 miles of the pipeline and within 5 miles of any potentially impacted waterway (based on oil spill modeling results). Wellhead protection areas are limited to Group A systems with over 100 connections.
3. Social and cultural resources are shown within 1 mile of the pipeline only.
4. Environmental Sensitivity Index (ESI) Maps provided and maintained by NOAA provide details of sensitive habitats and species both onshore and in marine waters.
0 2.5 5 10 Miles
N
Figure 6.2
Vulnerability Analysis
Map 3
ERM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122°30'0"W
122°15'0"W
122°0'0"W
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47°15'0"N
47°0'0"N
Detailed Map 9
RC10
RC11
RC12
RC13
RC14
SS3
SS4
TR5
TR6
SC329
SC330
SC331
SC332
SC333
SC334
SC335
SC336
SC337
SC338
SC339
SC340
SC341
SC342
Tacoma
Olympia
Lakewood
Puyallup
Kent
Auburn
Federal Way
Lakeland South
Lakeland North
East Hill-Meridian
Covington
Maple Valley
Lea Hill
Des Moines
Normandy Park
Seattle
Vashon
Gig Harbor
Artondale
Allyn-Grapeview
University Place
Fox Island
Steilacoom
DuPont
Fort Lewis
Parkland
Spanaway
Graham
Bonney Lake
Sumner
Edgewood
Milton
Pacific
Algona
Prairie Ridge
Wilkeson
Carbonado
Buckley
Enumclaw
Orting
Tumwater
Lacey
Tanglewilde-Thompson Place
Nisqually Indian Tribe
Nisqually National Wildlife Refuge
PIERCE CO
THURSTON CO
Bremerton National Airport
Vashon Municipal Airport
Port Orchard Airport
Watsons Airport
Rocky Bay Airport
Tacoma Narrows Airport
Howard Airport
Gower Field Airport
Seattle-Tacoma International Airport
Auburn Municipal Airport
Auburn Academy Airport
Evergreen Sky Ranch Airport
Crest Airpark
Lake Morton-Berrydale
Black Diamond
Flying H Ranch Airport
Cavalero South Prairie Airport
South Prairie
Burnett Landing Airport
Enumclaw Airport
Graham-Kapowsin Airport
Thun Field
Olympia Regional Airport
Tacoma Dome
Maple Heights-Lake Desire
East Renton Highlands
Center
Legend
Pipeline
20" Pipeline
16" Pipeline
14" Pipeline
12" Pipeline
Sole Source Aquifers
Surface Water Protection Area
Wellhead Protection Areas
Potentially Affected Rivers
Major River Crossings
Tribal Reservation
Historic Buildings
Schools
Parks
NOTES:
1. Only vulnerable resources within the vicinity of the pipeline are shown and numbered for clarity (see accompanying table for description).
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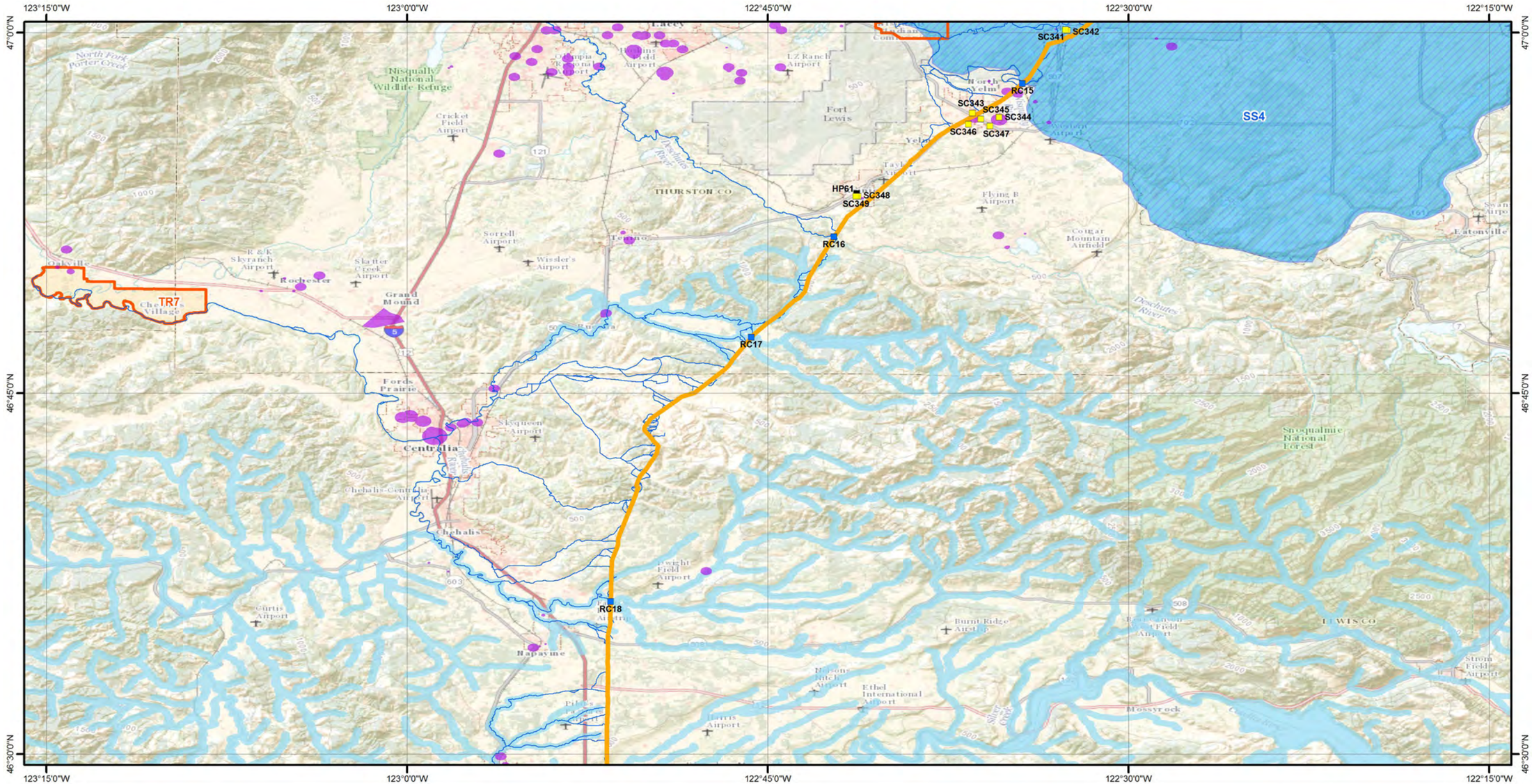
3. Social and cultural resources are shown within 1 mile of the pipeline only.
4. Environmental Sensitivity Index (ESI) Maps provided and maintained by NOAA provide details of sensitive habitats and species both onshore and in marine waters.
0 2.5 5 10 Miles
N
Figure 6.2
Vulnerability Analysis
Map 4
ERM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122°45'0"W
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122°15'0"W
47°0'0"N
46°45'0"N
46°30'0"N
SC341
SC342
RC15
SC343
SC345
SC344
SC346
SC347
SS4
HP61
SC348
SC349
RC16
RC17
RC18
TR7
THURSTON CO
LEWIS CO
Nisqually National Wildlife Refuge
Centralia
Chehalis
Rochester
Oakville
Grand Mound
Fords Prairie
Napavine
Eatonville
Mossyrock
Snoqualmie National Forest
Legend
Pipeline
20" Pipeline
16" Pipeline
14" Pipeline
12" Pipeline
Sole Source Aquifers
Surface Water Protection Area
Wellhead Protection Areas
Potentially Affected Rivers
Major River Crossings
Tribal Reservation
Historic Buildings
Schools
NOTES:
1. Only vulnerable resources within the vicinity of the pipeline are shown and numbered for clarity (see accompanying table for description).
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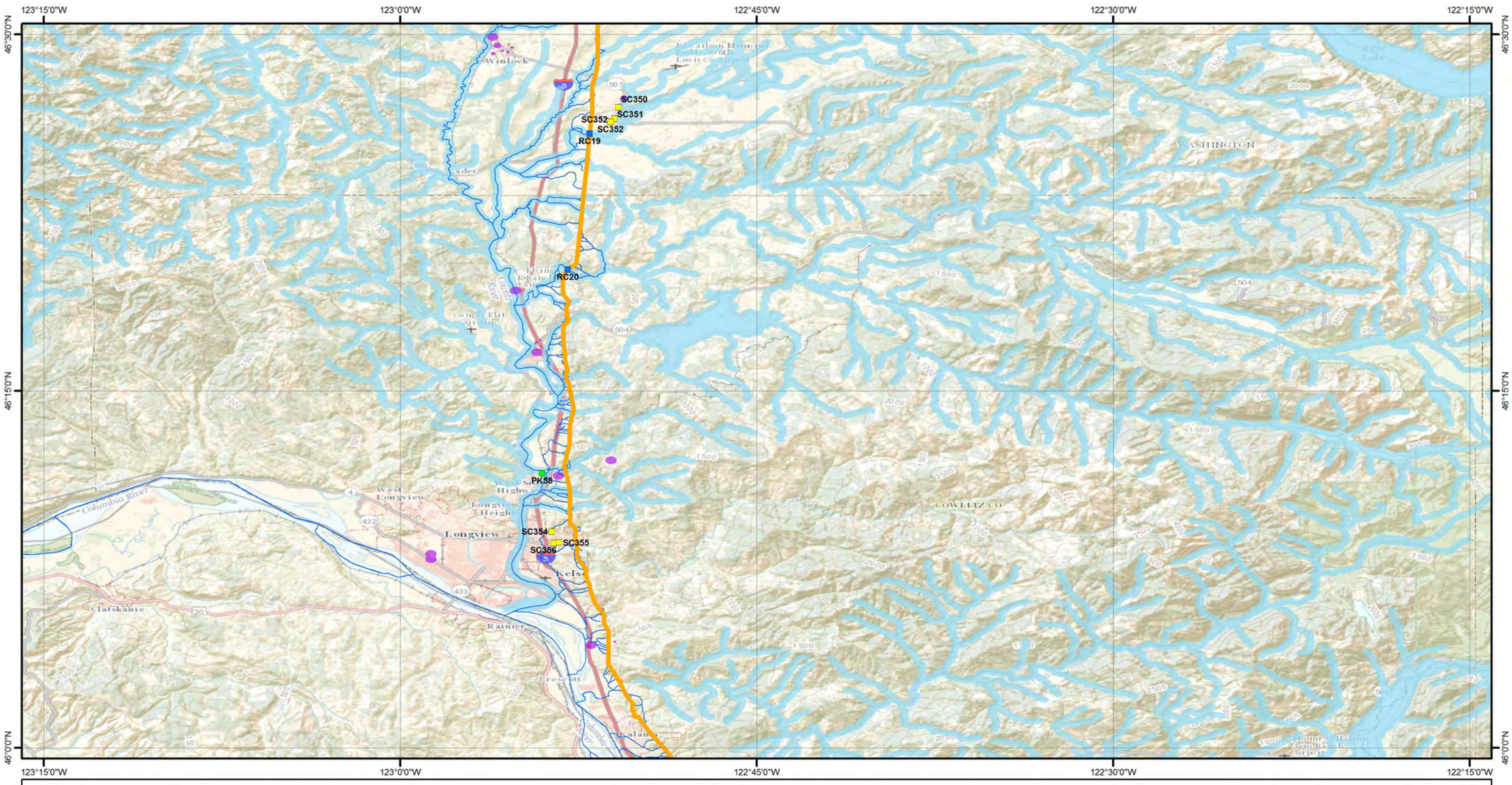
3. Social and cultural resources are shown within 1 mile of the pipeline only.
4. Environmental Sensitivity Index (ESI) Maps provided and maintained by NOAA provide details of sensitive habitats and species both onshore and in marine waters.
0 2.5 5 10 Miles
N
Figure 6.2
Vulnerability Analysis
Map 5
ERM



Legend

Pipeline
- 20" Pipeline
- 16" Pipeline
- 14" Pipeline
- 12" Pipeline

- Sole Source Aquifers
- Surface Water Protection Area
- Wellhead Protection Areas
- Potentially Affected Rivers
- Major River Crossings

- Tribal Reservation
- Historic Buildings
- Schools
- Parks

NOTES:
1. Only vulnerable resources within the vicinity of the pipeline are shown and numbered for clarity (see accompanying table for description).
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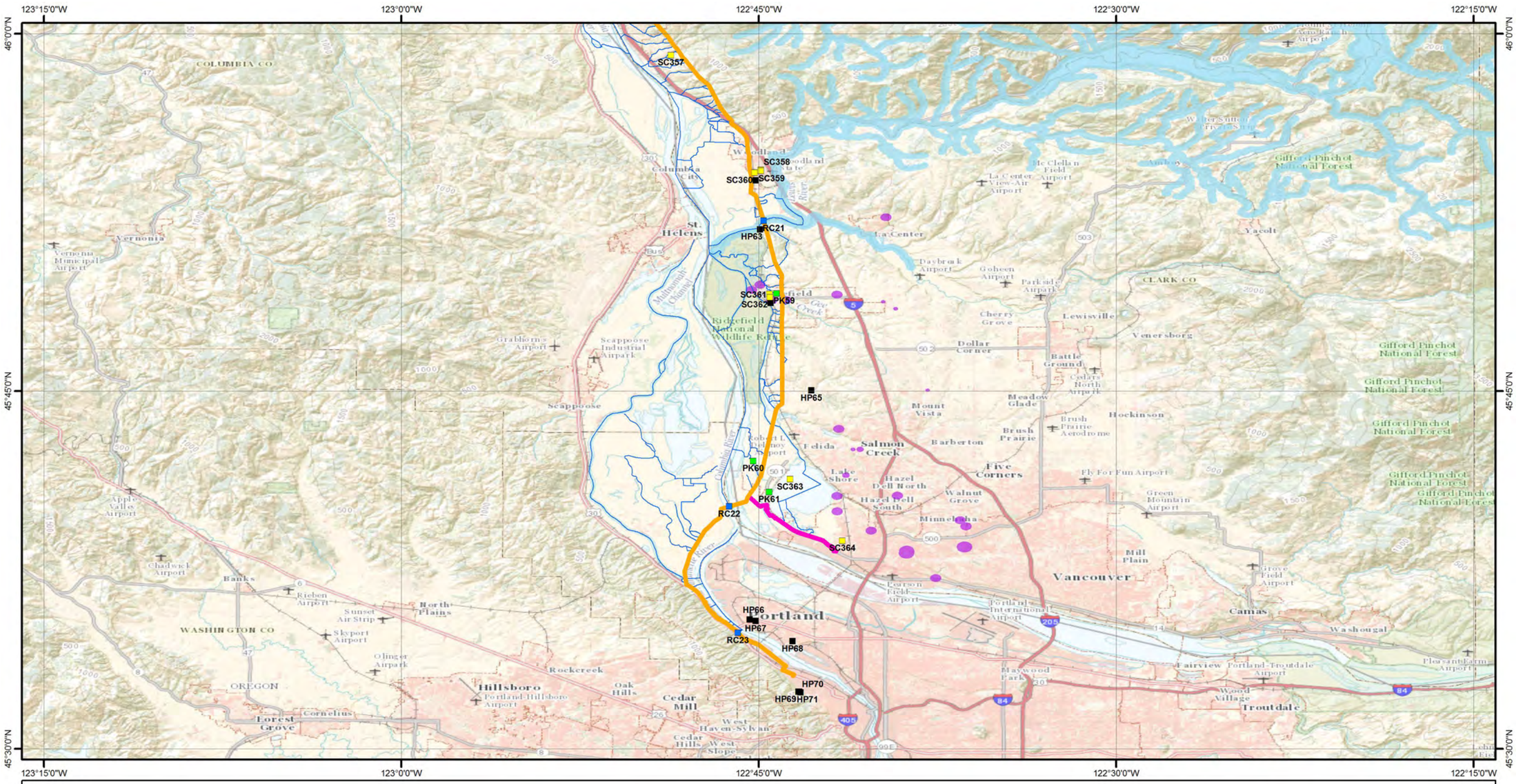
3. Social and cultural resources are shown within 1 mile of the pipeline only.
4. Environmental Sensitivity Index (ESI) Maps provided and maintained by NOAA provide details of sensitive habitats and species both onshore and in marine waters.

0 2.5 5 10 Miles

N

Figure 6.2
Vulnerability Analysis
Map 6

ERM



Legend

Pipeline
- 20" Pipeline
- 16" Pipeline
- 14" Pipeline
- 12" Pipeline

- Sole Source Aquifers
- Surface Water Protection Area
- Wellhead Protection Areas
- Potentially Affected Rivers
- Major River Crossings
- Tribal Reservation
- Historic Buildings
- Schools
- Parks

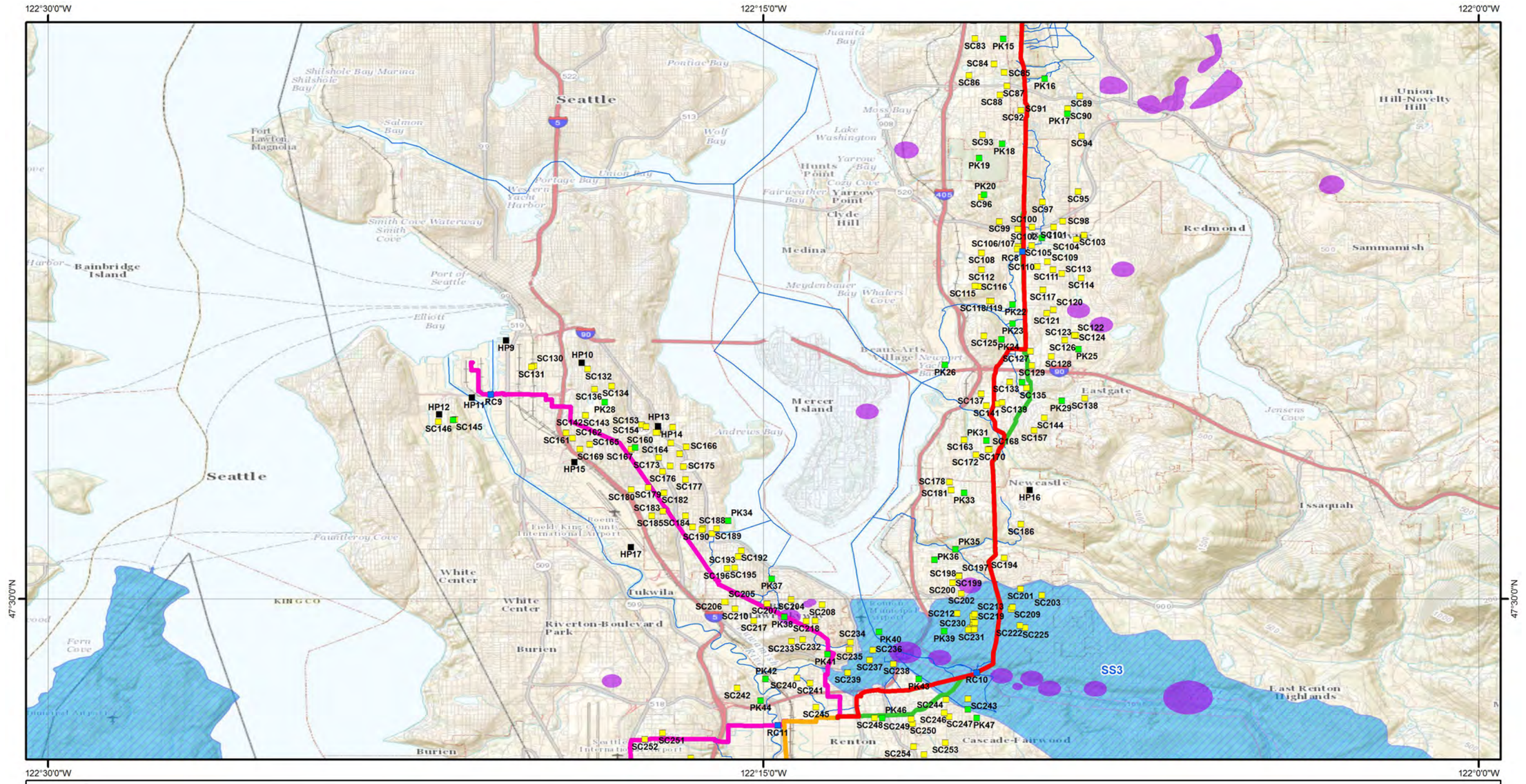
NOTES:
1. Only vulnerable resources within the vicinity of the pipeline are shown and numbered for clarity (see accompanying table for description).
2. Water resources are shown within 5 miles of the pipeline and within 5 miles of any potentially impacted waterway (based on oil spill modeling results). Wellhead protection areas are limited to Group A systems with over 100 connections.
3. Social and cultural resources are shown within 1 mile of the pipeline only.
4. Environmental Sensitivity Index (ESI) Maps provided and maintained by NOAA provide details of sensitive habitats and species both onshore and in marine waters.

0 2.5 5 10 Miles

N

Figure 6.2
Vulnerability Analysis
Map 7

ERM



Legend

Pipeline
- 20" Pipeline
- 16" Pipeline
- 14" Pipeline
- 12" Pipeline

- Sole Source Aquifers
- Surface Water Protection Area
- Wellhead Protection Areas
- Potentially Affected Rivers
- Major River Crossings

- Tribal Reservation
- Historic Buildings
- Schools
- Parks

NOTES:
1. Only vulnerable resources within the vicinity of the pipeline are shown and numbered for clarity (see accompanying table for description).
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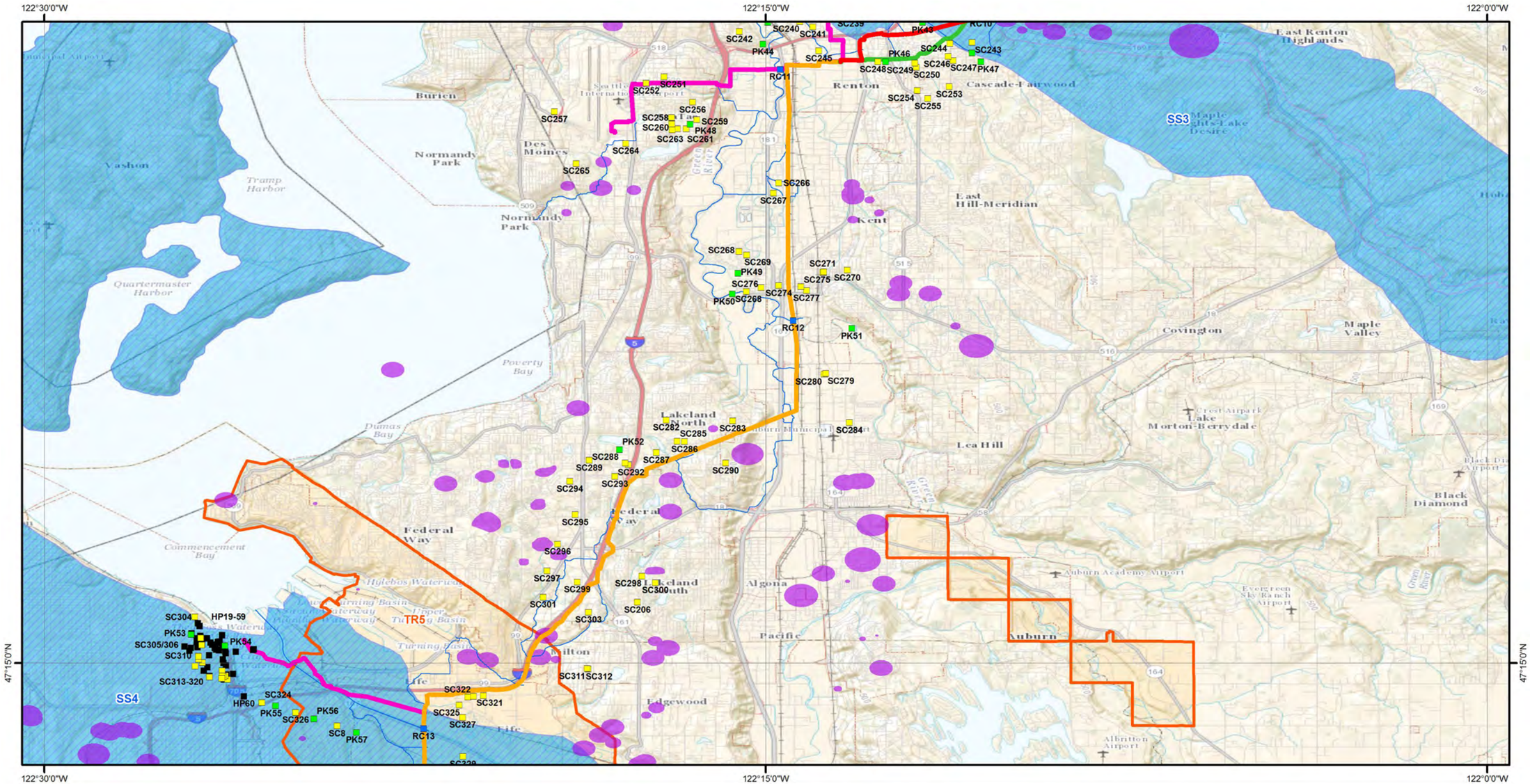
0 0.5 1 2 3 4 5 Miles

N

Figure 6.2
Vulnerability Analysis
Detailed Map 8

ERM



Legend

Pipeline
- 20" Pipeline
- 16" Pipeline
- 14" Pipeline
- 12" Pipeline

- Sole Source Aquifers
- Surface Water Protection Area
- Wellhead Protection Areas
- Potentially Affected Rivers
- Major River Crossings
- Tribal Reservation
- Historic Buildings
- Schools
- Parks

NOTES:
1. Only vulnerable resources within the vicinity of the pipeline are shown and numbered for clarity (see accompanying table for description).
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4. Environmental Sensitivity Index (ESI) Maps provided and maintained by NOAA provide details of sensitive habitats and species both onshore and in marine waters.

0 0.5 1 2 3 4 5 Miles

N

Figure 6.2
Vulnerability Analysis
Detailed Map 9

ERM

Figure 6.3: Vulnerability Analysis Map Index

Map ID#*	Map Name	Feature	Name
TR2	Bellingham - 1	Tribal Lands	Upper Skagit Reservation
HP1	Bellingham - 1	Historic Building	Hovander Homestead
PK1	Bellingham - 1	Park	Lake Terrell State Game Refuge
PK2	Bellingham - 1	Park	Hovander Homestead Park
PK3	Bellingham - 1	Park	Tenwent Lake State Wildlife Recreation Area
PK4	Bellingham - 1	Park	Roosevelt Field
PK5	Bellingham - 1	Park	Bloede Donovan Park
PK6	Bellingham - 1	Park	Saint Clair Park
PK7	Bellingham - 1	Park	Whatcom Falls Park
PK8	Bellingham - 1	Park	East Lake Padden Park
PK9	Bellingham - 1	Park	Samish Park
PK10	Bellingham - 1	Park	Upland State Game Bird Habitat
SC1	Bellingham - 1	School	North Bellingham Elementary (historical)
SC2	Bellingham - 1	School	Whatcom Day Academy
SC3	Bellingham - 1	School	Northern Heights Elementary School
SC4	Bellingham - 1	School	Squalicum High School
SC5	Bellingham - 1	School	Kids World Center 2000
SC6	Bellingham - 1	School	Bellingham Christian School
SC7	Bellingham - 1	School	Barkley YMCA Child Development Center
SC8	Bellingham - 1	School	Roosevelt Elementary School
SC9	Bellingham - 1	School	Silver Beach Elementary School
SC10	Bellingham - 1	School	Kids Korner Day Care Center
SC11	Bellingham - 1	School	Kindercare Learning Center 997
SC12	Bellingham - 1	School	Kulshan Middle School
SC13	Bellingham - 1	School	Wade King Elementary School
SC14	Bellingham - 1	School	Pierson School
SC15	Bellingham - 1	School	Allen Elementary School
SS1	Port Townsend - 2	Sole Source Aquifer	Newberg Area Aquifer
TR3	Port Townsend - 2	Tribal Lands	Swinomish Reservation

Map ID#*	Map Name	Feature	Name
TR4	Port Townsend - 2	Tribal Lands	Tulalip Reservation
HP2	Port Townsend - 2	Historic Building	Naval Auxiliary Air Station--Arlington
PK11	Port Townsend - 2	Park	Blue Stilly Park
SC16	Port Townsend - 2	School	Floyd Paxton School
SC17	Port Townsend - 2	School	Conway School
SC18	Port Townsend - 2	School	Arlington Christian School
SC19	Port Townsend - 2	School	Weston High School
SC20	Port Townsend - 2	School	Smokey Point Daycare and Kindergarten
SC21	Port Townsend - 2	School	Kids N Play Learning Center
SC22	Port Townsend - 2	School	Shoultes Elementary School
SC23	Port Townsend - 2	School	Kellogg Marsh Elementary School
SC24	Port Townsend - 2	School	Cedarcrest Middle School
SC25	Port Townsend - 2	School	Grace Academy
SC26	Port Townsend - 2	School	Grove Elementary School
SC27	Port Townsend - 2	School	East Sunnyside School
SC28	Port Townsend - 2	School	Sunnyside Elementary School
SC29	Port Townsend - 2	School	Lake Stevens Daycare Center
SS2	Seattle - 3	Sole Source Aquifer	Cross Valley Aquifer
HP3	Seattle - 3	Historic Building	North Creek School
HP4	Seattle - 3	Historic Building	Winningham Farm
HP5	Seattle - 3	Historic Building	Bates--Tanner Farm
HP6	Seattle - 3	Historic Building	Bothell Pioneer Cemetery
HP7	Seattle - 3	Historic Building	Chase, Dr. Reuben, House
HP8	Seattle - 3	Historic Building	Hollywood Farm
HP9	Seattle - 3	Historic Building	USCGC FIR
HP10	Seattle - 3	Historic Building	Turner-Koepf House
HP11	Seattle - 3	Historic Building	14th Avenue South Bridge
HP12	Seattle - 3	Historic Building	Cooper, Frank B., Elementary School
HP13	Seattle - 3	Historic Building	Seattle Public Library
HP14	Seattle - 3	Historic Building	Columbia City Historic District
HP15	Seattle - 3	Historic Building	Old Georgetown City Hall

Map ID#*	Map Name	Feature	Name
HP16	Seattle - 3	Historic Building	Pacific Coast Company House No. 75
HP17	Seattle - 3	Historic Building	Building No. 105, Boeing Airplane Company
PK12	Seattle - 3	Park	Gold Creek County Park
PK13	Seattle - 3	Park	E Norway Hill Park
PK14	Seattle - 3	Park	Sammamish River Regional Park
PK15	Seattle - 3	Park	Mark Twain Park
PK16	Seattle - 3	Park	Willows Creek Neighborhood Park
PK17	Seattle - 3	Park	Grass Lawn Park
PK18	Seattle - 3	Park	King County Park
PK19	Seattle - 3	Park	Bridle Trails State Park
PK20	Seattle - 3	Park	Cherry Crest Park
PK21	Seattle - 3	Park	Bellevue Highlands Park
PK22	Seattle - 3	Park	Kelsey Creek Park
PK23	Seattle - 3	Park	Bannerwood Park
PK24	Seattle - 3	Park	Woodridge Park
PK25	Seattle - 3	Park	Robinswood Park
PK26	Seattle - 3	Park	Sweyolocken Park
PK27	Seattle - 3	Park	Sunset Ravine Park
PK28	Seattle - 3	Park	Jefferson Park
PK29	Seattle - 3	Park	Eastgate Park
PK30	Seattle - 3	Park	Puget Park
PK31	Seattle - 3	Park	Coal Creek Park
PK32	Seattle - 3	Park	Dearborn Park
PK33	Seattle - 3	Park	Hazelwood Park
PK34	Seattle - 3	Park	Atlantic City Park
PK35	Seattle - 3	Park	May Creek Park
PK36	Seattle - 3	Park	Kennydale Lions Park
PK37	Seattle - 3	Park	Lakeridge Park
SC30	Seattle - 3	School	Sunnyside Preschool and Kindergarten School Lake Stevens Campus
SC31	Seattle - 3	School	East Everett School

Map ID#*	Map Name	Feature	Name
SC32	Seattle - 3	School	Cavelero Mid High School
SC33	Seattle - 3	School	Prove High School
SC34	Seattle - 3	School	Swans Trail School
SC35	Seattle - 3	School	Seattle Hill Elementary School
SC36	Seattle - 3	School	Small World Montessori School
SC37	Seattle - 3	School	Archbishop Murphy High School
SC38	Seattle - 3	School	Penny Creek Elementary School
SC39	Seattle - 3	School	Kindercare Learning Center 1707
SC40	Seattle - 3	School	Silver Firs Elementary School
SC41	Seattle - 3	School	Mill Creek Elementary School
SC42	Seattle - 3	School	Nancys Noahs Ark Daycare Center
SC43	Seattle - 3	School	Forest View Elementary School
SC44	Seattle - 3	School	Gateway Middle School
SC45	Seattle - 3	School	Cedar Wood Elementary School
SC46	Seattle - 3	School	Fernwood Elementary School
SC47	Seattle - 3	School	Canyon Creek Elementary School
SC48	Seattle - 3	School	Skyview Junior High School
SC49	Seattle - 3	School	Skyview Junior High School
SC50	Seattle - 3	School	Kokanee Elementary School
SC51	Seattle - 3	School	Canyon Park Montessori School
SC52	Seattle - 3	School	Northshore School District - Special Services
SC53	Seattle - 3	School	Northshore School District Office
SC54	Seattle - 3	School	Woodinville High School
SC55	Seattle - 3	School	Learning Garden School Bothell
SC56	Seattle - 3	School	Woodin Elementary School
SC57	Seattle - 3	School	Woodinville Montessori School North Creek Bothell Campus
SC58	Seattle - 3	School	University of Washington - Bothell Campus
SC59	Seattle - 3	School	Cascadia Community College
SC60	Seattle - 3	School	University of Washington Bothell Campus Building 1

Map ID#*	Map Name	Feature	Name
SC61	Seattle - 3	School	University of Washington Bothell Campus Commons
SC62	Seattle - 3	School	Dartmoor School
SC63	Seattle - 3	School	Kids Country Woodinville
SC64	Seattle - 3	School	Woodinville Elementary School
SC65	Seattle - 3	School	C O Sorenson School
SC66	Seattle - 3	School	Bellevue Christian School-Woodinville
SC67	Seattle - 3	School	Kindercare Learning Center 1617
SC68	Seattle - 3	School	Woodinville Montessori School
SC69	Seattle - 3	School	Woodinville Children Center
SC70	Seattle - 3	School	Cedar Park Christian School
SC71	Seattle - 3	School	Evergreen Academy Elementary School
SC72	Seattle - 3	School	Northshore Junior High School
SC73	Seattle - 3	School	Kindercare Learning Center 898
SC74	Seattle - 3	School	Woodmoor Elementary School
SC75	Seattle - 3	School	Lil' People's World Child Care Center
SC76	Seattle - 3	School	Tree of Life Daycare Center
SC77	Seattle - 3	School	Kamiakin Junior High School
SC78	Seattle - 3	School	John Muir Elementary School
SC79	Seattle - 3	School	Elite Kids Preschool Kirkland Center
SC80	Seattle - 3	School	Lake Washington Technical College
SC81	Seattle - 3	School	Lake Washington Technical College Early Learning Center
SC82	Seattle - 3	School	Kindercare Learning Center 1024
SC83	Seattle - 3	School	Springhurst School
SC84	Seattle - 3	School	Mark Twain Elementary School
SC85	Seattle - 3	School	City Kids Preschool
SC86	Seattle - 3	School	Rose Hill Presbyterian Preschool
SC87	Seattle - 3	School	Discovery Center
SC88	Seattle - 3	School	Rose Hill Elementary School
SC89	Seattle - 3	School	Kindercare Learning Center 1053
SC90	Seattle - 3	School	The Orchard Daycare Center

Map ID#*	Map Name	Feature	Name
SC91	Seattle - 3	School	Stella Schola Middle School
SC92	Seattle - 3	School	Rose Hill Junior High School
SC93	Seattle - 3	School	Benjamin Franklin Elementary School
SC94	Seattle - 3	School	Benjamin Rush Elementary School
SC95	Seattle - 3	School	Bright Horizons Overlake Daycare Center
SC96	Seattle - 3	School	Cherry Crest Elementary School
SC97	Seattle - 3	School	Bridle Trails Toys and Tots Daycare Center
SC98	Seattle - 3	School	Bellevue Children's Academy
SC99	Seattle - 3	School	Learning Garden School
SC100	Seattle - 3	School	Planet Kids Montessori School
SC101	Seattle - 3	School	America's Child Montessori School
SC102	Seattle - 3	School	The Academic Institute
SC103	Seattle - 3	School	Bel - Red Bilingual Academy
SC104	Seattle - 3	School	Highland Middle School
SC105	Seattle - 3	School	Early World Childrens School
SC106	Seattle - 3	School	A+ Alternative School
SC107	Seattle - 3	School	Dartmoor School
SC108	Seattle - 3	School	Eastside Academic School of Transit
SC109	Seattle - 3	School	Stevenson Elementary School
SC110	Seattle - 3	School	Cedar Park Christian School - Bellevue Campus
SC111	Seattle - 3	School	Odle Middle School
SC112	Seattle - 3	School	Three Cedars Waldorf School
SC113	Seattle - 3	School	Olympus Northwest Middle School
SC114	Seattle - 3	School	Jing Mei Elementary School
SC115	Seattle - 3	School	Bellevue School District Office
SC116	Seattle - 3	School	Wilburton Elementary School
SC117	Seattle - 3	School	Sammamish High School
SC118	Seattle - 3	School	Hyak Junior High School (historical)
SC119	Seattle - 3	School	International School
SC120	Seattle - 3	School	Lake Hills Elementary School

Map ID#*	Map Name	Feature	Name
SC121	Seattle - 3	School	Kelsey Creek Home School Center
SC122	Seattle - 3	School	Robinswood Middle School
SC123	Seattle - 3	School	Robinswood High School
SC124	Seattle - 3	School	Robinswood Elementary School
SC125	Seattle - 3	School	Woodridge Elementary School
SC126	Seattle - 3	School	Eastside Christian School
SC127	Seattle - 3	School	Chestnut Hill Academy South Campus
SC128	Seattle - 3	School	Bellevue Community College
SC129	Seattle - 3	School	Learning Garden School Sunset
SC130	Seattle - 3	School	Career Link School
SC131	Seattle - 3	School	John Stanford Center for Educational Excellence
SC132	Seattle - 3	School	Jose Martin Child Development Center
SC133	Seattle - 3	School	Puesta del Sol Elementary School
SC134	Seattle - 3	School	Kimball Elementary School
SC135	Seattle - 3	School	Tyee Middle School
SC136	Seattle - 3	School	Denise Louie Education Center Beacon Hill
SC137	Seattle - 3	School	Kindercare Learning Center 946
SC138	Seattle - 3	School	Eastgate Elementary School
SC139	Seattle - 3	School	Newport Childrens School
SC140	Seattle - 3	School	Mustard Seed Child Care Center
SC141	Seattle - 3	School	Newport High School
SC142	Seattle - 3	School	Asa Mercer Middle School
SC143	Seattle - 3	School	Mercer Middle School
SC144	Seattle - 3	School	Somerset Elementary School
SC145	Seattle - 3	School	Pathfinder K - 8 School
SC146	Seattle - 3	School	Southwest Youth and Family Services
SC147	Seattle - 3	School	Interagency Alder Academy
SC148	Seattle - 3	School	Interagency Camp School
SC149	Seattle - 3	School	Interagency Fairview Academy
SC150	Seattle - 3	School	Interagency King County Jail School

Map ID#*	Map Name	Feature	Name
SC151	Seattle - 3	School	Interagency Orion Center
SC152	Seattle - 3	School	Interagency Ryther Center
SC153	Seattle - 3	School	Interagency Southwest Youth and Family School
SC154	Seattle - 3	School	Interagency U District Youth Center
SC155	Seattle - 3	School	Zion Preparatory Academy
SC156	Seattle - 3	School	Sunnyside Montessori School
SC157	Seattle - 3	School	Forest Ridge School of the Sacred Heart
SC158	Seattle - 3	School	Orca Alternative
SC159	Seattle - 3	School	Columbia Elementary School
SC160	Seattle - 3	School	The New School at Columbia
SC161	Seattle - 3	School	Maple Elementary School
SC162	Seattle - 3	School	Saint George Parish School
SC163	Seattle - 3	School	Lake Heights Elementary School
SC164	Seattle - 3	School	Damascus Daycare Center
SC165	Seattle - 3	School	Alternative School Number One
SC166	Seattle - 3	School	Primm ABC Child Care Center and Preschool
SC167	Seattle - 3	School	Dearborn Park Elementary School
SC168	Seattle - 3	School	Newport Hills School
SC169	Seattle - 3	School	Cleveland High School
SC170	Seattle - 3	School	Newport Heights Elementary
SC171	Seattle - 3	School	Saint Edward Parish School
SC172	Seattle - 3	School	Ringdall Junior High School
SC173	Seattle - 3	School	Torah Day School of Seattle
SC174	Seattle - 3	School	Aki Kurose Middle School Academy
SC175	Seattle - 3	School	Sharples Junior High School
SC176	Seattle - 3	School	Gloryland Daycare Center
SC177	Seattle - 3	School	Martin Luther King Junior Elementary School
SC178	Seattle - 3	School	Renton Academy
SC179	Seattle - 3	School	Megumi Preschool Seattle

Map ID#*	Map Name	Feature	Name
SC180	Seattle - 3	School	Van Asselt Elementary School
SC181	Seattle - 3	School	Hazelwood Elementary School
SC182	Seattle - 3	School	Seattle Urban Academy
SC183	Seattle - 3	School	Wing Luke Elementary School
SC184	Seattle - 3	School	Tiny Tots Child Development Center Number 1
SC185	Seattle - 3	School	African American Academy
SC186	Seattle - 3	School	Newcastle Elementary School
SC187	Seattle - 3	School	Dunlap Elementary School
SC188	Seattle - 3	School	South Lake High School
SC189	Seattle - 3	School	Rainier Beach High School
SC190	Seattle - 3	School	Seattle School District Office
SC191	Seattle - 3	School	South Shore Middle School
SC192	Seattle - 3	School	Children's House Montessori School
SC193	Seattle - 3	School	Emerson Elementary School
SC194	Seattle - 3	School	Sierra Heights Elementary School
SC195	Seattle - 3	School	Amazing Grace Christian School
SC196	Seattle - 3	School	Saint Paul School
SC197	Seattle - 3	School	Hillcrest Middle School
SC198	Seattle - 3	School	Hillcrest Special Services Center
SC199	Seattle - 3	School	Hillcrest Early Childhood Center
SC200	Seattle - 3	School	McKnight Middle School
SC201	Seattle - 3	School	Kindercare Learning Center 1137
SC202	Seattle - 3	School	Renton Child Care Center
SC203	Seattle - 3	School	Hazen High School
SS3	Tacoma - 4	Sole Source Aquifer	Cedar Valley Aquifer
SS4	Tacoma - 4	Sole Source Aquifer	Central Pierce County Aquifer
TR5	Tacoma - 4	Tribal Lands	Puyallup Reservation
TR6	Tacoma - 4	Tribal Lands	Nisqually Reservation
HP18	Tacoma - 4	Historic Building	Drum, Henry, House
HP19	Tacoma - 4	Historic Building	Masonic Temple Building--Temple Theater

Map ID#*	Map Name	Feature	Name
HP20	Tacoma - 4	Historic Building	Wright Park and Seymour Conservatory
HP21	Tacoma - 4	Historic Building	Balfour Dock Building
HP22	Tacoma - 4	Historic Building	Fire Alarm Station
HP23	Tacoma - 4	Historic Building	Fire Station No. 1
HP24	Tacoma - 4	Historic Building	Walker Apartment Hotel
HP25	Tacoma - 4	Historic Building	Yuncker, John F., House
HP26	Tacoma - 4	Historic Building	House at 605 South G Street
HP27	Tacoma - 4	Historic Building	Northern Pacific Office Building
HP28	Tacoma - 4	Historic Building	Old City Hall
HP29	Tacoma - 4	Historic Building	Building at 712--716 Sixth Avenue
HP30	Tacoma - 4	Historic Building	Y.M.C.A. Building
HP31	Tacoma - 4	Historic Building	Old City Hall Historic District
HP32	Tacoma - 4	Historic Building	Lynn, C.O., Co. Funeral Home
HP33	Tacoma - 4	Historic Building	Rhodes Medical Arts Building
HP34	Tacoma - 4	Historic Building	South J Street Historic District
HP35	Tacoma - 4	Historic Building	Bowes Building
HP36	Tacoma - 4	Historic Building	House at 802--804 South G Street
HP37	Tacoma - 4	Historic Building	House at 708--710 South 8th Street
HP38	Tacoma - 4	Historic Building	Rialto Theater
HP39	Tacoma - 4	Historic Building	Pantages Theatre
HP40	Tacoma - 4	Historic Building	Fireboat Station
HP41	Tacoma - 4	Historic Building	Pythian Temple
HP42	Tacoma - 4	Historic Building	City Waterway Bridge
HP43	Tacoma - 4	Historic Building	National Bank of Tacoma
HP44	Tacoma - 4	Historic Building	McIlvaine Apartments
HP45	Tacoma - 4	Historic Building	Tacoma Building
HP46	Tacoma - 4	Historic Building	City Waterway Bridge
HP47	Tacoma - 4	Historic Building	Perkins Building
HP48	Tacoma - 4	Historic Building	US Post Office--Tacoma Downtown Station--Federal Building
HP49	Tacoma - 4	Historic Building	Sunset Telephone & Telegraph Building

Map ID#*	Map Name	Feature	Name
HP50	Tacoma - 4	Historic Building	Pacific National Bank Building
HP51	Tacoma - 4	Historic Building	Sandberg--Schoenfeld Buildings
HP52	Tacoma - 4	Historic Building	Sprague Building
HP53	Tacoma - 4	Historic Building	House at 1510 Tacoma Avenue South
HP54	Tacoma - 4	Historic Building	Building at 1602 South G Street
HP55	Tacoma - 4	Historic Building	House at 1610 South G Street
HP56	Tacoma - 4	Historic Building	Albers Brothers Mill
HP57	Tacoma - 4	Historic Building	Union Passenger Station
HP58	Tacoma - 4	Historic Building	Nihon Go Gakko
HP59	Tacoma - 4	Historic Building	Union Depot-Warehouse Historic District
HP60	Tacoma - 4	Historic Building	Engine House No. 4
PK38	Tacoma - 4	Park	Skyway Park
PK39	Tacoma - 4	Park	Windsor Hills Park
PK40	Tacoma - 4	Park	Renton Stadium
PK41	Tacoma - 4	Park	Earlington Park
PK42	Tacoma - 4	Park	Fort Dent Athletic Center
PK43	Tacoma - 4	Park	Phillip Arnold Park
PK44	Tacoma - 4	Park	Tukwila Park
PK45	Tacoma - 4	Park	Tiffany Park
PK46	Tacoma - 4	Park	Talbot Hill Park
PK47	Tacoma - 4	Park	Cascade Park
PK48	Tacoma - 4	Park	Valley Ridge Park
PK49	Tacoma - 4	Park	Russell Road Park
PK50	Tacoma - 4	Park	Downey Bridge Monument
PK51	Tacoma - 4	Park	North Green River Park
PK52	Tacoma - 4	Park	Steel Lake Park
PK53	Tacoma - 4	Park	Wright Park
PK54	Tacoma - 4	Park	Firemans Park
PK55	Tacoma - 4	Park	McKinley Park
PK56	Tacoma - 4	Park	Portland Avenue Park
PK57	Tacoma - 4	Park	Swan Creek County Park

Map ID#*	Map Name	Feature	Name
SC204	Tacoma - 4	School	Lakeridge Elementary School
SC205	Tacoma - 4	School	Rainier School
SC206	Tacoma - 4	School	Rainier View Elementary School
SC207	Tacoma - 4	School	Earlington Elementary School
SC208	Tacoma - 4	School	Bryn Mawr Elementary School
SC209	Tacoma - 4	School	Highlands Christian School
SC210	Tacoma - 4	School	Toddler Tech Child Care Center
SC211	Tacoma - 4	School	Honey Dew Home School
SC212	Tacoma - 4	School	Highlands Elementary School
SC213	Tacoma - 4	School	Renton Technical College Child Care Center
SC214	Tacoma - 4	School	Renton Technical College Odem Building
SC215	Tacoma - 4	School	Renton Technical College Greco Buildings
SC216	Tacoma - 4	School	Dimmitt Middle School
SC217	Tacoma - 4	School	Campbell Hill Elementary School
SC218	Tacoma - 4	School	Thomson Early Childhood Center
SC219	Tacoma - 4	School	Renton Technical College Roberts Campus Center
SC220	Tacoma - 4	School	Renton Technical College De Moss Building
SC221	Tacoma - 4	School	Renton Technical College Business Technology Building
SC222	Tacoma - 4	School	Childtime Learning Center Number 906
SC223	Tacoma - 4	School	Renton Technical College Anderson Building
SC224	Tacoma - 4	School	Renton Technical College Houser Building
SC225	Tacoma - 4	School	Childrens Village Child Care Center
SC226	Tacoma - 4	School	Renton Technical College Basic Studies Center
SC227	Tacoma - 4	School	Renton Technical College Electrical - Mechanical Building
SC228	Tacoma - 4	School	Renton Technical College
SC229	Tacoma - 4	School	Renton Technical College McCormick Building

Map ID#*	Map Name	Feature	Name
SC230	Tacoma - 4	School	Renton Technical College Technology Resource Center
SC231	Tacoma - 4	School	Renton Technical College Allied Health Building
SC232	Tacoma - 4	School	Black River High School
SC233	Tacoma - 4	School	Skyway Christian Kindergarten
SC234	Tacoma - 4	School	Ukrainian Christian Center School
SC235	Tacoma - 4	School	Renton Christian School
SC236	Tacoma - 4	School	Renton High School
SC237	Tacoma - 4	School	Saint Anthony School
SC238	Tacoma - 4	School	Ford School
SC239	Tacoma - 4	School	Renton School District Office
SC240	Tacoma - 4	School	Puget Sound Education Service District Office
SC241	Tacoma - 4	School	Embry - Riddle Aeronautical University
SC242	Tacoma - 4	School	Tukwila Elementary School
SC243	Tacoma - 4	School	Tiffany Park Elementary School
SC244	Tacoma - 4	School	Phoenix Montessori School
SC245	Tacoma - 4	School	Boeing Family Center
SC246	Tacoma - 4	School	Cascade Vista Child Care Center
SC247	Tacoma - 4	School	Cascade Elementary School
SC248	Tacoma - 4	School	Talbot Hill Elementary School
SC249	Tacoma - 4	School	Nelsen Middle School
SC250	Tacoma - 4	School	Spring Glen Elementary School
SC251	Tacoma - 4	School	McMicken Heights Elementary School
SC252	Tacoma - 4	School	Beautiful Savior Lutheran Preschool
SC253	Tacoma - 4	School	Circle Time Childcare Center
SC254	Tacoma - 4	School	Family Circle Learning Center
SC255	Tacoma - 4	School	Kindercare Learning Center 659
SC256	Tacoma - 4	School	Valley View Elementary School
SC257	Tacoma - 4	School	Seatac Occupational Skills Center
SC258	Tacoma - 4	School	Bow Lake Elementary School

Map ID#*	Map Name	Feature	Name
SC259	Tacoma - 4	School	Seattle Christian Middle School
SC260	Tacoma - 4	School	SeaTac Christian Academy
SC261	Tacoma - 4	School	Tyee Educational Complex
SC262	Tacoma - 4	School	Chinook Middle School
SC263	Tacoma - 4	School	Easter Seals Angle Lake Child Development Center
SC264	Tacoma - 4	School	Angle Lake School
SC265	Tacoma - 4	School	Maywood Center
SC266	Tacoma - 4	School	Bright Horizons at Centerpoint
SC267	Tacoma - 4	School	O'Brien School
SC268	Tacoma - 4	School	Great Beginnings Childcare Center
SC269	Tacoma - 4	School	Neely - O'Brien Elementary School
SC270	Tacoma - 4	School	Kent View Christian Elementary School
SC271	Tacoma - 4	School	Mill Creek Middle School
SC272	Tacoma - 4	School	Kent High School
SC273	Tacoma - 4	School	Kent Junior High School
SC274	Tacoma - 4	School	Three Bears Daycare Center
SC275	Tacoma - 4	School	Kent Child Development Center
SC276	Tacoma - 4	School	Kent Elementary School
SC277	Tacoma - 4	School	Montessori Plus School
SC278	Tacoma - 4	School	Great Beginnings Childcare Center
SC279	Tacoma - 4	School	Rainier Christian Preschool
SC280	Tacoma - 4	School	Thomas Academy
SC281	Tacoma - 4	School	Thomas School
SC282	Tacoma - 4	School	Camelot Elementary School
SC283	Tacoma - 4	School	Meredith Hill Elementary School
SC284	Tacoma - 4	School	Kindercare Learning Center 811
SC285	Tacoma - 4	School	Lake Dolloff Elementary School
SC286	Tacoma - 4	School	Kilo Middle School
SC287	Tacoma - 4	School	Saint Nicholas Montessori School
SC288	Tacoma - 4	School	Federal Way School District Office

Map ID#*	Map Name	Feature	Name
SC289	Tacoma - 4	School	Internet Academy
SC290	Tacoma - 4	School	Evergreen Heights Elementary School
SC291	Tacoma - 4	School	H S Truman High School
SC292	Tacoma - 4	School	Steel Lake School
SC293	Tacoma - 4	School	Space Age Daycare Preschool
SC294	Tacoma - 4	School	Childrens Dream Learning Center
SC295	Tacoma - 4	School	Kindercare Learning Center 809 West Campus
SC296	Tacoma - 4	School	Federal Way Public Academy
SC297	Tacoma - 4	School	Brooklake Christian School
SC298	Tacoma - 4	School	Lakeland Elementary School
SC299	Tacoma - 4	School	Todd Beamer High School
SC300	Tacoma - 4	School	Sequoyah Middle School
SC301	Tacoma - 4	School	Spring Valley Montessori School
SC302	Tacoma - 4	School	Rainier View Elementary School
SC303	Tacoma - 4	School	Home Hospital School
SC304	Tacoma - 4	School	Stadium High School
SC305	Tacoma - 4	School	Project Choice School
SC306	Tacoma - 4	School	Central School
SC307	Tacoma - 4	School	Bates Early Childhood Learning Center
SC308	Tacoma - 4	School	Vocational School
SC309	Tacoma - 4	School	Saint Leo School
SC310	Tacoma - 4	School	Community Montessori School
SC311	Tacoma - 4	School	Endeavour Intermediate School
SC312	Tacoma - 4	School	Milton Elementary School
SC313	Tacoma - 4	School	University of Washington Tacoma Campus Carlton Center
SC314	Tacoma - 4	School	University of Washington Tacoma Campus Academic Building
SC315	Tacoma - 4	School	University of Washington Tacoma Campus Science Building
SC316	Tacoma - 4	School	University of Washington Tacoma Campus Keystone Building

Map ID#*	Map Name	Feature	Name
SC317	Tacoma - 4	School	Metro Parks Program School
SC318	Tacoma - 4	School	Region V Learning Center
SC319	Tacoma - 4	School	University of Washington Tacoma Campus Tioga Building
SC320	Tacoma - 4	School	Tacoma School of the Arts
SC321	Tacoma - 4	School	Learning Opportunity Center
SC322	Tacoma - 4	School	Fife Elementary School
SC323	Tacoma - 4	School	Fife High School
SC324	Tacoma - 4	School	Hawthorne School
SC325	Tacoma - 4	School	Holy Innocents School
SC326	Tacoma - 4	School	Rogers Elementary School
SC327	Tacoma - 4	School	Columbia Junior High School
SC328	Tacoma - 4	School	Roosevelt Elementary School
SC329	Tacoma - 4	School	Riverside Elementary School
SC330	Tacoma - 4	School	Chief Leschi School
SC331	Tacoma - 4	School	Walker Road School
SC332	Tacoma - 4	School	Waller Road Elementary School
SC333	Tacoma - 4	School	Toddlers University II Child Care Center
SC334	Tacoma - 4	School	Central Avenue Elementary School
SC335	Tacoma - 4	School	Collins Elementary School
SC336	Tacoma - 4	School	Discovery Station Child Care Center
SC337	Tacoma - 4	School	Clover Creek Elementary School
SC338	Tacoma - 4	School	Spanaway Christian School
SC339	Tacoma - 4	School	Child's Time II Early Learning Center
SC340	Tacoma - 4	School	Elk Plain Elementary School
SC341	Tacoma - 4	School	Care Bear Child Care Center
SC342	Tacoma - 4	School	Roy Elementary School
TR7	Centralia - 5	Tribal Lands	Chehalis Reservation
HP61	Centralia - 5	Historic Building	Rainier School
SC343	Centralia - 5	School	Yelm Middle School
SC344	Centralia - 5	School	Fort Stevens Elementary School

Map ID#*	Map Name	Feature	Name
SC345	Centralia - 5	School	Yelm Extension School
SC346	Centralia - 5	School	Yelm Intermediate School
SC347	Centralia - 5	School	Our Redeemer Lutheran School
SC348	Centralia - 5	School	Rainier Elementary School
SC349	Centralia - 5	School	Rainier Junior/Senior High School
PK58	Centralia - 5	Park	Riverside County Park
SC350	Mt. Saint Helens - 6	School	Toledo High School
SC351	Mt. Saint Helens - 6	School	Toledo Middle School
SC352	Mt. Saint Helens - 6	School	Toledo Elementary School
SC353	Mt. Saint Helens - 6	School	Toledo Elementary School
SC354	Mt. Saint Helens - 6	School	Butler Acres Elementary School
SC355	Mt. Saint Helens - 6	School	Coweeman Middle School
SC356	Mt. Saint Helens - 6	School	Kelso High School
HP62	Vancouver - 7	Historic Building	Klager, Hulda, Lilac Gardens
HP63	Vancouver - 7	Historic Building	Lancaster, Judge Columbia, House
HP64	Vancouver - 7	Historic Building	Shobert, William Henry, House
HP65	Vancouver - 7	Historic Building	Sara Store
HP66	Vancouver - 7	Historic Building	US Post Office--St. John's Station
HP67	Vancouver - 7	Historic Building	St. Johns Signal Tower Gas Station
HP68	Vancouver - 7	Historic Building	West Hall
HP69	Vancouver - 7	Historic Building	McDougall--Campbell House
HP70	Vancouver - 7	Historic Building	McDougall, Alexander D., House
HP71	Vancouver - 7	Historic Building	McDougall, Natt and Christena, House
PK59	Vancouver - 7	Park	Abrams Park
PK60	Vancouver - 7	Park	Shillapoo Wildlife Recreation Area
PK61	Vancouver - 7	Park	Vancouver Lake Park
SC357	Vancouver - 7	School	Cloverdale School

Map ID#*	Map Name	Feature	Name
SC358	Vancouver - 7	School	Woodland High School
SC359	Vancouver - 7	School	Woodland Elementary School
SC360	Vancouver - 7	School	Woodland Middle School
SC361	Vancouver - 7	School	Union Ridge Elementary School
SC362	Vancouver - 7	School	View Ridge Middle School
SC363	Vancouver - 7	School	Dwight D Eisenhower Elementary School
SC364	Vancouver - 7	School	Fruit Valley Elementary School

SECTION 7 SUSTAINED RESPONSE ACTIONS

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List of Figures

7.1 Response Resources

7.1.1 Company Response Equipment

Company Response Equipment is listed in Figure 7.1. The equipment listed is available for response to both the Olympic Pipe Line and the Cherry Point Crude Line. Under current standards for response this equipment would be used by Olympic to establish initial containment within 2 hours of an incident. Olympic has established a Primary Response Contractor (PRC) agreement with National Response Corporation Environmental Services Inc. (NRCES) that provides 24/7 imbedded staff dedicated to Olympic for the purpose of meeting the 30 minute mobilization and 2 hour response standards for company owned equipment. Under this agreement NRCES will have 2 response personnel and a tow vehicle on call for each of Olympics 3 equipment trailers at all times.

7.1.2 Response Equipment Inspection and Maintenance

Company response resources consist of strategically located response trailers containing primarily safety and spill response equipment. One or more of the trailers can be mobilized to any location along the pipeline within 2 hours to meet the Washington Administrative Code (WAC) 173-182-365 and Tier 1 response planning requirements. Additional contractor equipment can also respond to any location on the pipeline system to meet the 6, 12, 24 and 48 hour response requirements.

Company response equipment is tested and inspected by NRCES response personnel in accordance with the same equipment maintenance procedures outlines in their approved PRC application. All maintenance records will be kept on file and available for inspection for a period of 5 years.

Figure 7.1: Locations of Spill Response Trailers

Location	WRRL #	Closest Mile Post	Trailer/Truck (Age)	Boats (Age)	Pumps / Skimmers	Boom	Other
Bayview Products Terminal 14879 Ovenell Road Mt. Vernon, WA 98273	30123	37	20' white Response Trailer (2008) Ford F250 4x4 Crew Cab (2008)	12' V bottom skiff with 15hp o/b (2008) (mounted on response truck)	2" diesel pump skimpac skimmer (26 gpm derated capacity)	200' - 5" sorbent 200' - sorbent sweep 1600' - 12" river 400' - 6" pond	8" PVC pipe (2) 3 x 8', open top drums
SF Tacoma Yard 1231 E 21st Street Tacoma, WA 98421	30124	130	20' white Response Trailer (2008) Ford F250 4x4 Crew Cab (2008)	12' V bottom skiff with 15hp o/b (2008) (mounted on response truck)	2" diesel pump skimpac skimmer (26 gpm derated capacity)	200' - 5" sorbent 200' - sorbent sweep 1600' - 12" river 400' - 6" pond	8" PVC pipe (2) 3 x 8', open top drums
Castle Rock Station 185 Kalmbach Quarry Rd Castle Rock, WA 98611	30125	209	20' white Response Trailer (2008) Ford F250 4x4 Crew Cab (2008)	12' V bottom skiff with 15hp o/b (2008) (mounted on response truck)	2" diesel pump skimpac skimmer (26 gpm derated capacity)	200' - 5" sorbent 200' - sorbent sweep 1600' - 12" river 400' - 6" pond	8" PVC pipe (2) 3 x 8', open top drums

Notes:
" = inches
' = feet
# = number
gpm = gallons per minute
hp = horsepower
o/b = on board
WRRL = Worldwide Response Recourse List

Figure 7.2: Spill Response Trailer Inventory

Trailer Description	Wells Cargo
Trailer Length:	20 feet
Trailer Weight:	
Trailer Hitch Type:	2 inch Ball
Trailer Electrical Connection Type:	
Inventory Date / by:	
Trailer Seal #	

Type of Equipment	**Specifications**	**On Hand**	**Unit**
Boom	River 12 inch	1600	Feet
	Pond 6 inch	400	Feet
	Sorbent	200	Feet
	Tow Bridle	3	Each
Dam Building Materials	PVC Pipe (8 inch X 8 feet)	3	Each
	Visqueen	1	Roll
	Metal Posts	12	Each
	Rope - 1/2 inch	2	600' Roll
Miscellaneous tools	Shovel - Round	1	Each
	Pitch Fork	1	Each
	Fence Post Driver	1	Each
	Weedeater	1	Each
	Chain Saw	1	Each
Hand Tools	Tool Box	1	Each
	Ratchet Set	1	Each
	Screwdriver Set	1	Each
	Crescent Wrench	1	Each
	Handsaw	1	Each
	Flashlight	1	Each
	Duct Tape	2	100' Roll

Type of Equipment	Specifications	On Hand	Unit
Trailer Location:			
Trailer ID:			
Trailer Description	Wells Cargo		
PPE/Safety/Decontamination Equipment	First Aid Kit	1	Each
	Safety Goggles	1	Each
	Eye Wash Exp. Date _____	1	Each
	Rubber Gloves	2	Pair
	Fire Extinguisher	1	Each
	Brush Cutter Harness	1	Each
	Chain Saw Chaps And Face Shield	1	Each
	Rain Gear	2	Set
Recovery Equipment	Pump - 1 inch Double Diaphragm	1	Each
	Skimmer - Skimpak 4200	1	Each
	Suction/Discharge hose (1 inch)	80/100	feet
	Air Compressor	1	Each
	Air Hose	75	Feet
	Strainer	1	Each
	Gasoline fuel can with funnel	1	Gallon
	Miscellaneous cam lock fittings	1	Box
Boats/motors	V bottom boat 12 feet	1	Each
	Motor - 15 horsepower, 2 stroke outboard	1	Each
	Danforth Anchors and Bouys	3	Each
	Boat gas tank	1	Each
	Air horn	1	Each

7.1.3 Contracts, Contractor Equipment and Manpower

The Company's PRCs as well as other companies who can provide spill response services are provided in Section 3. The Company has ensured by contract the availability of private personnel and equipment necessary to respond, to the maximum extent practicable, to the worst case discharge or the substantial threat of such discharge. The PRCs are also geographically distributed to provide materials, equipment and manpower in a timely manner even in the unlikely event of simultaneous oil spills.

Appendix B contains contracts for the Company's PRCs. Since these contractors are United States Coast Guard certified Oil Spill Removal Organizations (OSROs), equipment lists are not required to be maintained in this plan.

The OSROs have contracts with other companies therefore the company has endeavored to select contractors with sufficient equipment and overlapping areas of operation to ensure response equipment and personnel availability.

In the event that additional resources, not dedicated to spill response, are required to respond to an incident, Olympic will first utilize its OSRO contractors to source and acquire the needed equipment through established cooperative agreements. If the equipment cannot be obtained by the OSROs within 48 hours Olympic can request assistance from the BP Business Support Team (BST) that has been established to deal with business resourcing issues during an emergency.

7.1.4 Communications Equipment

Primarily Olympic communication is conducted using landline and cellular telephones. Additional communications equipment includes cellular telephone based applications, handheld VHF-FM radios, pagers, and fax machines. Equipment may be provided by the Company or leased from a communications retailer. Communications with government agencies, state police and contractors can be conducted on portable radios. Refer to Figure 7.3 for communications guidelines.

Figure 7.3: Communications Checklist

Communications Checklist	Initials	Date & Time Started	Date & Time Completed
Develop communications plan			
Ensure adequate phone lines per staff element - contact local provider			
Ensure adequate fax lines - contact local provider			
Internet access necessary?			
Ensure recharging stations for cellular phones			
VHF radio communications: *establish frequencies *assign call signs *distribute radios *establish communications schedule			
Ensure recharging stations for VHF radios			
Determine need for VHF repeaters			
Ensure copy machine available			
Ensure communications resource accountability			
Ensure responders have capability to communicate with aircraft.			

Note: Actions on this checklist may not be applicable or may be continuous activities.

7.1.5 Command Post

The Company will maintain an Emergency Operations Center (EOC) during a spill event. A prescreened list of hotels that have convention/meeting rooms that would serve for an incident command center are listed in Figure 7.5. Additional Tactical Command Post(s) (TCP) may be set up in the vicinity as needed. For guidelines for establishing a Command Post, refer to Figure 7.4.

Figure 7.4: Command Post Checklist

Command Post Checklist	Initials	Date & Time Started	Date & Time Completed
Ensure adequate space for size of staff			
Ensure 24 hour accessibility			
Ensure personal hygiene facilities			
Ensure suitability of existing communications resources (phone/fax/radio)			
Ensure availability of private conference and briefing rooms			
Identify command post security requirements, safe location			
Notify other parties of Command Post location, provide maps/driving directions			
Determine staging areas and incident base locations			
Identify future need to move, upgrade facilities			

Note: Actions on this checklist may not be applicable or may be continuous activities.

Figure 7.5: Command Post Locations

Name	Address	Driving Directions
Best Western Lakeway	714 Lakeway drive Bellingham, WA 98229 (360) 671-1011	From interstate 5 north - use exit 253 Lakeway drive. Turn right at the stop sign onto king street. Take a right onto Lakeway drive at the stoplight. The best western Lakeway inn s entrance is the first driveway on the left.
Holiday Inn Everett	3105 pine street Everett, WA 98201 (425) 339-2000	From north - i-5 north to exit 193. Left on pacific avenue. Left on pine street.
Hyatt Regency, Bellevue	900 Bellevue way ne, Bellevue, WA 98004 (425) 462-1234	From 405 north – Bellevue Exit NE 8th street west. Hotel is on 8th street ne and Bellevue way.
Embassy Suites Tukwila	15920 w valley road Tukwila, WA 98188 (425) 227-8844	From i-5 exit i-405 north, take exit 1 /west valley highway/ and travel 2 blocks south to the hotel. Hotel is located at southeast corner of west valley highway and Longacre way.
Red Lion Olympia	2300 evergreen park drive Olympia, WA 98502 360-943-4000	From interstate 5 north or southbound take exit 104 highway 101. From highway 101, Take the first exit - Crosby boulevard / cooper point road. Turn right onto cooper point road. Turn right on evergreen park drive and the right on south evergreen park drive. Turn right into Morris business park at Lakeridge way, straight to the hotel.
Best Western Plus Park Place Inn & Suites	201 interstate avenue Chehalis, WA 98532 360-748-4040	From interstate 5 north or southbound take exit 76, Go one block east, turn right onto interstate avenue for 400 ft.
Red Lion Kelso/Longview	510 s kelso dr. Kelso, WA 360-636-4400	From interstate 5 north or southbound take exit 39. Turn left onto wa-4/Allen street. Turn right onto S kelso dr. Destination will be on the left
Hilton Vancouver	301 w 6th street Vancouver, WA 98660	South on interstate 5- take interstate 5 into Vancouver- Washington. Take the city center exit /1c/. Turn right onto mill plain Blvd. -becomes 15th street- Turn left onto Columbia street. Hotel is on the SW corner of 6th and Columbia

7.2 Site Security Measures

Due to the large amount of public attention created at an oil spill site, additional security measures are required. Several measures should be planned in advance to prepare security personnel for various possible scenarios including the unlikely event of simultaneous spills. A checklist for site security is included in Figure 7.6.

Figure 7.6: Site Security Checklist

Site Security Checklist	Initials	Date & Time Started	Date & Time Completed
Restrict access to the site.			
Direct traffic away from the site.			
Request assistance from the Sheriff's Department to: • Establish road blocks where necessary, to secure the area • Divert local traffic away from the spill area • Provide access for spill response equipment and personnel			
Coordinate rescue operations with the local fire department paramedics.			
Request, through the Federal On-Scene Coordinator, the Federal Aviation Administration (FAA) restrict air space over the site.			
Contract for additional security personnel, as needed.			
Maintain strict control over all personnel and vehicular traffic entering the site.			
Position security personnel to effectively control non-response personnel.			
Barricade lesser traveled points with appropriate signs warning against entry.			
Establish check points at barricaded points to verify security effectiveness.			
Maintain a log that documents all security related incidents and observations made at the spill site.			
Establish a pass system and distribute pre-prepared security passes to all spill related personnel.			
Ensure all response equipment is safeguarded.			

A model Site Security Plan is provided in Figure 5.2.

7.3 Public Affairs

This section contains guidelines for dealing with the media during an emergency. The Incident Commander will play a key role in providing the initial public assessment and taking the first steps to provide the Company's public response. Information in this section includes:

- Guidelines for dealing with the media,
- Incident Fact Sheet, and
- List of Potential Questions

GUIDELINES FOR DEALING WITH THE MEDIA

- You as a company manager are the most logical person for reporters to seek out for information.
- If you don't answer the reporters' questions, they will look elsewhere to find out what happened. However, if you do not have this information or are not prepared to answer a particular question, say so. Then say when they can expect the answers to their questions (i.e. one hour, etc.).
- It is important to be courteous to all media representatives and to provide a safe place for them to wait until a company representative can meet them. You may need to provide an initial statement.

Do Provide:

- A brief, general description of what happened.
- Number of injured or killed, if known.
- Steps being taken to handle the emergency.

Don't Provide:

- Names of deceased or seriously injured employees until the next of kin have been notified.
- Speculation about the cause of the emergency.
- Any statement implying personal or company negligence.
- Cost estimates of damage.

Other Considerations:

- Safety considerations should always receive priority in determining access to company property.
- Anticipate likely questions:
  - There are only six questions that can be asked about any subject: Who, What, When, Where, Why and How.
- Keep answers short and understandable. Answer only the question that is asked by the reporter.
- Give the most important facts first. Talk to the public's concern about the incident.
  - Are there deaths or injuries, is there an immediate threat to the public. Is there any danger of explosion, is the fire under control, can it be controlled?
- If you don't know the answer to a question, don't be afraid to say "I don't know".
  - Make note of the question and tell the reporter that you will try to get the answer for him - then do it.
- Don't be defensive.

- There is no such thing as "Talking off the record".
  - Assume that anything and everything you say to a reporter is going to be printed or used in the story.
- Avoid "What If" or speculative questions.
  - These questions should be answered with a restatement of the problem and what is being done to control it.
- Don’t speculate about the cause of the incident.
- Don’t minimize the situation.

Figure 7.7: Incident Fact Sheet

What occurred? _____

When (Time)? _____

Where (Location)? _____

What are hazards? _____

How is the situation being handled? _____

_____

How many people involved? _____

Confirmed injuries/fatalities _____

How/Where being treated? _____

Name of injured (release only after next of kin are notified) _____

_____

Name of fatalities (release only after next of kin are notified) _____

_____

What agencies have been notified? _____
On scene? (Yes/No) _____

Who is in charge? _____

Has outside help been requested _____ Who? _____
On scene? (Yes/No) _____

Is there danger to the plant? _____

Is there danger to the community _____ What _____

_____

Is there an environmental hazard? _____

What is the environmental hazard? _____

What is being done to minimize environmental threat _____

_____

Is there a need for evacuation? _____

Figure 7.8: List of Potential Questions

1. How big is the spill? (approximately) _____

2. How did it happen? _____

3. When did it happen? Date: _____ Time: _____

4. What is Olympic doing to clean up the spill and prevent other spills? _____

5. What if the spill hit the beach, residential or recreational areas, or environmentally sensitive areas?

6. Is the material hazardous and/or toxic? _____

7. Has any fish or wildlife been affected? _____

8. What was the last occurrence of this nature? _____

9. What is Olympic's environmental policy?

SECTION 8 DEMOBILIZATION / POST-INCIDENT REVIEW

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8.1 Equipment Demobilization

Demobilization is one of the areas that the Company can significantly reduce costs with proper planning. Therefore, emphasis must be placed on establishing efficient demobilization procedures. A demobilization checklist is contained in Figure 8.1. A demobilization plan is included in Figure 8.2.

Figure 8.1: Demobilization Checklist

Demobilization Checklist	Initials	Date & Time Started	Date & Time Completed
Assign personnel to identify surplus resources and probable release times			
Establish demobilization priorities			
Develop decontamination procedures			
Initiate equipment repair and maintenance			
Develop Disposal Plan			
Identify shipping needs			
Identify personnel travel needs			
Develop impact assessment and statements			
Obtain concurrence of Planning and Operations prior to release of personnel or equipment			

Figure 8.2: Demobilization Plan

Incident Name:		Plan Location:	
Effective Date of Plan:		Effective Time Period of Plan:	
Spill Location:		Plan Prepared By:	

Demobilization Procedures

- Staging Area Manager will determine which resources are ready for release from a specific collection site. The Staging Area Manager will provide guidance on release priorities and demobilization recommendations. Information maintained by the Situation Unit Leader will be utilized to assist in the prioritization.
- Each collection site will require a decontamination area. Decontaminated equipment will be returned to appropriate staging area for release or re-deployment. Transports for equipment will be required if remote from staging area.
- Staging Area Manager will document all demobilization and decontamination activities.
- Equipment designated for re-assignment will be mobilized to the appropriate staging area.
- The Staging Area Manager will maintain a log documenting that proper decontamination procedures were performed for each piece of equipment.
- The Operations Section Chief will ensure that redeployed personnel receive proper rest prior to their return to duty. The Staging Group Leader will monitor personnel redeployment activities to ensure number of hours worked is within acceptable guidelines.
- The Operations Section Chief must approve demobilization plans prior to decontamination, release, or redeployment of any resources.

8.2 Post Incident Review

All facility personnel involved in the incident shall be debriefed within two weeks after termination of operations. A standard debriefing form is provided in Figure 8.3. The primary purpose of the post-spill review is to identify actual or potential deficiencies in the Facility Response Plan (FRP) and determine the changes required to correct the deficiencies. The post-spill review is also intended to identify which response procedures, equipment, and techniques were effective and which were not and the reason(s) why. This type of information is very helpful in the development of a functional FRP by eliminating or modifying those response procedures that are less effective and emphasizing those that are highly effective. This process should also be used for evaluating training drills or exercises. Key agency personnel that were involved in the response will be invited to attend the post-spill review.

Figure 8.3: Standard Debriefing Form

Name of incident: _____

Date: _____

Personnel Debriefed

Name: _____

Normal duty: _____

Summary of duties performed during incident (list date, time, and location):

_____

_____

_____

_____

_____

Positive aspects of the response:

_____

_____

_____

_____

Aspects of the response which could be improved:

_____

_____

_____

_____

Name: _____

Title: _____

Signature: _____

8.2.1 Final Spill Cleanup Report

A final, comprehensive report shall be prepared by the Incident Commander or his designee after completion of spill cleanup activities for internal use. It should be written in the narrative form, including all appropriate information listed below:

1. Time, location, and date of discharge.
2. Type of material discharged.
3. Quantity discharged (indicate volume, color, length and width of slick, and rate of release if continuous).
4. Source of spill (tank, flowline, etc.) in which the oil was originally contained, path of discharge, and impact area.
5. Detailed description of what actually caused the discharge and actions taken to control or stop the discharge.
6. Description of damage to the environment.
7. Steps that Company or contractors took to clean up the spilled oil, and dates and times steps were taken.
8. The equipment used to remove the spilled oil, dates, and number of hours equipment was used.
9. The number of persons employed in the removal of oil from each location, including their identity, employer, and the number of hours worked at that location.
10. Actions by the Company or contractors to mitigate damage to the environment.
11. Measures taken by the Company or contractors to prevent future spills.
12. The federal and state agencies to which the Company or contractors reported the discharge. Show the agency, its location, the date and time of notification, and the official contacted.
13. Description of the effectiveness of equipment and cleanup techniques and recommendations for improvement.
14. The names, addresses, and titles of people who played a major role in responding to the event.
15. A section identifying problems and deficiencies noted during the response event. A follow-up section should include recommended procedure modifications to make a future response more effective and efficient.
16. All other relative information.
17. A final signature as follows:

The above information is true to the best of my knowledge and belief:

Name:_____

Title:_____

Signature:_____

Date:_____

APPENDIX A TRAINING AND EXERCISES

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A.1 Exercise Requirements and Schedules

Olympic Pipe Line Company LLC (Olympic) participates in the National Preparedness for Response Exercise Program (NPREP) to satisfy the exercise requirements of the United States Environmental Protection Agency (USEPA), Pipeline and Hazardous Materials Safety Administration (PHMSA), Washington Department of Ecology (WDOE) and Oregon Department of Environmental Quality (ODEQ). A listing of all exercise requirements to be completed within the three year (triennial) cycle is listed in Figure A.1. The Environmental Coordinator is responsible for scheduling, maintaining records, implementing and evaluating the drill program, and ensuring that post-drill evaluation improvements are implemented and the plan is updated accordingly.

Olympic will schedule oil spill exercises on the Northwest Area Committee area exercise calendar. Deployment drills will be scheduled at least 30 days in advance, tabletop drills at least 60 days in advance, and worst case tabletop drills at least 90 days in advance (Figure A.2). This will ensure that Ecology is provided with the opportunity to help design and evaluate all tabletop and deployment drills.

Figure A.1: NPREP Core Components

Core Components	Description
1. Organizational Design	
A. Notifications	Test the notifications procedures identified in the Area Contingency Plan and the associated Responsible Party Response Plan.
B. Staff Mobilization	Demonstrate the ability to assemble the spill response organization identified in the Area Contingency Plan and the associated Responsible Party Response Plan.
C. Ability to operate within the response management system described in the plan	Demonstrate the ability of the spill response organization to work within a unified command. Demonstrate the ability of the response organization to operate within the framework of the response management system identified in their respective plans.
2. Operational Response	
A. Discharge Prevention/Control	Demonstrate the ability of the spill response organization to control and stop the discharge at the source.
B. Assessment	Demonstrate the ability of the response organization to provide initial assessment of the discharge and provide continuing assessments of the effectiveness of the tactical operations.
C. Containment	Demonstrate the ability of the spill response organization to contain the discharge at the source or in various locations for recovery operations.
D. Recovery	Demonstrate the ability of the spill response organization to recover the discharged product.
E. Protection	Demonstrate the ability of the spill response team organization to protect the environmentally and economically sensitive areas identified in the Area Contingency Plan and the respective industry response plan.
F. Disposal	Demonstrate the ability of the spill response organization to dispose of the recovered material and contaminated debris.
3. Response Support	
A. Communications	Demonstrate the ability to establish an effective communications system for the spill response organization.
B. Transportation	Demonstrate the ability to establish multi-mode transportation both for execution of the discharge and support functions.
C. Personnel Support	Demonstrate the ability to provide the necessary support of all personnel associated with response.
D. Equipment Maintenance and Support	Demonstrate the ability to maintain and support all equipment associated with the response.
E. Procurement	Demonstrate the ability to establish and effective procurement system.
F. Documentation	Demonstrate the ability of the spill response organization to document all operational and support aspects of the response and provide detailed records of decisions and actions taken.

Figure A.2: Exercise Type and Frequency

Exercise Type	Exercise Characteristics
Facility/Qualified Individual (QI) Notification	• Conducted quarterly • Environmental Coordinator initiates mock spill notification to QI • Environmental Coordinator documents time/date of notification, name, and phone number of individuals contacted • Document in accordance with form in Figure A.3
Equipment Deployment	• Conducted semiannually • Response contractors listed in plan must participate in annual deployment exercise • Document in accordance with form in Figure A.3
Tabletop	• Conducted annually • Must exercise worst case discharge scenario once every three years • Must test all plan components at least once every three years • Environmental Coordinator may choose to utilize The Response Group (TRG) for training, planning, implementation, and coaching services. • Will utilize the use of the Facility Response Plan, Northwest Area Contingency Plan, Incident Management Handbook, Field Document and TRG's Incident Action Plan Software. • Document in accordance with form in Figure A.3
Unannounced	• Company will either participate in unannounced tabletop exercise or equipment deployment exercise on an annual basis, if selected • Company may take credit for participation in government initiated unannounced drill in lieu of drill required by NPREP guidelines • Plan holders who have participated in a NPREP government-initiated unannounced exercise will not be required to participate in another one for a least 36 months from the date of the exercise.
Area	• An industry plan holder that participates in an Area Exercise would not be required to participate in another Area Exercise for a minimum of six years.
Other Exercise Considerations	
Drill Program Evaluation Procedures	• Company conducts post-exercise meetings to discuss positive items, areas for improvement and to develop action item checklist to be implemented later
Records of Drills	• Company will maintain exercise records for five years following completion of each exercise • Records will be made available to USEPA, PHMSA, WDOE, ODEQ and other applicable agencies upon request • Company will verify appropriate records are kept for each spill response contractor listed in Plan as required by NPREP

Exercise Type	Exercise Characteristics
	guidelines (annual equipment deployment drill, triennial unannounced drill, etc.)

Figure A.3: After Action Report

Exercise Documentation Form/After Action Report (AAR)

Facility Name:_____ Address:_____

Prepared By:_____ Phone Number:_____

Date of Exercise:_____ Time Exercise Began:_____ Time Exercise Ended:_____

Other BP Facilities Receiving Credit for This Exercise: _____

Please Check Type of Exercise (check as many as apply)

- ☐ QI Notification
- ☐ Announced Spill Management Team Tabletop
- ☐ Unannounced Spill Management Tabletop
- ☐ Announced Facility Equipment Deployment
- ☐ Unannounced Facility Equipment Deployment
- ☐ Security
- ☐ Medical Emergency
- ☐ Transport
- ☐ Contractor Equipment Deployment
- ☐ Government Initiated Unannounced Drill
- ☐ Area Exercise
- ☐ On Board Emergency Procedures
- ☐ Evacuation
- ☐ Natural Disaster
- ☐ Fire/Explosion
- ☐ Business Continuity

Indicate which components were exercised during this drill/incident

- ☐ Notification
- ☐ Staff Mobilization
- ☐ Response Management System
- ☐ Discharge Control
- ☐ Discharge Assessment
- ☐ Discharge Containment
- ☐ Recovery of Spilled Material
- ☐ Sensitive Area Protection
- ☐ Disposal
- ☐ Communications
- ☐ Transportation
- ☐ Personnel Support
- ☐ Procurement
- ☐ Documentation
- ☐ Equip. Maintenance

Names and Response Team Role of Participants
(Use separate sheet if necessary and include contractors.)

_____ _____

Scenario Detailed Description (Use separate sheet if necessary.)

Describe how drill/ incident objectives were met. (Denote actual or simulated, include equipment deployed.)

Evaluation/Recommendations/ Lessons Learned:

List action items to be implemented, action assignment and provide a tentative time table for implementation of those items.

Facility Manager/Team Leader (BP Products)

Print Name_____ Signature_____ Date_____

Agency Verification (if applicable)

Print Name_____ Signature_____ Date_____

Agency Name_____

A.2 Training Program

The following table lists training requirements for spill responders:

Training Type	Training Characteristics
Training in Use of Facility Response Plan (FRP)	• Field personnel will be trained to properly report/monitor spills utilizing the Field Document • Plan will be reviewed annually by all employees • Facility Response Plan/Field Document Training records can be located in the BP My Talent and Learning (MT&L)
Occupational Safety and Health Administration (OSHA) Training Requirements	• Company responders designated in the FRP must have 24 hours of initial spill response training • Laborers having potential for minimal exposure must have 24 hours of initial oil spill response instruction and 8 hours of actual field experience • Spill responders having potential exposure to hazardous substances at levels exceeding permissible exposure limits must have 40 hours of initial training offsite and 24 hours of actual field experience • On-site management/supervisors required to receive same training as equipment operators/general laborers plus 8 hours of specialized hazardous waste management training • Managers/employees require 8 hours of annual refresher training • Hazardous Waste Operations and Emergency Response (HAZWOPER) Emergency Response Levels provided in Figure A.5
Spill Management Team Personnel Training	• See recommended NPREP Training Matrix (Figure A.4)
Training for Casual Laborers or Volunteers	• Company will not use casual laborers/volunteers for operations requiring HAZWOPER training
Wildlife	• Only trained personnel with permits issued by U.S. Fish and Wildlife Service and appropriate state agency will be used to treat oiled wildlife
Training Documentation and Record Maintenance	• Training activity records will be retained five years for all personnel following completion of training • Company will retain training records indefinitely for individuals assigned specific duties in FRP • Training records can be located in MT&L

A.2.1 Qualified Individual

The Qualified Individual (QI) will coordinate with the Federal, State, Local and Tribal On-Scene Coordinators (FOSC, SOSC, LOSC, TOSC) throughout the response. Vital duties of the QI include:

- Notify all response personnel, as needed.
- Assist Team Leads to identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification.
- Work with the Environmental Coordinator to Notify and provide necessary information to the appropriate Federal, state, and local authorities with designated response roles, including the National Response Center (NRC), Washington Emergency Management Division (WEMD), and local response agencies.
- Work with the Safety Coordinator to assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion).
- Assess and implement prompt removal actions to contain and remove the substance released.
- Coordinate rescue and response actions as previously arranged with all response personnel.
- Engage in contracting with oil spill removal organizations.
- Use authority to immediately access company funding to initiate cleanup activities.
- Direct cleanup activities until properly relieved of this responsibility.

Figure A.4: IMT Training Matrix

Course Information	Course Name	NIMS ICC 100 Intro to ICS	NIMS ICS 200 ICS-single resources / initial actions	NIMS ICS 300 Intro to IMT	IMT	Initial IDT training	NIMS ICS 400 Intermediate ICS for expanded incidents	Cert/evaluation procedures	Field Performance	IDT / DOT Review	BST exercise	Annual Exercise or Activation for an incident	Refresher	Media/Comms Training (e.g. Cape Vidal)	PREPDT/JOC Virtual Desk Drill Annual Update	IAP software	JIC training	JIC Prep/Desk Training	Command Staff	ICP Operations Section	Logistics/Finance Section	Planning Section	Management Assistance training staff	IDT Functional/Full DP	IAP/OPCON	Misc Workshops / Seminars (e.g. SACAD, GIS, Technology, Wildlife etc.)		
	Training Time	2 hrs	2hrs	2 hrs	4 hrs	4 hrs	3 Days	na	na	2 hr	4 hrs	4-8 hours	4 hrs	2 days	8-16 hours	4 hrs	8 hrs	8 hrs	8 hrs	8 hrs	8 hrs	8 hrs	1 day	4 hrs	8-24 hrs	na	na	na
	Delivery Format	Online	Online	Online	Classroom	Classroom	Classroom	Classroom or Online	Classroom or Online	Classroom	Exercise	Exercise	Classroom	Classroom	Exercise	Classroom	Classroom	Classroom	Classroom	Classroom	Classroom	Classroom	Classroom	Classroom	Classroom	Various	Various	Various
	Frequency†	Once	Once	Once	Once	Once	Once	Annual	Annual	Annual	Annual	Annual	Annual	2 years	3 years	3 years	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years	3 years	4 years	tbd	na	na	na
	Course Category	One-time course				Course completed every year							Completed every year; fulfilled by any optional course(s)	Course completed every two years	Course completed every three years									Course completed every four years	As per local HSSE requirements	Case by case requirements		
ICS Role/Response Staff	**INCIDENT MGMT TEAM (IMT)**																											
	COMMAND STAFF																											
	Incident Commander / Dep IC																											
	Safety Officer																											
	Information Officer (GPA Function Support)**																											
	Law Officer (Legal Function Support)**																											
	HR Officer (Function Support)**																											
	Security Officer (Function Support)**																											
	Liaison Officer (GPA Support, Identified SME)**																											
	OPERATIONS SECTION																											
	Section Chief – Operations / Deputy																											
	Branch Directors / Dep																											
	Group/Div Supv ; TF Leaders*											3 yr																
	Staging Area Manager											3 yr																
	ICP Staff											3 yr																
	PLANNING SECTION																											
	Section Chief – Planning / Deputy																											
	Environmental Unit Leader																											
	Situation / Resource Unit Leader																											
	Documentation Unit Leader																											
	ICP Staff											3 yr																
	LOGISTICS SECTION																											
	Section Chief – Logistics / Deputy																											
	Branch Directors/Unit Leaders																											
	ICP Staff											3 yr																
	FINANCE SECTION																											
	Section Chief – Finance																											
	Unit Leaders											3 yr																
	Staff											3 yr																
	On-site TACTICAL RESPONSE TEAM (TRT)																											
	On-Scene Commander*																											
	Site Safety Officer*											3 yr																
	Personnel expected to respond in accordance with Asset Emergency Plan*																											
	All on-site employees																											
	BUSINESS SUPPORT TEAM (BST)																											
	Business Support Team Leader																											
	C&CM Coordinator																											
	Situation Status Coor																											
	Functional Advisors				***									***			***						****					
	Asset Advisors																											

Figure A.5: HAZWOPER Emergency Response Levels

Level	Description
1	**Witness** or **discoverer** of a spilled product discharge; sole emergency response responsibility is to notify the Incident Commander. Training Requirement: Sufficient to demonstrate competency at position.
2	**First responders** who respond to releases as part of the initial response effort; trained to respond within a defensive manner (i.e. booming to contain the release and prevent it from spreading), but not to stop the release. **Training Requirement:** HAZWOPER First Responder Awareness Level **Frequency:** Annual **Time Estimate:** 8+ hrs **Employees Required to be Trained:** Individuals who are likely to witness or discover a hazardous material release and who have been trained to initiate an emergency response sequence by notifying the appropriate authorities. OSHA 1910.120(e), (g)(6)(l) Competencies: • Understand what hazardous substances are, and the risks associated with them in an incident • Understand the potential outcome associated with an emergency created when hazards substances are present • Recognize the presence of hazardous substances in an emergency. • Identify the hazardous substances, if possible • Understand the role of the first responder awareness individual in the Company's emergency response plan including site security and control and the United States Department of Transportation's (USDOT) Emergency Response Guidebook • Realize the need for additional resources, and to make appropriate notifications
3	**Hazardous materials technicians** trained to aggressively stop the release; these individuals plug, patch, or otherwise block the release of product at the source. **Training Requirement:** HAZWOPER Hazardous Material Technician Level **Frequency:** Initial **Time Estimate:** 24 + hrs **Employees Required to be Trained:** Individuals Who respond to hazardous material releases or potential releases for the purpose of stopping the release. (OSHA 29 Code of Federal Regulations [CFR] 1910.120) **Competencies:** • Meet requirements for First Responder; • Implement of emergency plans; • Classify, identify, and verify hazardous material using field survey equipment; • Function an assigned role in the Incident Command System; • Hazard and risk assessment techniques; • Advance control, containment, or confined operations (within capacities of resources and the personal protective equipment (PPE) available; • Decontamination procedures; • Termination procedures; • Basic chemistry and toxicology terminology and behavior; • Select and use proper specialized chemical PPE provided to hazardous material technicians.

Level	Description
4	**Hazardous materials specialists** trained to have specific knowledge of hazardous releases and substances, manage spill cleanup operations, and act as liaisons with governmental authorities. **Training Requirement:** HAZWOPER On Scene Incident Commander Level **Frequency:** Initial **Time Estimate:** 24+ hrs **Employees Required to be Trained:** Individuals (called Incident Commander) who will assume control of an incident scene beyond the "First Responder Awareness Level". (OSHA 29 CFR 1910.120) **Competencies:** In addition to 24 hours of training equal to the technician level, specialists must have competency in the following: • Implement the employer's incident command system; • Implement the employer's emergency response plan; • Understand the hazards and risks associated with employees working in chemical PPE; • Implement the local emergency response plan; • The State emergency response plan and Federal Regional Response Team; and • Understand the importance of decontamination procedures.
5	**Incident Commander** of an industry spill response team assuming control of the incident Training Requirement: HAZWOPER Hazardous Material Technician Level **Frequency:** Initial **Time Estimate:** 24+ hrs **Employees Required to be Trained:** Individuals who respond to hazardous material releases or potential releases for the purpose of stopping the release. (OSHA 29 CFR 1910.120) **Competencies:** • Meet requirements for First Responder; • Implement of emergency plans; • Classify, identify, and verify hazardous material using field survey equipment; • Function an assigned role in the Incident Command System; • Hazard and risk assessment techniques; • Advance control, containment, or confined operations (within capacities of resources and the PPE available; • Decontamination procedures; • Termination procedures; • Basic chemistry and toxicology terminology and behavior; • Select and use proper specialized chemical PPE provided to hazardous material technicians.

APPENDIX B CONTRACTOR RESPONSE EQUIPMENT

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B.1 Spill Response Contractors

Olympic Pipe Line Company LLC (Olympic) has contracted with additional Oil Spill Response Organizations (OSROs) to provide personnel and equipment in the event of a spill. The National Response Corporation Environmental Services Inc. (NRCES) and Marine Spill Response Corporation (MSRC) will respond to inland and marine releases. The classification, response capabilities and equipment is described below.

B.1.1 OSRO Classification

The OSRO classification process was developed by the United States Coast Guard (USCG) to provide guidelines that the USCG and plan preparers can evaluate an OSRO's potential to respond to and recover oil spills. Plan holders that utilize USCG classified OSRO services, are not required to list their response resources in their plans.

The following is a listing of the USCG classified OSROs for the inland/nearshore and shoreline operating area in the Captain of the Ports (COTP) that are ensured to respond to incidents on the pipeline system and associated facilities listed in this Plan:

OSRO

MSRC
COTP:
Puget Sound, Washington
Portland, Oregon
Coos Bay, Oregon

USCG CLASSIFICATIONS

	Facilities				Vessels			
	MM	W1	W2	W3	MM	W1	W2	W3
River/Canal	✔	✔	✔	✔	✔	✔	✔	✔
Inland	✔	✔	✔	✔	✔	✔	✔	✔
Open Ocean	✔	✔	✔	✔	✔	✔	✔	✔
Offshore	✔	✔	✔	✔	✔	✔	✔	✔
Nearshore	✔	✔	✔	✔	✔	✔	✔	✔
Great Lakes								

NRCES
COTP:
Bellingham, Washington
Seattle, Washington
Tacoma, Washington
Portland, OR

	Facilities				Vessels			
	MM	W1	W2	W3	MM	W1	W2	W3
River/Canal	✔	✔	✔	✔	✔	✔	✔	✔
Inland	✔	✔	✔	✔	✔	✔	✔	✔
Open Ocean	✔		✔	✔	✔	✔	✔	✔
Offshore	✔		✔	✔	✔	✔	✔	✔
Nearshore	✔		✔	✔	✔	✔	✔	✔
Great Lakes								

Letters of commitment for these OSROs are included on the following pages. Copies of the entire OSRO contracts will be made available for inspection if requested by Ecology.

B.1.2 OSRO Evidence of Contracts

- MSRC
- NRCES

MSRC
Marine Spill Response Corporation®

CERTIFICATE of OSRO Coverage Onshore Facilities Operator

This certificate provides evidence of OSRO coverage for

and its affiliates (if applicable) for the calendar year 2021 under membership in the Marine Preservation Association (MPA) and through a fully executed service agreement with the Marine Spill Response Corporation (MSRC).

Pursuant to this agreement with MSRC,

(1) Is entitled to directly activate MSRC response services, and

(2) Has contractual ability to cite MSRC as Oil Spill Removal Organization (OSRO) in its Facility Response Plan(s) (FRPs).

MSRC's Service Agreement with
provides direct access to MSRC's OSRO response services, as well as a plan citation for any facilities or pipelines that operate within MSRC's U.S. Operational area through December 31, 2021.

For any clarification regarding this notification, please contact MSRC or refer the verifying authority to:

Ceren Karaer
Customer Relationship Manager

Marine Spill Response Corporation
3838 N Sam Houston Pkwy E, Suite 400
Houston, TX 77032
+1 703 304 9688
customer.service@msrc.org

1 January 2021 – 31 December 2021

MSRC
Marine Spill Response Corporation®

CERTIFICATE of OSRO Coverage Onshore Facilities Operator

This certificate provides evidence of OSRO coverage for

and its affiliates (if applicable) for the calendar year 2021 under membership in the Marine Preservation Association (MPA) and through a fully executed service agreement with the Marine Spill Response Corporation (MSRC).

Pursuant to this agreement with MSRC,

(1) Is entitled to directly activate MSRC response services, and

(2) Has contractual ability to cite MSRC as Oil Spill Removal Organization (OSRO) in its Facility Response Plan(s) (FRPs).

MSRC's Service Agreement with
provides direct access to MSRC's OSRO response services, as well as a plan citation for any facilities or pipelines that operate within MSRC's U.S. Operational area through December 31, 2021.

For any clarification regarding this notification, please contact MSRC or refer the verifying authority to:

Ceren Karaer
Customer Relationship Manager

Marine Spill Response Corporation
3838 N Sam Houston Pkwy E, Suite 400
Houston, TX 77032
+1 703 304 9688
customer.service@msrc.org

1 January 2021 – 31 December 2021

CERTIFICATE of

MSRC Marine Spill Response Corporation

OSRO Coverage Offshore E&P Facilities Operator

This certificate provides evidence of OSRO coverage for
and its affiliates (if applicable) for the calendar year 2021 under membership in the Marine Preservation Association (MPA) and through a fully executed service agreement with the Marine Spill Response Corporation (MSRC).

Pursuant to this agreement with MSRC,
(1) Is entitled to directly activate MSRC response services, and
(2) Has contractual ability to cite MSRC as Oil Spill Removal Organization (OSRO) in its Facility Response Plan(s) (FRPs).

MSRC's Service Agreement with
provides direct access to MSRC's OSRO response services, as well as a plan citation for any facilities that operate within MSRC's U.S. Operational area through December 31, 2021.

For any clarification regarding this notification, please contact MSRC or refer the verifying authority to

Ceren Karaer
Customer Relationship Manager

Marine Spill Response Corporation
3838 N Sam Houston Pkwy E, Suite 400
Houston, TX 77032
+1 703 304 9688
customer.service@msrc.org

1 January 2021 – 31 December 2021

March 21, 2021

Alexandria "Alex" Crooks
Environmental Coordinator | Crisis and Continuity Management
Olympic Pipe Line Company LLC
Operated by BP Pipelines North America Inc.
600 SW 39th Street, Suite 275
Renton, WA 98057

Via Email: alex.crooks@bp.com

RESPONSE CONTRACTOR CERTIFICATION

This letter confirms that NRC Environmental Services Inc. (NRC) has a Short Form Master Services Agreement with Olympic Pipe Line Company (OPL), Agreement No.: OLY-2008MSA001 (Agreement). Under this Agreement, NRC is the primary response contractor providing Standby Personnel and services solely dedicated to assist OPL in meeting its 2-hour planning standards for initial booming requirements per WAC 173-182-365 beginning on or about February 1, 2009.

The scope of services provided by NRC under the Agreement – as detailed in the incorporated "NRCES Standby Services Proposal – Revised" dated October 29, 2008 – are as specified by OPL. In addition, NRC provides OPL with approved PRC services for Shoreline Cleanup (WAC 173-182-522) and Wildlife Services (WAC 173-182-540). All services provided by NRC are based on planning standards and do not include performance guarantees for deployments during drills or actual spill responses.

If you have any questions regarding NRC coverage, please don't hesitate to contact me either by phone at 206-730-3993 or by email at stephanie.barton@usecology.com.

Best Regards,

Stephanie Barton

Stephanie Barton
Director, Emergency Response Programs
NRC Environmental Services Inc.
9520 10th Ave. S., Ste 150
Seattle, WA 98108

Copy: Tiffany Gallo and Sophie Todd, NRC

APPENDIX C OLYMPIC PIPE LINE SYSTEM OVERVIEW

Table of Contents

List of Figures

C.1 Overview

The Olympic Pipe Line Company LLC (Olympic) operating system consists of over 400 miles of petroleum products pipelines; extending from four refineries in Northwestern Washington and continuing through the State of Washington (paralleling Puget Sound and the Interstate 5 corridor), terminating near Portland, Oregon. The Cherry Point Crude Pipeline, also operated by BP, is covered in Appendix D.

Delivery facilities located in the State of Washington:

- Mt. Vernon (Bayview),
- Renton,
- Seattle (Harbor Island),
- Sea-Tac International Airport,
- Tacoma,
- Spanaway (Tacoma Station), and
- Vancouver.

and in the State of Oregon:

- Linnton, and
- Portland.

Olympic receives products from four (4) refineries in the State of Washington:

- BP Cherry Point Refinery,
- Phillips 66 Ferndale Refinery,
- Tesoro NW Refinery, and
- Shell Anacortes Refinery.

The Olympic pipeline network consists of a single 16" mainline originating at the BP Cherry Point and Phillips 66 Ferndale Refineries, which flows to Bayview Products Terminal, continuing to Allen Station. There is also a 16” line originating at Tesoro NW Refinery and Shell Anacortes Refinery, which flows to Bayview Products Terminal, continuing to Allen Station. Dual mainlines (16" and 20") transport petroleum products from Allen Station to Renton Pump Station.

A single 14” mainline runs from Renton, Washington to Portland, Oregon. 12" lateral lines provide connections from Renton Pump Station to the Seattle and Sea-Tac Delivery Facilities. Lateral lines of 6", 8", and 12" carry products from the 14" main line to the Tacoma, and Vancouver Delivery Facilities, respectively.

Olympic's Bayview Products Terminal consists of five (5) storage tanks and one (1) utility tank, with a cumulative total of 561,300 barrels (bbls).

Olympic transports the following refined petroleum products within the operating system:

- various grades of gasoline,
- aviation turbine fuel (kerosene),
- diesel fuel.

All main line and booster pumping units are driven by electric motors, with a total horsepower in excess of 43,000. The system is operated via remote control from the Renton Control Center.

The following delivery lines (Figure C.1) are owned and/or maintained by Olympic. Routine inspections of all line segments are performed on a periodic basis. (Inspection of some of these lines requires the assistance of appropriate terminal personnel.) The line segments must be physically inspected, with a

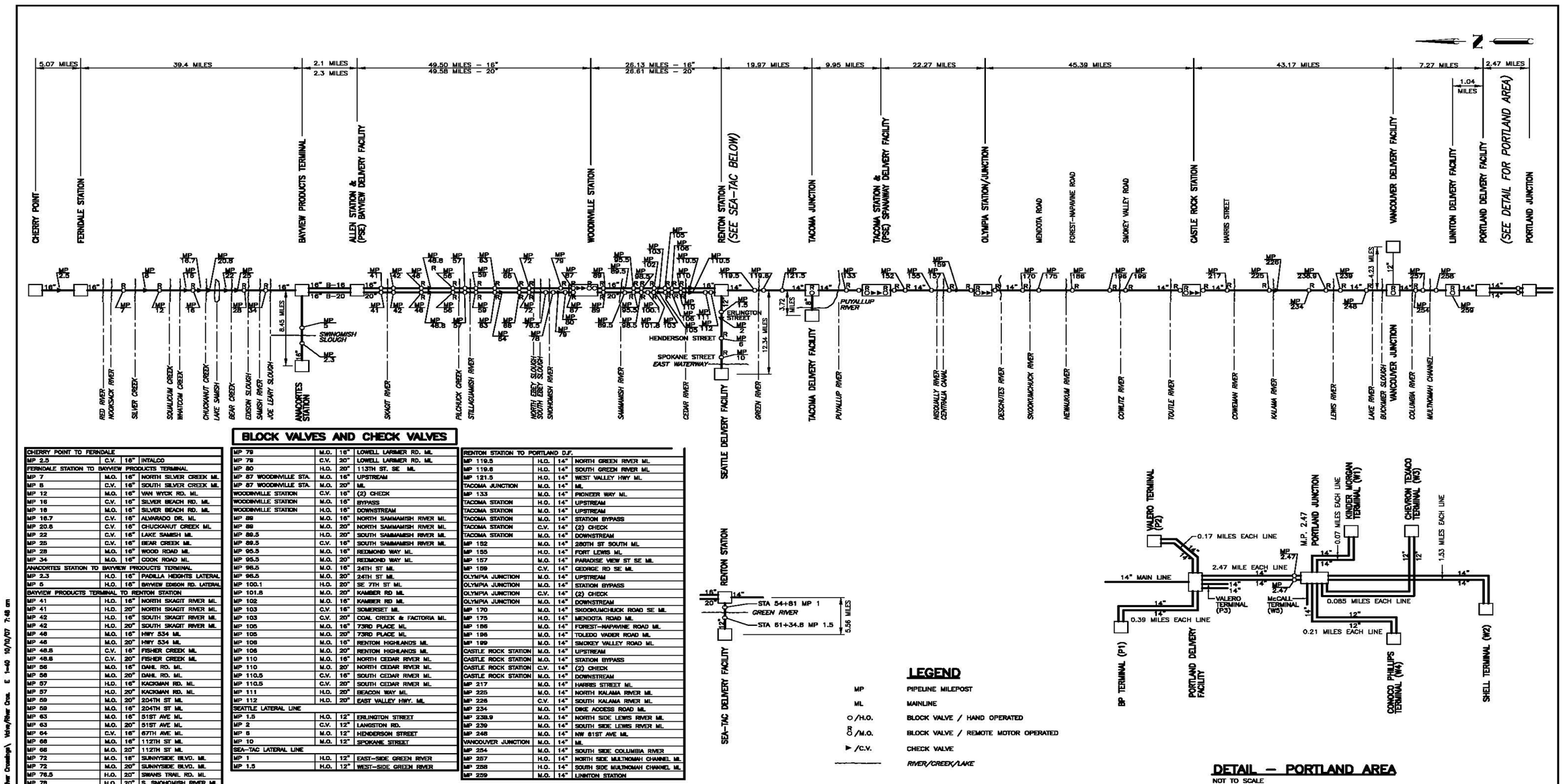
verbal status report issued to the Renton Control Center, subsequent to an abnormal event encompassing the operation of these lines.

Figure C.2 illustrates the line segments covered in this Plan.

Figure C.1: Delivery Line Segments

Renton Delivery Facility	• Gasoline/fuel delivery lines to Phillips 66 terminate at the insulated flanges within the Phillips 66 tank farm.
Seattle Delivery Facility (Harbor Island)	• Gasoline/fuel delivery lines to Kinder Morgan terminate at the insulated flanges within the Kinder Morgan tank farm. • Gasoline/fuel delivery lines to Shell terminate at the insulated flanges at Shell's tank farm fire wall. • Fuel delivery line to Shell's north tank farm terminates at the insulated flange within Shell's north tank farm. • Gasoline/fuel delivery lines to BP terminate at the insulated flanges at Olympic's Seattle Delivery Facility.
Sea-Tac Delivery Facility	• Aviation turbine fuel delivery lines into tankage at the Seatac Terminal. Seatac Terminal is owned by the Port of Seattle and operated by Swiss Port.
Tacoma Delivery Facility	• Gasoline/fuel delivery lines to Phillips 66 terminate within Phillips 66 tank farm fire wall. • Gasoline/fuel delivery lines to Phillips 66 terminate within Phillips 66 tank farm. • Gasoline/fuel delivery lines to Nustar terminate within Nustar's tank farm. • Gasoline/fuel delivery lines to Targa terminate at the flange Tacoma Delivery Facility.
Vancouver Delivery Facility	• Gasoline/fuel delivery lines to Tesoro terminate at the insulated flanges within Tesoro's tank farm. • Gasoline/fuel delivery lines that are currently idled (disconnected and purged product free) that run from the Vancouver Delivery Facility west along St. Francis Lane approximately 925 feet towards West 26th Avenue.
Linnton Delivery Facility	• Gasoline/fuel delivery lines to Kinder Morgan terminate at the insulated flanges at Olympic's Linnton Delivery Facility.
Portland Delivery Facility	• Gasoline/fuel delivery lines to BP terminate within BP's fire wall at the insulated flanges. • Gasoline/fuel delivery lines to Time terminate at the insulated flanges at Nustar's tank farm.
Portland Junction	• Gasoline/fuel delivery lines to Kinder Morgan terminate at the Kinder Morgan dock at the insulated flanges. • Gasoline/fuel delivery lines to Phillips 66 terminate at Phillips 66 tank farm fire wall. • Gasoline/fuel delivery lines to Chevron terminate at Chevron's insulated flanges inside a vault. • Fuel delivery lines to McCall terminate at the insulated flange at Olympic's Portland Junction facility. • Gasoline/fuel delivery lines to Shell terminate inside Shell's fire wall at the insulated flanges inside a vault.

Figure C.2: Olympic System Map



BLOCK VALVES AND CHECK VALVES

CHERRY POINT TO FERNDALE			
MP 2.5	C.V.	16"	INTALCO
FERNDALE STATION TO BAYVIEW PRODUCTS TERMINAL			
MP 7	M.O.	16"	NORTH SILVER CREEK ML.
MP 8	C.V.	16"	SOUTH SILVER CREEK ML.
MP 12	M.O.	16"	VAN WYCK RD. ML.
MP 16	C.V.	16"	SILVER BEACH RD. ML.
MP 16	M.O.	16"	SILVER BEACH RD. ML.
MP 16.7	C.V.	16"	ALVARADO DR. ML
MP 20.8	C.V.	16"	CHUCKANUT CREEK ML
MP 22	C.V.	16"	LAKE SAMISH ML
MP 25	C.V.	16"	BEAR CREEK ML.
MP 28	M.O.	16"	WOOD ROAD ML.
MP 34	M.O.	16"	COOK ROAD ML.
ANACORTES STATION TO BAYVIEW PRODUCTS TERMINAL			
MP 2.3	H.O.	16"	PADILLA HEIGHTS LATERAL
MP 5	H.O.	16"	BAYVIEW EDISON RD. LATERAL
BAYVIEW PRODUCTS TERMINAL TO RENTON STATION			
MP 41	H.O.	16"	NORTH SKAGIT RIVER ML.
MP 41	H.O.	20"	NORTH SKAGIT RIVER ML.
MP 42	H.O.	16"	SOUTH SKAGIT RIVER ML.
MP 42	H.O.	20"	SOUTH SKAGIT RIVER ML.
MP 46	M.O.	16"	HWY 534 ML
MP 46	M.O.	20"	HWY 534 ML
MP 48.6	C.V.	16"	FISHER CREEK ML
MP 48.6	C.V.	20"	FISHER CREEK ML
MP 56	M.O.	16"	DAHL RD. ML.
MP 56	M.O.	20"	DAHL RD. ML.
MP 57	H.O.	16"	KACKMAN RD. ML.
MP 57	H.O.	20"	KACKMAN RD. ML.
MP 59	M.O.	20"	204TH ST ML
MP 59	M.O.	16"	204TH ST ML
MP 63	M.O.	16"	51ST AVE ML
MP 63	M.O.	20"	51ST AVE ML
MP 64	C.V.	16"	67TH AVE ML
MP 66	M.O.	16"	112TH ST ML
MP 66	M.O.	20"	112TH ST ML
MP 72	M.O.	16"	SUNNYSIDE BLVD. ML.
MP 72	M.O.	20"	SUNNYSIDE BLVD. ML.
MP 76.5	H.O.	20"	SWANS TRAIL RD. ML.
MP 78	H.O.	20"	S. SNOHOMISH RIVER ML.
MP 79	M.O.	16"	LOWELL LARIMER RD. ML
MP 79	C.V.	20"	LOWELL LARIMER RD. ML
MP 80	H.O.	20"	113TH ST. SE ML
MP 87 WOODINVILLE STA.	M.O.	16"	UPSTREAM
MP 87 WOODINVILLE STA.	M.O.	20"	ML
WOODINVILLE STATION	C.V.	16"	(2) CHECK
WOODINVILLE STATION	M.O.	16"	BYPASS
WOODINVILLE STATION	H.O.	16"	DOWNSTREAM
MP 89	M.O.	16"	NORTH SAMMAMISH RIVER ML.
MP 89	M.O.	20"	NORTH SAMMAMISH RIVER ML.
MP 89.5	H.O.	20"	SOUTH SAMMAMISH RIVER ML.
MP 89.5	C.V.	16"	SOUTH SAMMAMISH RIVER ML.
MP 95.5	M.O.	16"	REDMOND WAY ML.
MP 95.5	M.O.	20"	REDMOND WAY ML.
MP 96.5	M.O.	16"	24TH ST ML.
MP 96.5	M.O.	20"	24TH ST ML.
MP 100.1	H.O.	20"	SE 7TH ST ML
MP 101.8	M.O.	20"	KAMBER RD ML
MP 102	M.O.	16"	KAMBER RD ML
MP 103	C.V.	16"	SOMERSET ML
MP 103	C.V.	20"	COAL CREEK & FACTORIA ML
MP 105	M.O.	16"	73RD PLACE ML
MP 105	M.O.	20"	73RD PLACE ML
MP 108	M.O.	16"	RENTON HIGHLANDS ML
MP 108	M.O.	20"	RENTON HIGHLANDS ML
MP 110	M.O.	16"	NORTH CEDAR RIVER ML
MP 110	M.O.	20"	NORTH CEDAR RIVER ML
MP 110.5	C.V.	16"	SOUTH CEDAR RIVER ML
MP 110.5	C.V.	20"	SOUTH CEDAR RIVER ML
MP 111	H.O.	20"	BEACON WAY ML
MP 112	H.O.	20"	EAST VALLEY HWY. ML
SEATTLE LATERAL LINE			
MP 1.5	H.O.	12"	ERLINGTON STREET
MP 2	C.V.	12"	LANGSTON RD.
MP 8	M.O.	12"	HENDERSON STREET
MP 10	M.O.	12"	SPOKANE STREET
SEA-TAC LATERAL LINE			
MP 1	H.O.	12"	EAST-SIDE GREEN RIVER
MP 1.5	H.O.	12"	WEST-SIDE GREEN RIVER
RENTON STATION TO PORTLAND D.F.			
MP 119.5	H.O.	14"	NORTH GREEN RIVER ML
MP 119.8	H.O.	14"	SOUTH GREEN RIVER ML
MP 121.5	H.O.	14"	WEST VALLEY HWY ML.
TACOMA JUNCTION	M.O.	14"	ML
MP 133	M.O.	14"	PIONEER WAY ML
TACOMA STATION	H.O.	14"	UPSTREAM
TACOMA STATION	M.O.	14"	UPSTREAM
TACOMA STATION	M.O.	14"	STATION BYPASS
TACOMA STATION	C.V.	14"	(2) CHECK
TACOMA STATION	M.O.	14"	DOWNSTREAM
MP 152	M.O.	14"	280TH ST SOUTH ML
MP 155	H.O.	14"	FORT LEWIS ML
MP 157	M.O.	14"	PARADISE VIEW ST SE ML
MP 159	C.V.	14"	GEORGE RD SE ML
OLYMPIA JUNCTION	M.O.	14"	UPSTREAM
OLYMPIA JUNCTION	M.O.	14"	STATION BYPASS
OLYMPIA JUNCTION	C.V.	14"	(2) CHECK
OLYMPIA JUNCTION	M.O.	14"	DOWNSTREAM
MP 170	M.O.	14"	SKOOKUMCHUCK ROAD SE ML
MP 175	H.O.	14"	MENDOTA ROAD ML
MP 186	M.O.	14"	FOREST-NAPAVINE ROAD ML
MP 196	M.O.	14"	TOLEDO VADER ROAD ML
MP 199	M.O.	14"	SMOKEY VALLEY ROAD ML
CASTLE ROCK STATION	M.O.	14"	UPSTREAM
CASTLE ROCK STATION	M.O.	14"	STATION BYPASS
CASTLE ROCK STATION	C.V.	14"	(2) CHECK
CASTLE ROCK STATION	M.O.	14"	DOWNSTREAM
MP 217	M.O.	14"	HARRIS STREET ML
MP 225	M.O.	14"	NORTH KALAMA RIVER ML
MP 226	C.V.	14"	SOUTH KALAMA RIVER ML
MP 234	M.O.	14"	DIKE ACCESS ROAD ML
MP 238.9	M.O.	14"	NORTH SIDE LEWIS RIVER ML
MP 239	M.O.	14"	SOUTH SIDE LEWIS RIVER ML
MP 248	M.O.	14"	NW 61ST AVE ML
VANCOUVER JUNCTION	M.O.	14"	ML
MP 254	M.O.	14"	SOUTH SIDE COLUMBIA RIVER
MP 257	H.O.	14"	NORTH SIDE MULTNOMAH CHANNEL ML
MP 258	H.O.	14"	SOUTH SIDE MULTNOMAH CHANNEL ML
MP 259	M.O.	14"	LINNTON STATION

LEGEND

MP	PIPELINE MILEPOST
ML	MAINLINE
○/H.O.	BLOCK VALVE / HAND OPERATED
⊙/M.O.	BLOCK VALVE / REMOTE MOTOR OPERATED
▶/C.V.	CHECK VALVE
	RIVER/CREEK/LAKE

DETAIL – PORTLAND AREA

NOT TO SCALE

NOTES

VALVE EFFECTIVENESS WORK IN PROGRESS

MP 130 AND MP 140 (14") VALVES TO BE INSTALLED

MP 119.6 (14") VALVE TO BE CONVERTED TO M.O.

LEGEND

NO.	REVISION	DATE	CH.	APPR.
12	ADDED VALVE EFFECTIVENESS WORK COMPLETED TO DATE	EDM 05/23/05	EDM 05/23/05	KHH 05/23/05
15	UPDATED	WAM 1/27/11	WAM 1/27/11	
14	ADDED NEW VALVES	EDM 10/19/07	CCH 10/19/07	
13	ADDED VALVE EFFECTIVENESS WORK COMPLETED TO DATE	EDM 6-30-06	CCH 6-30-06	KHH 6-30-06

PROJECT NUMBER

HORIZONTAL DATUM:
VERTICAL DATUM:
NOTE BOOKS:
AFE NO'S:

ENGINEERING		
DRAFTSMAN	EDM	6-30-06
ENGINEERING CHECK		
DRAFTING CHECK		
APPROVED		DATE

OLYMPIC PIPELINE COMPANY
Renton, Washington

BLOCK VALVES AND RIVER CROSSINGS

SCALE	DRAWING NO.	REV. NO.
NOT TO SCALE	D-240	15

EDM D-240-14.dwg X:\Drafting\River Crossings\ Valve/River Cross. E 1=40 10/10/07 7:48 am

Figure C.3: Line Fills and Displacements

MAINLINE SEGMENT	BASE VOLUME
16" Cherry Point Pump Station - Ferndale Booster Area	6,088 bbls
16" Ferndale Booster Area - Bayview Products Terminal	47,301 bbls
16" Bayview Products Terminal - Allen Station (B-16)	2,844 bbls
16" Anacortes Station - Bayview Products Terminal	9,436 bbls
16" Bayview Products Terminal - Allen Station (B-20)	2,137 bbls
16" Allen Station - Woodinville Pump Station	61,000 bbls
16" Woodinville Pump Station - Renton Pump Station	31,500 bbls
20" Allen Station - Renton Pump Station	149,000 bbls
14" Renton Pump Station - Tacoma Pump Station	27,715 bbls
Tacoma Pump Station - Olympia Junction	20,620 bbls
Olympia Junction - Castle Rock Pump Station	42,036 bbls
Castle Rock Pump Station - Portland Delivery Facility	47,000 bbls
Portland Delivery Facility - Portland Junction	2,312 bbls

Figure C.4: Base Volume Capacities

LINE	SEGMENT (from-to)	LENGTH (miles)	INSIDE DIAMETER (inches)	CAPACITY (bbls/mile)	LINE FILL (60^{O}F, zero pressure)
Main Line					
16"	CP - FB	5.02	15.3750	1,212.68	6,088
16"	FB - FE	0.06	15.2500	1,193.05	72
16"	FE - BV	39.00	15.3750	1,212.68	47,301
16"	BV - AL (FE)	1.80	15.3750	1,212.68	2,137
16"	AS - AA	1.51	15.5000	1,232.48	1,861
16"	AT - AA	1.12	15.5000	1,232.48	1,380
16"	AA - BV	7.80	15.3750	1,212.68	9,436
16"	BV - AL (AA)	2.30	15.3750	1,216.68	2,844
16"	AL - WN	49.52	15.3750	1,212.68	60,052
16"	WN - RE	26.11	15.3750	1,212.68	31,663
20"	AL - WN	46.97	19.5000	1,950.68	91,623
20"	AL - WN	0.07	19.4375	1,938.20	136
20"	AL - WN	2.02	19.3750	1,925.75	3,890
20"	AL - WN	0.46	19.0000	1,851.93	852
20"	WN - RE	25.39	19.5000	1,950.68	49,528
20"	WN - RE	0.91	19.4375	1,938.20	1,764
20"	WN - RE	0.36	19.3750	1,925.75	693
14"	RE - TJ	19.97	13.4375	926.31	18,498
14"	TJ - TA	9.95	13.4375	926.31	9,217
14"	TA - OJ	22.26	13.4375	926.31	20,620
14"	OJ - CR	45.38	13.4375	926.31	42,036
14"	CR - VJ	43.19	13.4375	926.31	40,007
14"	VJ - LI	5.38	13.4375	926.31	4,984
14"	VJ - LI	0.85	13.0000	866.97	737
14"	LI - PO	1.05	13.4375	926.31	973

LINE	SEGMENT (from-to)	LENGTH (miles)	INSIDE DIAMETER (inches)	CAPACITY (bbls/mile)	LINE FILL (60^{O}F, zero pressure)
Lateral					
12"	RE - SE	12.43	12.1875	761.99	9,472
12"	RE - ST	5.54	12.1875	761.99	4,221
8"	TJ - TA	3.72	8.2500	349.16	1,299
6"	OJ - OL	14.90	6.2500	200.39	2,986
12"	VJ - VA	4.23	12.1875	761.99	3,223

Figure C.5: Pipeline Facility Information

These facilities, stations and terminals are described in the following pages.

- Cherry Point Station
- Ferndale Station
- Phillips 66 Refinery Fuel Booster Pumps
- Anacortes-Tesoro Booster
- Anacortes-Shell Booster
- Anacortes Station
- Bayview Products Terminal
- Allen Station
- Woodinville Station
- Renton Station
- Renton Delivery Facility
- Seattle Delivery Facility
- Tacoma Junction
- Tacoma Delivery Facility
- Tacoma Station
- Olympia Junction/Station
- Castle Rock Station
- Vancouver Junction
- Vancouver Delivery Facility
- Linnton Delivery Facility
- Portland Delivery Facility
- Portland Junction

Cherry Point Pump Station

4476 Aldergrove Rd.
Ferndale, WA 98248

Cherry Point Station receives product from the BP Cherry Point Refinery and boosts the stream to Ferndale Station.

Refinery products are delivered by refinery booster pump(s) to Olympic's Cherry Point Station. A 1000-horsepower unit boosts the stream through a 16" line to Ferndale Station. The Cherry Point booster unit can be by-passed allowing the refinery boosters to pump directly to Ferndale at reduced flow rates. A gravity detection device and a 35-bbl double walled sump are provided to maintain quality control. A control valve is located downstream for pumping unit suction and discharge control. A 20" uni-directional prover and 10" meter are provided to maintain line integrity to Ferndale Station. A launcher, capable of

launching either scrapers or spheres, is located downstream of the mainline pumping units.

There are no manifold valves at Cherry Point, so refinery personnel are directed by the control center or field operations personnel when to make product changes.

Ferndale Station

3901 Unick Rd. (6th and “L” Street)
Ferndale, WA 98248

Ferndale Station receives products from the Phillips 66 Ferndale Refinery, BP Cherry Point Refinery or Cherry Point Station and pumps the stream to Bayview Products Terminal.

Ferndale Station booster pump area which receives product from Phillips 66 Refinery is configured with one 800-horsepower electric centrifugal unit (fuel booster) and one 450-horsepower electric-vertical centrifugal unit (gas booster).

The Ferndale Main Line Station pumping equipment consists of one 800-horsepower and two 2000-horsepower electric centrifugal units.

A 10-bbl double walled sump tank is located at the booster area. This sump is pumped into a 35-bbl sump located at the main line station. A control valve is provided for control of suction and discharge pressures. A launcher capable of launching either scrapers or spheres is located downstream of the main line pumping units. A receiver capable of receiving scrapers or spheres from Cherry Point Station is located upstream of the pumping units.

Phillips 66 Ferndale Refinery Fuel Booster Pumps

3901 Unick Rd. (6th and “L” Street)
Ferndale, WA 98248

The Phillips 66 refinery booster fuel pumps will start when the associated fuel valve is open and when the Ferndale fuel booster pump starts.

The refinery boosters have "hand - off - auto" switches which are in the "off" position until approximately 1 1/2 hours prior to start or swing to Phillips 66 fuel, at which time the switches are placed in the "auto" position by Phillips 66 Refinery personnel. Following Olympic's pumping of Phillips 66 fuel, the switches are returned to the "off" position, by Phillips 66 Refinery personnel.

There is a manually operated bypass valve between the refinery booster's suction and discharge valves. It is in the closed position when pumping to the pipeline and open only when the refinery is making a gravity feed to the refinery truck loading rack.

Anacortes-Tesoro Booster (K Booster)

10200 W March Point Rd. (7th & “G” Street)
Anacortes, WA 98221

The Anacortes-Tesoro Booster Station receives products from the Tesoro refinery and pumps the stream to Anacortes Station.

Products are received by gravity flow to the Tesoro booster manifold and pump units which are located on Tesoro refinery property. A 200-hp (horse power) electric-vertical centrifugal unit and a 750-hp electric-centrifugal unit boosts the stream to Anacortes Station where it is metered and pumped into the main line.

A 5-bbl sump tank is provided for quality control purposes.

Anacortes-Shell Booster (E Booster)

8505 South Texas Road (“A” Street)
Anacortes, WA 98221

The Anacortes-Shell Booster Station receives products from the Shell refinery and pumps the stream to Anacortes Station.

Products can be delivered by refinery pump to the Shell booster manifold and pump which are located on Shell refinery property. A 750-horsepower booster pump boosts the stream to Anacortes Station where it is metered and pumped into the mainline.

A 10-bbl double walled sump tank is provided for quality control purposes.

Anacortes Station

8830 North Texas Rd.
Anacortes, WA 98221

Anacortes Station receives products from the Shell or Tesoro refineries via the respective booster stations (E and K Booster) and pumps the stream to Bayview Products Terminal.

The Anacortes Station pumping equipment consists of one 750-horsepower and one 1000-horsepower pumping unit.

A 210-bbl utility tank is located within containment at the station. A gravity detection device and a 35-bbl double walled sump tank are for quality control. A control valve is provided for control of suction and discharge pressures. A launcher, capable of launching either scrapers or spheres is located downstream of the pump units.

A Programmable Logic Controller (PLC) is provided for remote control of the Shell and Tesoro Booster Stations.

Bayview Products Terminal

14879 Ovenell Road
Mt. Vernon, WA 98273

Olympic's Bayview Products Terminal receives products from the Ferndale and Anacortes refineries via the 16" lateral lines and boosts product to Allen station.

Products from either lateral line may be partially or completely diverted into one of the five 100,000-bbl above ground storage tanks or the above ground utility tank is 10,000-bbl capacity. Tank product designation is determined through computer driven scheduling software and can be changed to maximize system throughput. Transmix product may be injected into either outgoing lateral line.

Pumping equipment consists of three 1250-horsepower electric-centrifugal units and one 20-horsepower electric tank transfer pump. The units are connected in a series with one unit dedicated to each outgoing lateral and one unit configured as a swing unit, it can boost to either outgoing lateral. Control valves, strainer, turbine meters and auto-samplers are located on both incoming laterals and outgoing laterals. There are 6 meters located both downstream and upstream for line integrity.

Allen Station

16292 Ovenell Road
Mt. Vernon, WA 98273

Allen Station facilities enable product streams from the two lines coming from Bayview Products Terminal to be pumped into the 16" Allen-Renton line or the 20" Allen Renton line.

Allen 16" Station pumping equipment consists of one 1500-horsepower and two 2500-horsepower electric-centrifugal units connected in series. A control valve is located downstream of the pumping units to control minimum suction and maximum discharge pressures.

Allen 20" Station pumping equipment consists of two 2500-horsepower electric/centrifugal units connected in series. A control valve is located downstream of the pumping units to control minimum suction and maximum discharge pressures.

A 2000-bbl utility tank is provided for interfaces arriving from the incoming 16” and 20” lines. The interface material can be injected into either the 16" Allen-Renton line or the 20" Allen-Renton line. A 35-bbl sump which pumps into the utility tank is provided for quality control purposes.

Woodinville Station

21909 45th Ave. S.E.
Bothell, WA 98021

Woodinville Station operates as a pumping station on the Allen-Renton 16" mainline. The Allen-Renton 20" line passes through the station but there are no pumps on the 20” line at the station.

Woodinville Station pumping equipment consists of one 1000-horsepower electric-centrifugal unit and one 2000-horsepower electric-centrifugal unit. A control valve is located downstream of the mainline units to control minimum suction and maximum discharge.

An automatic sphere by-pass system is installed to allow scrapers and spheres to by-pass the pumping station without shutting down the pump units.

Renton Station

2319 Lind Ave. SW
Renton, WA 98057

Renton Station receives product from Allen-Renton 16” and 20” lines. The station operates as a pump station on the 14" mainline, boosting the stream from either the 16" or 20" Allen-Renton mainline and as the junction point for deliveries to the Seattle 12" lateral line, the Sea-Tac 12" lateral line and to Renton Delivery Facility located at Renton Station.

Renton Station's pumping equipment consists of three electric-centrifugal units (a 1250 horsepower and two 2500 horsepower). The pumping units are connected in series and may be used in any combination. A control valve is located downstream of the pumping units on the 14" mainline to control suction and discharge pressures.

A 10,000-bbl utility tank is provided for interfaces arriving in the incoming 16" and 20" lines. The interface material is disposed of primarily by injection can be injected into the 14" mainline stream, the Seattle lateral line stream or the Renton Delivery Facility stream. A 35-bbl sump tank is installed which can pump into the utility tank.

Receivers capable of handling either spheres or scrapers are installed on the 16" and 20" incoming mainlines. Launchers are installed on the 14" Portland mainline, the 12" Seattle lateral line and the Sea-Tac 12" lateral line.

Pressure relief valves installed on the Allen 16" and Allen 20" incoming lines provide surge relief to the utility tank.

Renton Delivery Facility

2319 Lind Ave. SW
Renton, WA 98057

Renton Delivery Facility has the function of making deliveries from the 16" or 20" manifold at Renton Station Phillips 66 tankage at its Renton Terminal.

Deliveries to Phillips 66 are made through Olympic's custody transfer turbine meter and dual 12" delivery lines.

The 35-bbl Renton Station sump is used for Renton Delivery Facility drain-down and quality control purposes. The 10,000-bbl utility tank is used to contain interface. Control valves located both upstream and downstream of the meter control pressure and flow rate.

Seattle Delivery Facility

2444-52 13th Ave. S.W.
Seattle, WA 98134

Seattle Delivery Facility delivers product from the 12" Renton-Seattle lateral line into tankage at BP, Kinder Morgan, and Shell terminals on Harbor Island.

A 35-bbl sump tank pumps into the 1000-bbl utility tank. Transmix accumulated in the utility tank can be injected back into the pipeline.

A receiver on the 12" line is capable of receiving either spheres or scrapers. A control valve installed upstream of the meter provides control of pressure and flow rate.

Sea-Tac Delivery Facility

2350 S. 190th St.
Seattle, WA 98158

Sea-Tac Delivery Facility delivers only aviation turbine fuel into tankage at the Seatac Terminal (S1), through a 12” lateral line from Renton Station. The Seatac Delivery is monitored and controlled by the Renton Control Center. Seatac Terminal is owned by the Port of Seattle and operated by Swiss Port.

Tacoma Junction

2660 Frank Albert Rd.
Fife, WA 98424

Tacoma Junction has the function of delivering products from the 14" Renton-Portland into the 8" Tacoma lateral line.

Products may be stripped from the 14" mainline stream or the stream may be turned full to the 8" Tacoma lateral line. Flow and pressure are regulated by means of a control valve installed downstream of the take-off point on the 8" line. A launcher capable of handling either scraper or spheres is located on the 8" Tacoma lateral line.

A 5-bbl sump tank is provided for quality control purposes. The sump tank at Tacoma Junction pumps into the 8" lateral line.

Tacoma Delivery Facility

706 East “F” Street
Tacoma, WA 98421

Tacoma Delivery Facility delivers product from the 8" Tacoma lateral line into tankage at Phillips 66 and Nustar.

A 35-bbl sump tank pumps into the 250-bbl utility tank. Transmix accumulated in the utility tank can be injected back into the pipeline.

The receiver on the 8" line is capable of receiving either spheres or scrapers. A control valve installed upstream of the meter provides control of pressure and flow rate.

Tacoma Station

4420 180th Street E
Tacoma, WA 98446

Tacoma Station operates as a pumping station on the Renton-Portland 14" mainline.

Tacoma Station pumping equipment consists of two 2500-horsepower electric-centrifugal units. A control valve is located downstream of the mainline units to control minimum suction and maximum discharge.

An automatic sphere by-pass system is installed to allow scrapers and spheres to by-pass the pumping station without shutting down the pump units.

A 35-bbl sump is installed to contain product which is injected into the mainline stream.

Olympia Junction/Station

11711 Vail Cut-off Road SE
Rainier, WA 98576

Olympia Junction/Station operates as a pumping station on the Renton-Portland 14" mainline. Products may be stripped from the 14" mainline stream to the 6" Olympia lateral downstream of the pumping units.

Olympia Junction/Station pumping equipment consists of two 2500-horsepower electric-centrifugal units. A control valve is located downstream of the mainline units to control minimum suction and maximum discharge.

An automatic sphere by-pass system is installed to allow scrapers and spheres to by-pass the pumping station without shutting down the pump units.

A control valve and a launcher are located on the 6" lateral line.

A 35-bbl sump is installed to contain product which is injected into the mainline stream.

Castle Rock Station

185 Kalmbach Quarry Road
Castle Rock, WA 98611

Castle Rock Station operates as a pumping station on the Renton-Portland 14" mainline.

Castle Rock Station pumping equipment consists of two 2500 horsepower electric-centrifugal units. A control valve is located downstream of the mainline units to control minimum suction and maximum discharge.

An automatic sphere by-pass system is installed to allow spheres to by-pass the pumping station without shutting down the pump units.

A 35-bbl sump is installed to contain product which is later injected into the main line stream.

Vancouver Junction

8815 N.W. Lower River Road
Vancouver, WA 98660

Vancouver Junction has the function of delivering products from the 14" Renton-Portland line into the 12" Vancouver lateral line.

Products may be stripped from the 14" mainline stream or the stream may be turned full to the 12" Vancouver lateral line. A scraper trap is located on the 12" Vancouver lateral line. A 12-inch launcher can accommodate both scrapers and spheres.

A 25-bbl sump tank which is pumped into the lateral line is provided for quality control purposes.

Vancouver Delivery Facility

2251 Saint Francis Lane
Vancouver, WA 98660

Vancouver Delivery Facility has the function of making deliveries from the 12" Vancouver lateral line to the Tesoro terminal.

Deliveries from the 12" line are made through Olympic's custody transfer meter and manifold. Each terminal is connected to Olympic's manifold by a 12" gasoline delivery line and a 12" fuel delivery line. A 1,000-bbl utility is used for interface which can be either injected into the delivery stream or by off-loading into a vacuum truck.

A 35-bbl sump is used for quality control purposes. The receiver on the incoming line can accommodate either spheres or scrapers. Control valves installed upstream and downstream of the meter control pressure and flow rate.

Linnton Delivery Facility

10225 N.W. 112th
Portland, OR 97231

Linnton Delivery Facility (Delivery Facility) delivers product into tankage at Kinder Morgan via the 14” Renton-Portland mainline.

Deliveries from the 14" line are made through Olympic's custody transfer meter and manifold.

A 35-bbl sump tank is located at Linnton Delivery Facility for quality control purposes. Control valves are installed upstream and downstream of the meter to regulate pressure and flow.

Portland Delivery Facility

9420 N.W. St. Helens Road
Portland, OR 97231

Portland Delivery Facility has the function of making deliveries from the 14" mainline directly to BP, Nustar terminals and to Kinder Morgan, Chevron, Phillips 66, McCall and Shell terminals by way of manifold valves at Portland Junction which is downstream of Portland D.F

Deliveries are made through Olympic's custody transfer meter and manifold. The BP and Nustar terminals are each connected to Portland Delivery Facility by dual 14" delivery lines - one for gasoline and one for fuel. A 14" gasoline line and a 14" fuel line extend from Portland Delivery Facility to Portland Junction where manifold valves and dual delivery lines connect to the terminals of Kinder Morgan, Chevron,

Phillips 66, McCall and Shell.

Two 2000-bbl utility tanks are used for interface can be injected into the delivery stream or by loading onto vacuum trucks. Portland also has the ability of off-loading trucks into tanks 105 and 106.

A 35-bbl sump is used for quality control purposes. The receiver on the incoming line can accommodate either spheres or scrapers. Control valves are located upstream and downstream of the meter to control pressure and flow rate.

Portland Junction

6160 N.W. Front
Portland, OR 97213

Portland Junction (Willbridge) has dual 14" lines (a gasoline line and a fuel line) incoming from Portland Delivery Facility. Manifold valves permit delivery of products to Kinder Morgan, Chevron, Phillips 66, McCall and Shell.

Custody transfer of the products at Portland Junction has been made upstream at Portland Delivery Facility.

Figure C.6: Block Valve Driving Directions

Location	Latitude	Longitude	Driving Directions
Cherry Point to Allen Station			
Cherry Point Station	48.878034	-122.725797	From I-5, take Slater Rd/Lummi Island exit #260, go west on Slater Road, then north on Lake Terrell Road and then west on Mountain View and north on Rainbow Road, which will turn to the west, then go north on Kickerville and west on Aldergrove approximately 1 mile. Cherry Point Station is on the north side of Aldergrove Road.
MP 2.5 Check Valve 16'' Cherry Point Lateral	48.855462	-122.70416	From Cherry Point refinery, head south on Kickerville Rd. Continue straight on Kickerville at Henry (do not bear left onto Rainbow Rd.) Continue 0.5 miles on Kickerville to dead end. Check Valve will be on left.
Ferndale Station	48.826527	-122.701272	From I-5, take Slater Rd./ Lummi Island exit #260. Turn left onto Slater Rd. and continue west for seven miles. Turn right on Lake Terrell Rd. and go north approximately 1 mile to Unick Rd. Turn left on Unick Rd and go 1/2 mile to the Phillips Refinery Main Gate. There are two security check points. When you pass the main security check pt. turn right, go 1 block to H street and turn left. Go to the end of H street and turn right onto L street. Continue 1/2 mile on L street to the intersection of 6th. OPL is at 6th and L Street intersection, south end of 6th
MP 7 Block Valve (MOV) 16''	48.818358	-122.554424	From I-5, take Slater Rd./Lummi Island exit #260. Turn left and go 0.3 mile and turn right on Rural Ave. Go 150' on right hand side.
MP 8 Check Valve 16''	48.81789807	-122.5292975	From I-5, take Slater Rd./ Lummi Island exit #260. Turn right on Slater rd, and go 0.8 of a mile to Northwest Ave and turn left. Check valve is 150' on left side of roadway.
MP 12 Block Valve (MOV) 16''	48.804086	-122.451669	Going north on I-5, take Sunset / Mt Baker exit #255 and turn right. Go 0.8 mile to third traffic light, at Hannigan Rd, and follow it for 1.9 miles and turn left on Van Wyck rd. Block Valve is 0.3 mile at intersection in board fenced area.
MP 16 Block Valve/Check Valve (MOV) 16''	48.747696	-122.433648	Going North on I-5, take Exit #253, Lakeway Drive. Turn right on King St. and go one block to Lakeway Drive. Turn Left and follow Lakeway Drive 1.4 miles to traffic light at Kenoyer Dr./ Silver Beach Rd. intersection. Turn left onto Silver Beach Rd, and look for dirt driveway 100' on right from the intersection.
MP 16.7 Check Valve 16''	48.738843	-122.433511	Going North on I-5 take Exit #253, Lakeway Drive. Turn right on King St. and go one block to Lakeway Drive. Turn Left and follow Lakeway Drive 1.4 miles to traffic light at Kenoyer Dr./ Silver Beach Rd. intersection. Turn right on Kenoyer Dr. and follow it 0.3 miles and turn left on Alvarado Dr. Follow it to the end of the pavement. Check Valve is 100 yards down the dirt road in the pipe fenced area.
MP 20.8 Check Valve 16''	48.685122	-122.427055	Going North on I-5 take North Lake Samish exit #246. Turn right on Samish Way and go 0.2 miles to Old Samish Rd. and turn right. Go 1.3 miles and turn left into

Location	Latitude	Longitude	Driving Directions
			mobile home park. Keep to the right and follow dirt road past the barn too logging gate on Chuckanut Creek (Gate Combo 5050). ML Check is 150' up the road, then turn right and follow path to the clearing where Check Valve is located.
MP 22 Check Valve 16''	48.668083	-122.410512	Going North on I-5, take North Lake Samish exit #246. Turn right on Samish Way, it will turn into North Lake Samish Rd. Follow this over the bridge to Roy Rd. Take the first logging rd. to the left and park at the logging gate (Gate combo 4567). The check valve is 150 yards up the dirt rd at the crest of the hill in vault.
MP 25 Check Valve 16''	48.62905	-122.375846	Going North on I-5, take Alger Exit #240. Turn left and go West 0.4 miles and turn left on Barrel Springs Rd. Follow for 0.2 miles and turn right on Shaw Rd. Go 0.3 mile to 1116 and 1120 and turn left into the driveway. You must stay to the left on this road and it will come out on the ROW at the Check Valve.
MP 28 Block Valve (MOV) 16''	48.592657	-122.37518	From I-5 North, take Exit #240 then east on Lake Samish Rd 0.2 miles, then South on Colony Road for 1.8 miles, then west on Wood Road for 1.7 miles. Block valve is just north of road.
MP 34 Block Valve (MOV) 16''	48.508532	-122.38914	From I-5, take Exit #232 and go west on Cook Road for 2.8 miles, which is then called Bradley Road. Our block valve is 0.6 miles just south of the Bradley Road.
Bayview Products Terminal	48.459188	-122.427075	From I-5 take Exit #230, go west on Highway 20 for 3.0 miles and turn right on Higgins Airport way. Go 0.3 miles and turn left on Ovenell Rd. Go .25 miles and BPT is on the right side of the road.
Anacortes Lateral			
Anacortes Station	48.477501	-122.548904	From I-5, take exit #230. Go west on Highway 20 for 7.1 miles, turn right on Padilla Heights road, go 2 miles and turn right on E. March Pt Rd. Go 1 mile, turn left on North Texas road, the road will bend right, the station is on the left side of the road.
MP 2.3 Block Valve (HOV) 16''	48.455119	-122.527682	From I-5, take exit #230 and go west on Hwy 20 for 7.1 miles then north (right) on Padilla Heights road for 0.1 miles then right on Casino Dr, Right at stop sign and stay to your right. Left on Padilla Heights Rd. Access road is on your left 150'.
MP 5 Block Valve (HOV) 16''	48.447483	-122.466027	From I-5, take exit #230 and go west on Highway 20 for about 6.4 miles to the Bay View Edison road, turn right. Go north for 0.1 miles, turn right on dirt road, go 150' - block valve is on the right.
Allen Station to Renton Station			
Allen Station	48.455649	-122.390823	From I-5, take exit 230, go west on Highway 20 for 2.2 miles and turn north onto Avon-Allen Rd, left on Ovenell Rd for .6 miles gate is on the left.
MP 41 Block Valve 16" & 20" (HOV)	48.398711	-122.370963	North on I-5, take exit #226, to west on Kincaid Street 0.3 mile, turn (right) north on South 3rd Street, go 0.3 miles and road will turn (left) west and become Division. Go 0.4 miles and turn (left) south on South Wall, go one

Location	Latitude	Longitude	Driving Directions
			block (300 feet) turn (right) west on McLean Road. Go 0.9 mile and turn (left) south on Penn Road go 1.6 miles road turn (right) west and becomes Calhoun Road, go .2 mile. Valves on (left) south side of road.
MP 42 Block Valve 16" & 20" (HOV)	48.391993	-122.357726	From I-5, take exit #221, go west take quick turn north (right) on Conway, go 2.1 miles, turn west on Stackpole Rd go 0..9 miles, turn north (right) on Dike Road go 1.5 miles. Valve on left side of road.
MP 46 Block Valve 16" & 20" (MOV)	48.34113	-122.321785	From I-5, take exit #221, go east on McMurray 0.5 mile. Valves on left side of road.
MP 48.8 Check Valve 16" & 20"	48.303992	-122.295823	From I-5, take exit #218, go east on Starbird Rd 1 mile to Bulson Road. Turn south (right) go 0..3 miles, turn right into driveway #23502.Check valve 100' south (left) of driveway.
MP 56 Block Valve 16" & 20" (MOV)	48.227736	-122.225904	From I-5, exit #212, go east on 268th Street NE 0.2 mile, turn south (right) on 4th Ave. NW go 1 mile to valves at end of road
MP 57 Block Valve 16" & 20" (HOV)	48.209606	-122.210827	From I-5, take exit #210 go east on 236th NE.0.3 miles. Valves on right side of road.
MP 59 Block Valve 16" & 20" (MOV)	48.181387	-122.193079	From I-5, take exit #208, go east on Arlington cut-off road 0.3 miles, turn south (right) on Smokey Point Blvd go 0.3 mile turn east (left) on 204th street NE. Valves on right side of road.
MP 63 Block Valve 16" & 20" (MOV)	48.134122	-122.160688	From I-5, take exit #206 go east 1 mile turn south (right) on 51st Ave NE. I mile turn east (left) on 152nd St NE, block valve is on the left.
MP 64 Check Valve 16"	48.111555	-122.140999	From I-5, take exit #206 go east 2 miles to 67th Ave NE, go south (right) 2.9 miles just past 132nd St. NE, block valve is on the right
MP 66 Block Valve 16" & 20" (MOV)	48.09562106	-122.1282666	From I-5, take exit #206, go east on 172nd Street NE. 2 miles, turn south (right) on 67th Ave. NE go 3.7 miles, turn east (left) on 112th Street NE., go to end of road through locked gate (Company locked) at Concrete NorWest Sand and Gravel straight 500 yards. Valves on right side of road.
MP 72 Block Valve 16" & 20" (MOV)	48.005229	-122.128624	From I-5, take Hwy 2, exit #194 go east 2.2 miles, turn north (left) on Lake Stevens Highway 204, go 0.2 miles, turn northwest (left) on 69th Ave. SE – Sunnyside Blvd. Go 2.1 miles. Valves on left side of road.
MP 76.5 Block Valve 20" (HOV)	47.939933	-122.160336	From I-5, take Hwy 2, exit #194 go east 1.8 miles turn off of the 20th st exit take a right at stop sign. Left on 43rd Ave Se. Follow to 52nd St Se which turns into Home Acres Rd for 1.25 miles. Block valve will be on south side of road.
MP 78 Block Valve 20" (HOV)	47.92551	-122.167457	From I-405, take exit #23 and head north on Hwy 522 to Hwy 9 exit. Turn left (north) on Hwy 9, go 8.4 miles to light at Marsh Rd. Turn east (right) on Marsh Rd ½ a block to "T", bear left (north) at "T", to Airport Way. Follow north approximately 1.1 miles, cross railroad tracks, turn left on Lowell-Snohomish River Rd. Head

Location	Latitude	Longitude	Driving Directions
			west on the road for approximately 3.4 miles. Locate the pipeline vent markers on both sides of the road, the block valve is just south of the railroad tracks 200' east from the underpass entrance.
Anacortes Lateral			
MP 79 Block Valve 16" (MOV) & 20" Check Valve	47.903305	-122.169114	From I-405, take exit #23 and head north on Hwy 522 to Hwy 9 exit. Turn left (north) on Hwy 9, go approximately 6.9 miles to Lowell-Larimer Rd. and turn west (left) at this light. Go approximately 2 miles to intersection of Marsh/Lowell-Larimer and Seattle Hill Rds. Bear right then turn left back onto Lowell-Larimer Rd. and continue on for approximately 1.4 miles. Watch for the pipeline markers and gated area of the road, the Block Valve site is 200' north of the road down the gravel driveway behind fencing.
MP 80 Block Valve 20" (HOV)	47.895546	-122.169323	From I-5, take exit #186, head east on 128th St/Hwy 96 to 35th Ave. SE. Turn left at light; go north approximately 1 mile to 116th St SE, turn right. Go approximately 0.7 miles to Pinehurst housing development; turn left on 45th Dr SE, then immediately east (right) on 115th PL SE, which eventually turns into 47th Ave SE heading north. Follow 47th Ave till you get to 113th St SE turn west (left) total trip from 116th is 0.3 miles. The Block Valve site will be on your right hand side gated and clearly visible from the road approx. 25'. From I-405, take exit # 26, Bothell-Everett Hwy north (right) on 180th. Left on 35th Ave Se travel north approx 3.5 miles to 116th St SE, turn right. Follow directions as above.
Allen Station to Renton Station			
Woodinville Station	47.798892	-122.171062	From I-405, take exit # 23 and head north on Hwy 522 to Hwy 9 exit. Turn left (north) at light, head north for 0.7 miles, then turn west (left) at 228th St SE for Approx. 1.4 miles till you reach 45th Ave SE, then turn north (right). Follow 45th Ave 0.5 miles till you come to address 21909 45th Ave SE and turn right at driveway.
MP 89 Block Valve 16" & 20" (MOV)	47.762627	-122.173828	From I-405, take exit # 24 (Beardslee Blvd exit) and head east on NE 195th St. Follow for approx. 0.4 miles to 120th Ave NE, turn south (right). After about 0.5 miles turn left at first driveway of the Archstone apartment complex across from Home Depot and between the Starbucks coffee house and Seattle times parking lot end. Go down new Apartment complex road till you come to pipeline markers (approx. 4 blocks). The Block Valves are north of that location gated and visible from the road (follow dirt road north (left) for access). MP marker 89 is clearly visible from the road.
MP 89.5 16" Check Valve & 20" Block Valve (HOV)	47.75547162	-122.1738939	From I-405, to exit # 23 (Hwy 522), go approx. 1 mile to the Woodinville exit and head south (right) on Hwy 202 for 0.2 miles to NE 175th St/Hwy 202 and turn west (right) at the light. Travel 0.3 miles across bridge and railroad tracks and turn west (right) on NE 173rd PL. Follow to the first driveway on right, approx. 0.3 miles - you'll cross over the pipeline at this time before you get to the driveway. Go over the railroad tracks again and turn

Location	Latitude	Longitude	Driving Directions
			east (right) and follow to the pipeline crossing approx. 2 blocks, with the Block Valve on the North side within the small island in the parking lot.
MP 95.5 Block Valve 16" & 20" (MOV)	47.67776	-122.158556	From I-405, take exit # 18 (NE 85th St) and head east approx. 1.4 miles, look for the pipeline markers around the 13600 block of NE 85th St. The Block Valve's will be on the south side of the road gated and clearly visible from the road.
MP 98.5 Block Valve 16" & 20" (MOV)	47.63138	-122.159494	From I-405, take exit # 14, Hwy 520, heading east towards Redmond. Take the very first exit on 520 which is Northrup Way and turn east (left) at the light stay in the left hand lane, go about 6 blocks then turn north (left) on 130th Ave NE and go approx. 4 blocks to NE 24th St. Turn east (right) on 24th and go approx. 5 ½ blocks until you come to the pipeline crossing. The Block Valve's will be on the south side of road at the 13500 block clearly gated and visible from the road, approx. 100'.
MP 100.1 Block Valve 20" (HOV)	47.603459	-122.158769	From I-405, take exit # 12 (SE 8th St) and go east approx. 0.4 miles to Lake Hills Connector, take this road east (right) and go approx. 1.5 miles to 140th Ave SE. Turn north (left) on 140th and go 1 block north to SE 7th St and turn west (left), go all the way to the end of the road where it dead ends at a trail. Follow the gravel trail downhill till you come to the pipeline Right of Way which is 1 or 2 blocks of walking, the pipeline Block Valve site is on the south (left) hand side at the bottom of the trail approx. 25'.
MP 101.8 Block Valve 20" (MOV)	47.588158	-122.158339	From I-405, take exit # 10 (Coal Creek Pkwy) and head east for approx. 0.5 miles to Factoria Blvd/128th Ave SE, turn north (left) at the light. Follow this road for approx. 1.6 miles and stay in your right hand lane when approaching SE 26th St. (you will go underneath I-90). Turn east (right) on SE 26th St (Kamber Rd.) and go approx. 0.3 miles to the pipeline crossing at 13615 SE 26th St. The 16" Block Valve site will be on the south side of the road gated and clearly visible within 50' of the road. The 20" Block Valve site will be on the north side of the road.
MP 102 Block Valve 16" (MOV)	47.587143	-122.158356	From I-405, take exit # 10 (Coal Creek Pkwy) and head east for approx. 0.5 miles to Factoria Blvd/128th Ave SE, turn north (left) at the light. Follow this road for approx. 1.6 miles and stay in your right hand lane when approaching SE 26th St. (you will go underneath I-90). Turn east (right) on SE 26th St (Kamber Rd.) and go approx. 0.3 miles to the pipeline crossing at 13615 SE 26th St. The 16" Block Valve site will be on the south side of the road gated and clearly visible within 50' of the road. The 20" Block Valve site will be on the north side of the road.
MP 103 Check Valve 20"	47.56302	-122.169659	From I-405, take exit 10 and head east on Coal Creek Parkway for .6 miles. Check valve is in a vault in north edge of parking lot.
MP 103 Check Valve 16"	47.571255	-122.157082	From I-405, take exit #10 (Coal Creek Pkwy) and head east and take a left at Factoria Blvd. Right on SE

Location	Latitude	Longitude	Driving Directions
			Newport way for .7 miles and turn right at Somerset Blvd Se, left on Somerset Blvd valve is on your left at chain link fence.
MP 105 Block Valve 16" & 20" (MOV)	47.537778	-122.169522	From I-405, take exit # 10 (Coal Creek Pkwy) and head east, continue on Coal Creek Pkwy in a Southeast direction for approx. 2.5 miles. Turn west (right) on SE 69th Way and go .2 miles to the pipeline crossing at the 12800 block, open the Right of Way gate and head south (left) down gravel road for 2 blocks. The Block Valve is approx. 250' south of the gravel road.
MP 106 Block Valve 16" & 20" (MOV)	47.513218	-122.171135	From I-405, take exit # 5 (NE Park Dr/Sunset Blvd) and head east off the freeway, stay on Sunset for approx. 1.8 miles and turn north (left) at Union Ave NE for approx. 0.6 miles then turn west (left) on SE 101st St which eventually becomes SE 100th St. Follow down 101st for 0.3 miles to the pipeline crossing at the 12500-12600 block, then turn left on the gravel road to the clearly visible gated area 100' south of 100th
MP 106 Block Valve 16" & 20" (MOV)	47.513218	-122.171135	From I-405, take exit # 5 (NE Park Dr/Sunset Blvd) and head east off the freeway, stay on Sunset for approx. 1.8 miles and turn north (left) at Union Ave NE for approx. 0.6 miles then turn west (left) on SE 101st St which eventually becomes SE 100th St. Follow down 101st for 0.3 miles to the pipeline crossing at the 12500-12600 block, then turn left on the gravel road to a visible gated area 100' south of 100th St.
MP 110 Block Valve 16" & 20" (MOV)	47.476309	-122.171624	From I-405, take exit # 4 (Maple Valley Hwy) and head east for approx. 0.1 mile, turn northeast (left) on SE 5th St 0.4 miles to the pipeline crossing. The Block Valves are gated and clearly visible on the north side of the road approx. 50' from road.
MP 110.5 Check Valve 16" & 20"	47.473652	-122.176681	From I-405, take exit #2 (Rainier Ave/Hwy 167) north to S Grady Way. Turn right (east) follow for 0.4 miles to Talbot Rd. turn south (right). Take Talbot Rd. for 0.5 miles to S. Puget Dr. and turn southwest (left) and take this for approx. 1.4 miles until you get to the intersection of Royal Hills Dr/Edmonds Dr. SE. Turn northeast (left) onto Royal Hills Dr. for 0.4 miles to new road called Harrington Pl. SE, this is a new development called the Shadow Hawk Town homes (Code Key-Key 0415). Once on Harrington Pl. continue on 0.2 miles to the pipeline crossing, from here the MP marker 110 should be clearly visible. From MP 110 marker go ¼ mile north to the valve sites, which are in concrete vaults.
MP 111 Block Valve 20" (HOV)	47.469956	-122.191586	From I-405, take exit #2 (Rainier Ave/Hwy 167) north for one block and turn west (right) on SW Grady Way and follow for 0.4 miles to Talbot Rd. turn south (right). Take Talbot Rd. for 0.5 miles to S. Puget Dr., turn southwest (left) and follow for approx. 1.4 miles to a PSE service road, which is approx. ½ block from the intersection of Royal Hills/S Puget Dr./Edmonds Dr. SE. Take this service road west (left) for 0.3 miles and look for the pipeline crossing - the Block Valve site is on the south side of the service road approx. 100' in a concrete vault.

Location	Latitude	Longitude	Driving Directions
MP 112 Block Valve 20" (HOV)	47.459059	-122.218799	From I-405, take exit # 2 (Rainier Ave/Hwy 167) north one block to SW Grady Way then turn west (left) and go 0.3 miles to Lind Ave SW. Turn south (left) on Lind Ave over the 405 over pass to the first light which is SW 16th St. Turn east (left) and follow approximately 0.7 miles (becomes East Valley Rd.) to the pipeline crossing around the 2300 block of East Valley, turn west (right) on driveway to clearly visible and gated area approx. 100' west of the road.
Renton Station	47.458068	-122.224366	From I-405, take exit # 2 (Rainier Ave/Hwy 167) north one block to SW Grady Way, turn west (left), go 0.3 miles to Lind Ave SW and turn south (left). Go 0.9 miles on Lind to the driveway address of 2319 Lind Ave SW on the west side of the road.
Sea-Tac Lateral			
MP 1.5 Block Valve 12" (HOV)	47.476437	-122.227465	From I-405, take exit # 2 (Rainier Ave/Hwy 167) north, proceed 0.3 miles to SW 7th St. Turn west (left) on 7th 0.1 miles to Hardie Ave SW and turn north (right), follow Hardie Ave for 0.2 miles then turn west (left) on SW 5th PL. Go approx. 0.3 miles and turn west (left) on SW 5th Ct., go 0.1 miles and follow to the left of apartment building "H" driveway of the Avalon Greenbriar Apts. The Block Valve site is on the right side of apartment building "K" slightly downhill and approx. 100' from the driveway.
MP 2 Check Valve 12"	47.481663	-122.226964	From SR 167, heading north take the SR 900/SW Sunset Blvd headed west. Go .5 miles and turn (right) north on Earlington Ave SW left on SW Langston Rd. Valve site is 450' up the road on your right.
MP 6 Block Valve 12" (MOV)	47.523506	-122.278396	Take I-5, north to exit # 157 (Martin Luther King Jr. Way). Stay in the right hand lane for approx. 1.1 miles and turn east (right) on S Henderson St. proceed on Henderson for 100' and look for pipeline crossing markers, the Block Valve site is on the north (left) side of Henderson St. gated and clearly visible from the road within 50'.
MP 10 Block Valve 12" (MOV)	47.569684	-122.326049	Take I-5, south to exit # 163 (Safeco Field/Spokane St. exit). Once off the exit at the bottom of the ramp at the first light, which is 6th Ave S go 0.1 miles heading west on Spokane St. to the first left hand "U" turn heading east on Spokane St. Go 0.1 miles back to 6th Ave S then turn south (right) on 6th and follow for 0.1 miles, the Block Valve site on the SE corner of 6th and Charlestown approx. 50' from 6th Ave S.
MP 1.5 Block Valve	47.476356	-122.227467	From SR 167 and I 405 intersections take Rainer Ave S North for .18 miles and turn left and go straight onto Stevens Ave Sw. Turn left on SW 5th St. Valve is located down the hill in yard.
MP 2 Check Valve	47.48767	-122.22697	From SR 167 and I 405 intersections take Rainer Ave S North for .66 miles and turn left on SR 900/Sunset Blvd. Go .11 miles and turn right on Hardie Ave SW and keep left onto Langston. CV will be on your right at .38 miles.
MP 6 Block Valve (MOV)	47.523506	-122.278397	From I-5 south bound take exit 158 and turn left on Boeing Access rd. Turn left onto Martin Luther King Jr Way South. Go for .95 miles and turn then right onto

Location	Latitude	Longitude	Driving Directions
			South Henderson St. Valve site will be on your left. From I-5 North bound take exit 157 and go straight onto Martin Luther King Jr Way South for 1.72 miles and turn then right onto South Henderson St. Valve site will be on your left.
MP 10 Block Valve (MOV)	47.56966	-122.32604	From I-5 South bound take exit 163A and go straight on West Seattle Freeway ramp. Take the South Spokane St ramp and head east on South Spokane St and turn right onto 6th Ave South and then turn left onto South Charlestown St. Valve will be on your right. From I-5 North bound take exit 163 and keep left on South Spokane St ramp. Turn left onto 6th Ave South and then turn left onto South Charlestown St. Valve will be on your right.
Seattle Delivery Facility	47.582619	-122.351571	From I-5, north take exit # 163 the West Seattle Freeway exit, on the West Seattle Freeway go for approx. 0.9 miles to the Harbor Island/11th Ave SW exit. Once the exit is made go 0.6 miles staying in the middle lane to Klickitat Ave SW. Turn north (right) on Klickitat Ave SW and continue on for 0.6 miles until you reach SW Lander St. and turn east (right). Follow Lander for 0.1 mile and turn north (left) on 13th Ave SW, follow 13th for 0.2 miles to the address of 2444 13th Ave SW on the east (right) side of the road.
MP 1 Block Valve 12" (HOV)	47.456288	-122.242866	From I-405, take exit #1 (West Valley/Tukwila) and head south on West Valley for 0.5 miles to Strander Blvd. Turn east (left) on Strander to the dead end barrier gate between Jack in the Box and Wendy's. This will put you next to the interurban trail. Follow the trail approx. 220' south to the Block Valve site which is on the west side 25' from the trail.
MP 1.5 Block Valve 12" (HOV)	47.455748	-122.245229	From I-405, take exit #1 (West Valley/Tukwila) and head south on West Valley for 0.5 miles to Strander Blvd. Turn west (right) on Strander for 0.2 miles and turn south (left) into the Pacific Gulf Business Park. Stay to the left of the driveway heading back towards the river crossing barrier gate and walking trail. The Block Valve site is within 20' west (look for pipeline markers) of the walking trail slightly downhill and in a concrete vault.
Sea-Tac Terminal	47.433975	-122.302266	From I-5, take exit # 152 (Orillia Rd./S 188th St.) west to S 188th St. Follow 188th St. for 1.2 miles (past International Blvd) and turn left (south) on 28th Ave S for 0.2 miles. Turn right (west) at the first intersection, go 0.1 miles, turn north (right) again – turns to gravel road - follow to the Seatac facility. Tanks should be visible at this point.
Renton to Portland			
MP 119.5 Block Valve 14" (MOV)	47.37037573	122.2406607	From I-405, take exit # 2 (Hwy 167) south for approx. 6.7 miles to the Des Moines/Willis St. exit (Hwy 516). Turn east for 0.2 miles to 74th Ave S, then turn south (right) on 74th for 0.6 miles until you come to S. 259th St. and turn with the road west (left) for 0.1 miles to the pipeline Right of Way. Turn left into driveway and the Block Valve site is

Location	Latitude	Longitude	Driving Directions
			200' north of S. 259th St. and clearly visible from the road.
MP 119.6 Block Valve 14" (HOV)	47.367428	-122.2402654	From I-405, take exit # 2 (Hwy 167) south for approx. 6.7 miles to the Des Moines/Willis St. exit (Hwy 516) Turn east for 0.2 miles to 74th Ave S, then turn south (right) on 74th for 0.6 miles until you come to S. 259th St. and turn with the road west (left) for 0.3 miles to 78th Ave S. Turn south (right) over bridge and go 0.3 miles to S 262nd St. then turn west (right) for 0.2 miles to the pipeline crossing. The Block Valve site is 100' north of S 262nd St. on the south west side of building.
MP 121.5 Check Valve 14" (HOV)	47.333925	-122.248938	From I-405, take exit #2 (Hwy 167) south for ~ 8.4 miles to S 277th St. exit. Turn west (right) off of Hwy 167 0.1 miles to West Valley Hwy and turn south (left) for ~ 1.5 miles to the pipeline crossing, look for the Block Valve site on the east side of West Valley Hwy 50' from the rd.
MP 127 Block Valve 14" (MOV)	47.282683	-122.307708	From I-5, take exit #142B (Hwy 18) west toward South 348th Street. Turn right onto Hwy 18 west. Take first left onto Kits Corner Rd S. Turn left onto S 360th St. Go 381 feet and turn left. Go 141 feet and turn right. Go .02 miles and turn left onto an unknown road.
MP 130 Block Valve 14" (MOV)	47.255965	-122.330152	From I-5, take exit #142B (Hwy 18) west toward South 348th Street. Turn right onto Hwy 18 west. Take first left onto Kits Corner Rd S. Turn right onto Milton Rd S. Continue onto 5th Avenue. Turn right onto Birch Street. Go 0.1 miles to block valve site.
Tacoma Junction	47.232699	-122.368382	From I-5, take exit # 137 South onto 54th Ave E. Go approx. 0.2 miles, over I-5, then turn west (right) onto 20th St. E. On 20th St. go for approx. 0.4 miles to Frank Albert Rd. and turn left (south). Follow Frank Albert for 0.6 miles to the first gravel driveway on your right (west) side after the bridge and turn right. Go 0.1 miles through facility gates to address 2660 Frank Albert Rd.
Tacoma Delivery Facility	47.25793284	-122.4308917	From I-5, take exit # 135 (Portland Ave). Head north on Portland Ave. 0.8 miles to Saint Paul Ave and turn west (left) onto St. Paul Ave. Go for approx. 0.6 miles to "E" St. and make the first turn under the overpass and turn northwest (right). On "E" St. go 0.3 miles to E 7th St. and go north (right) for 2 blocks. The facility will be on the left (west) side of the road at 706 East "F" St.
MP 133 Block Valve 14" (MOV)	47.216094	-122.368237	From north take Hwy 167 south approx. 20 miles to the Hwy 512 exit (Puyallup/Olympia exit) and head west (Veer left). Follow Hwy 512 for approx. 6.4 miles to the Canyon Road exit. From south take I-5 exit #127 (Hwy 512) east to Canyon Road exit. Go north off the exit onto Canyon Rd., continue on for approx. 3.2 miles and that will bring you to Pioneer Way East, turn northwest (left). Follow Pioneer Way for 1 mile and look for the road markers, the Block Valve Site is approx. 25' form Pioneer on the north side of the road.
MP 140 Block Valve 14" (MOV)	47.114964	-122.369067	From south take I-5 exit #127 (Hwy 512) east to Canyon Road exit. Go south off exit onto Canyon Rd. for

Location	Latitude	Longitude	Driving Directions
			approximately 1.5 miles. Turn right onto Brookdale Rd E. Follow Brookdale Rd for about 0.6 miles. The Block Valve Site is on the south side of the road.
Tacoma Station	47.089598	-122.370383	From north take Hwy 167 south approx. 20 miles to the Hwy 512 exit (Puyallup/Olympia exit) and head west (Veer left). Follow Hwy 512 for approx. 6.4 miles to the Canyon Road exit. From south take I-5 exit #127 (Hwy 512) east to Canyon Road exit. Go south off exit onto Canyon Rd. for approx. 4.3 miles to 176th St. E, turn west (right) on 176th for 0.2 miles to 51st Ave E. Turn south (left) on 51st and follow 0.7 miles; this will become 52nd Ave E then eventually head right (west) onto 180th St. E. which will put you at the 1st facility gate address 4420 180th St. E. Go through gate and follow access road for another 0.3 miles to the main facility.
MP 152 Block Valve 14" (MOV)	47.00246575	-122.532755	From SR 507 in Yelm, head east on 280th St at bend in road valve will be on your right.
MP 155 Block Valve 14" (HOV)	46.968376	-122.569326	This Block Valve site is on a Military installation and requires a certain access please contact the Central Area Supervisor for location information.
MP 157 Block Valve 14" (MOV)	46.95519066	-122.5851659	From SR 510/SR507 intersection head north on 1st N. Left on Rhoton Rd and a quick right onto Northern Pacific Se. Take a left on Wilkenson Rd Se for .3 miles and take a right onto Paradise View St. Valve is on the north end of the street at road tee.
MP 159 Check Valve 14"	46.93033074	-122.6287435	From SR 507 in Yelm, head west onto George Rd for .35 miles valve will be on your right.
Olympia Junction	46.872838	-122.694392	From I-5, take Exit 88A, go North-Easterly on Tenino-Rochester Road 14.1 miles, then South on Vail Loop Road 0.7 mile. Station is on right side of road.
MP 170 Block Valve 14" (MOV)	46.794702	-122.755221	From highway SR 507 turn east on 184th Ave for 1 mile until it turns into Skookumchuck Rd. Follow Skookumchuck road east for 5.4 miles. Valve site is will be on your right.
MP 175 Block Valve 14" (HOV)	46.74521	-122.81318	Contact South Area Team Leader for access, you must be escorted on to Coal mine property or go through their safety
MP 186 Block Valve 14" (MOV)	46.592677	-122.859169	From I-5, take exit # 71, go east on Hwy 508. Take first left off Hwy 508 this is Forest Napavine Rd. Go about 2 miles until you come to our pipeline crossing clearly marked by milepost 186 on the left shoulder of the road. The block valve is on the right shoulder of the road.
MP 199 Block Valve 14" (MOV)	46.402055	-122.869788	From I-5, take exit # 57 and go east to the end of the road. At the end of the road turn left on to Jackson Hwy. Go approx. one mile and turn right on to Smokey Valley Rd. Go about 1.5 miles to pipeline crossing, the block valve is on the left shoulder of the road.
Castle Rock Station	46.265538	-122.883116	From I-5, take exit #48 on Huntington Ave. Head east up hill (Kalmbach Quarry Road) to OPL Castle Rock Station.

Location	Latitude	Longitude	Driving Directions
MP 217 Block Valve 14" (MOV)	46.147905	-122.877195	From I-5, take the Allen Street Kelso-Longview exit (#39). Proceed easterly on Allen Street for about 0.8 miles to Corduroy Road. Turn left, follow for 0.3 miles to Harris street, turn right, follow 0.1 miles to OPL crossing - valve is off the right shoulder of the road
MP 225 Block Valve 14" (MOV)	46.046095	-122.84533	From I-5, take Exit 32 (Kalama River Rd.) and go east ~ 1 mile before heading north on an s-curve. Enter BPA substation parking lot. Valve Site is on a private road behind a locked gate
MP 226 Check Valve 14"	46.034291	-122.839715	From I-5, take Exit 32 (Kalama River Rd.) east to frontage road, turn rt (south) for ~0.5 mi to second dirt road past river., turn left. Follow, bearing left at fork up hill. Will come to locked Forest Service gate (contact Castle Rock for combo) Proceed through gate, following rd. – stay right at forks. After crossing p/l ROW once, look for fork to left to check valve (if you cross ROW again, you've gone too far)
MP 234 Block Valve 14" (MOV)	45.926607	-122.758397	From I-5, take exit 22 and head west on Dike Access Rd .1 of a mile and valve is on south side of road.
MP 238.9 Block Valve 14" (MOV)	45.872514	-122.747499	From I-5, heading south take Exit # 21 proceed straight on Pacific St. to Goerig St. Then 1st left on Lakeshore Dr. From I-5 heading north take exit #21 to light turn left (west) to Lakeshore Dr. (2nd left). Follow Lakeshore for 1.0 mi., road turns right and is named Pinkerton Dr. Continue for 0.3 miles to " Y ", stay left heading south on So. Pekin Rd. for 1.5 mi. to Dike (north side of the Lewis River) head right (west) for 0.6 miles to OPL ROW. Block valve in field on north side, we have access through farmers dairy.
MP 238.9 Block Valve 14" (MOV)	45.872514	-122.747499	From I-5, heading south take Exit # 21 proceed straight on Pacific St. to Goerig St. Then 1st left on Lakeshore Dr. From I-5 heading north take exit #21 to light turn left (west) to Lakeshore Dr. (2nd left). Follow Lakeshore for 1.0 mi., road turns right and is named Pinkerton Dr. Continue for 0.3 miles to " Y ", stay left heading south on So. Pekin Rd. for 1.5 mi. to Dike (north side of the Lewis River) head right (west) for 0.6 miles to OPL ROW. Block valve in field on north side, we have access through farmers dairy.
MP 239 Block Valve 14" (MOV)	45.855611	-122.742749	From I-5, take Exit #14 (Battleground). Follow westerly on NW 269th St for about 0.6 mile to NW 31st Ave., then turn right. Follow for about 0.9 miles to NW 289th, turn left go 2 miles to NW 71st Ave., then turn right. Go 1.5 miles, block valve is on the rt side of the road.
MP 248 Block Valve 14" (MOV)	45.748216	-122.733628	From I-5, take exit 9 and head west on NE 179th St for 3.16 miles turn left on NW 61st Ave and valve site will be on your left.
Vancouver Junction	45.676192	-122.757582	From I-5, take 4th Plain Blvd exit. Proceed westerly for about 5.8 miles to cyclone fence gate entrance to OPL Vancouver Jct. (Site in field easily visible from gate and road.)
Vancouver Delivery	45.63808778	-122.695808	I-5 So. exit Mill Plain Blvd. veer right or I-5 No. bound

Location	Latitude	Longitude	Driving Directions
Facility			same exit except turn left at light at bottom of ramp. Follow Mill Plain for aprox.1.7 miles turn left on St. Francis Lane follow for 0.2 miles, turn left before RR crossing into the Tesoro gate. Proceed straight to Delivery Facility.
MP 254 Block Valve 14" (MOV)	45.660348	-122.779199	I-5 southbound to Hwy 30 westbound, from the first light (Nicolai) continue westbound Approx. 9.3 miles to Sauvie Island Bridge. Right over bridge continue around to NW Gillihan. From here travel approx. 2.7 miles to the 19300 block of NW Gillihan. Turn right down long unnamed gravel road for approx. 0.1 miles. Block valve with cattle guard on left side of road.
MP 257 Block Valve 14" (HOV)	45.629877	-122.799991	I-5 southbound to Hwy 30 westbound, from the first light (Nicolai) continue westbound Approx. 9.3 miles to Sauvie Island Bridge. Right over bridge continue around to NW Gillihan from here travel approx. 0.9 miles to NW Lily. Right on NW Lily approx. 0.1 miles to block valve with cattle guard on the right.
MP 258 Block Valve 14" (HOV)	45.614316	-122.79976	I-5 southbound to Hwy 30 westbound, from the first light (Nicolai) continue westbound approx. 7.0 miles to Marina way. Right on Marina for 0.3 miles. Block valve with cattle guard on knoll on the right.
Linnton Delivery Facility	45.602339	-122.787323	I-5 southbound to Hwy 30 westbound, from the first light (Nicolai) continue westbound approx. 6.2 miles to 112th street. Right on 112th across RR tracks to Olympic Linnton Facility on the left.
Portland Delivery Facility	45.59030233	-122.7766226	I-5 southbound to Hwy 30 westbound, from the first light (Nicolai) west approx. 5.2 miles to the ST Services sign (formerly Mobil Lube Plant sign). Head down driveway and then at the stop sign make a U turn to the Portland Delivery facility.
Portland Junction	45.590433	-122.776929	I-5 southbound to Hwy 30 westbound, from the first light (Nicolai) approx. 1.9 miles to Kittridge. Right over bridge. Left at Front/Kittridge light approx. 0.8 miles to OPL Portland Jct. Facility on the right.

Figure C.7: Hazard Identification Tanks

HAZARD IDENTIFICATION TANKS (Tank = any container that stores oil)							
Tank Number	**Location**	**Substance Stored* (Oil & Haz. Substance)**	**Diameter/ Height**	**Maximum Capacity (Gallons)**	**Tank Type (i.e. floating roof, fixed roof, etc.)**	**Year Built**	**Containment Type**
101	Allen Station	Transmix	24 feet/25 feet	66,192	Internal Floating Roof	1965	Concrete
117	Anacortes Station	Transmix	15 feet/10 feet	8,400	Fixed, Cone Roof	1993	Earth Berm
202	Bayview Products Terminal	Ultra-Low Sulfur Diesel	48 Feet/128 Feet	4,620,000	Internal Floating Roof	1998	Asphalt
203	Bayview Products Terminal	Gasoline	48 Feet/128 Feet	4,620,000	Internal Floating Roof	1998	Asphalt
204	Bayview Products Terminal	Gasoline	48 Feet/128 Feet	4,620,000	Internal Floating Roof	1998	Asphalt
205	Bayview Products Terminal	Ultra-Low Sulfur Diesel	48 Feet/128 Feet	4,620,000	Internal Floating Roof	1998	Asphalt
206	Bayview Products Terminal	Jet A	48 Feet/128 Feet	4,620,000	Internal Floating Roof	1998	Asphalt
209	Bayview Products Terminal	Transmix	40 Feet/45 Feet	474,600	Internal Floating Roof	1998	Asphalt
116	Renton Station	Transmix	40 Feet/45 Feet	474,600	Internal Floating Roof	1975	Concrete
107	Vancouver Delivery Facility	Transmix	8 Feet/6 Feet	41,496	Internal Floating Roof	1967	Concrete
105	Portland Delivery Facility	Transmix	24 Feet/25 Feet	84,000	Internal Floating Roof	1965	Concrete
106	Portland Delivery Facility	Transmix	24 Feet/25 Feet	84,000	Internal Floating Roof	1965	Concrete

* The Bayview Tanks (202-206) can change between gasoline, diesel, and jet fuel.

Figure C.8: Products Handled

Product Name	Density (kg/m3)	Specific Gravity	API Gravity	Oil Group	Sulfur Content (Weight %)	Hazard Classifications	
						49 CFR	NFPA
BP Low Sulfur Diesel	850	0.85	34.9705882	3	0-0.05%	Class 3 Flammable Liquid	Health Hazard (Blue) 1 Flammability (Red) 3 Reactivity (Yellow) 0
BP High Sulfur Diesel	850	0.85	34.9705882	3	0.5%		
BP Jet Fuel A	810	0.81	43.191358	2	N/A	Class 3 Flammable Liquid	Health Hazard (Blue) 0 Flammability (Red) 2 Reactivity (Yellow) 0
BP Transmix	700	0.7	70.6428571	2	0.5%	Class 3 Flammable Liquid	Health Hazard (Blue) 1 Flammability (Red) 3 Reactivity (Yellow) 0
BP Unleaded Premium Gasoline	700	0.7	70.6428571	2	N/A	Class 3 Flammable Liquid	Health Hazard (Blue) 1 Flammability (Red) 3 Reactivity (Yellow) 0
BP Unleaded Regular Gasoline	700	0.7	70.6428571	2	N/A		
Arco Unleaded Gas	750	0.75	57.1666667	2	N/A		
Crude Oil*	≥ 940	≥ .94	17.5-29.29545	≥4	0.9-2.8%	Class 2 Flammable Liquid	Health Hazard (Blue) 1 Flammability (Red) 3 Reactivity (Yellow) 0
Butane	2 (Vapor Density)	0.58	N/A	N/A	N/A	Class 2 Flammable Liquid	Health Hazard (Blue) 1 Flammability (Red) 4 Reactivity (Yellow) 0

* The Puget Sound Pipeline is fed by the Trans Mountain Pipeline (TMPL). Specifications for petroleum permitted to be transported through the Trans Mountain Pipeline are detailed in TMPL Tariff No. 92, issued by the Canadian National Energy Board (NEB) as follows:

Specifications of Petroleum. Petroleum having the following specifications shall not be accepted by the Carrier for transportation on the Mainline System:

a) Reid vapor pressure in excess of one hundred and three kilopascals (103 kPa);
b) containing sand, dust, gums, sediment, water or other impurities totaling, in aggregate, in excess of one-half of one percent (0.5%) of volume as measured by an acceptable API or ASTM test method;
c) having at the Receipt Point a temperature greater than thirty-eight degrees Celsius (38ºC);
d) having at the Receipt Point a Density in excess of nine hundred and forty kilograms per Cubic Meter (940 kg/m^3);
e) having a kinematic viscosity in excess of three hundred and fifty (350) cSt determined at Reference Line Temperature; or
f) having any organic chlorides or other compounds with physical or chemical characteristics that may render such Petroleum not readily transportable by the Carrier or that may materially affect the quality of other substances transported by the Carrier or otherwise cause disadvantage to the Carrier.

APPENDIX D CHERRY POINT CRUDE/ BUTANE PIPELINE

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D.1 System Overview

Cherry Point 24" Crude Pipeline

The 24-inch bi-directional pipeline supplies the BP Cherry Point Refinery with crude oil for processing. The refinery receives light and heavy crude oil (See Appendix C) from the Trans Mountain Pipeline System owned and operated by Kinder Morgan Canada.

A 16" bi-directional line ties into the mainline 1500 feet downstream of the Trans Mountain Lake Terrell Road Facility. As of August 2009, the valve has been blinded and is not in-service. Phillips 66 takes ownership of the line after the valve site. In the past it was used for delivery/receipt between Phillips 66 and BP Refineries.

The crude pipeline is 5.3 miles long. It originates at the BP 24-inch 600 ANSI Gate valve located inside the Trans Mountain Lake Terrell Road Facility and ends at the BP Cherry Point Refinery. Kinder Morgan operates the gate valve from their Laurel, Station located in Washington. The pipeline is owned by BP West Coast Products Company; maintained by US Pipelines & Logistics Northwest Pipelines District, and monitored and operated by the BP Pipelines, (North America) Inc. Tulsa Control Center located in Tulsa, Oklahoma.

The crude pipeline is located entirely within Whatcom County in Washington State. It begins just west of the town of Ferndale, WA, near Lake Terrell and transverses northerly through Phillips 66 property and the Alcoa Aluminum Plant right of way to the BP Cherry Point Refinery near Birch Bay. The pipeline shares easement with the 6-inch Butane Pipeline, 8-inch Ferndale Natural Gas Pipeline, and the 16-inch Pipeline.

The pipeline does not cross any rivers or streams but is located in the vicinity of a wildlife habitat at Lake Terrell. Lake Terrell is a small lake located northeast of the pipeline.

Cherry Point 6" Butane Pipeline

The 6-inch bi-directional Butane Pipeline originates at the BP Cherry Point Refinery and supplies the Chevron Ferndale Storage Terminal with butane for storage, rail, truck, and tanker ship delivery. The Chevron Ferndale Storage Terminal also ships and can receive butane from Phillips 66 Ferndale Refinery.

The 5-mile pipeline normally flows from the BP Cherry Point refinery to the Chevron Ferndale Storage Terminal. Occasionally the BP Cherry Point Refinery may elect to receive butanes from the Chevron Ferndale Storage Terminal depending on refinery needs.

Normal flow rates are approximately 550-barrels per hour (bph) during transfers from the BP Cherry Point Refinery to the Chevron Ferndale Storage Terminal and 800-900 bph from the terminal back to the refinery.

The pipeline is owned by BP West Coast Products Company; maintained by the US Pipelines & Logistics Northwest Pipelines District, and monitored and operated by the BP Pipelines, (North America) Inc. Tulsa Control Center located in Tulsa, Oklahoma.

The butane pipeline is located entirely within Whatcom County, Washington State. It begins at the BP Cherry Point Refinery near Birch Bay northwest of the town of Ferndale, WA and continues southerly through the Alcoa Aluminum Plant right-of-way to the Chevron Ferndale Storage Terminal. The pipeline shares easement along with the 24-inch crude pipeline, 8-inch Ferndale Gas Pipeline, and the 16-inch Olympic Pipe line.

Figure D.1: Initial Notification Log

INITIAL NOTIFICATIONS				
Upon Discovery of a product discharge, the Spill Observer/First Responder shall immediately notify Control Center:				
NOTIFY	**TIME**	**CONTACT**		
Tulsa Control Center	(800) 548-6482			
Controller Console	(918) 660-4458			
If this is believed an emergency, immediately notify 911.				
NOTIFY	**NO**	**YES**	**TIME**	**CONTACT**
Has 911 been notified?				
Immediately upon notification, verification or suspicion of a release, the Control Center Personnel shall:				
CONFIRM: Has observer/responder notified 911? ☐ Yes ☐ No				
NOTIFY FOR BOTH CRUDE AND BUTANE RELEASES:				
NOTIFY	**PHONE NUMBER**	**TIME**	**REMARKS**	
Operations and Maintenance (O&M) Field Specialist Adam Groves Kevin Washington	 (360) 661-6416 (360) 815-6698			
Cherry Point Refinery Security (Main Gate) Shift Supervisor	 (360) 371-1301 (360) 371-1271			
Control Center Team Leader	(206) 786-1532			
ADDITIONAL NOTIFICATIONS FOR BUTANE PIPELINE RELEASES:				

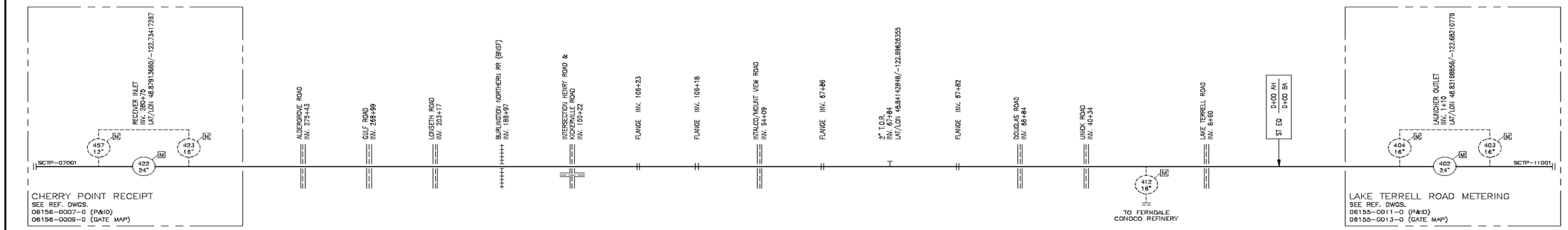
NOTIFY	PHONE NUMBER	TIME	REMARKS
Petrogas Ferndale Storage Terminal	(360) 384-1701 ext 0		
Immediately upon notification, verification or suspicion of a release, the O&M Field Specialist shall:			
NOTIFY	**PHONE NUMBER**	**TIME**	**REMARKS**
Joseph Paquette North Area O&M Team Leader	(331) 229-6057 (360) 428-4214 ext. 6003		
Immediately upon notification, verification or suspicion of a release, the North Area O&M Team Leader shall:			
NOTIFY	**PHONE NUMBER**	**TIME**	**REMARKS**
Primary: Alexandria Crooks Environmental Coordinator	(425) 591-3599		
Secondary: Michaela Decker Safety Coordinator	(312) 434-2764		
Terry Zimmerman District Operations Manager	(219) 973-5985		
Immediately upon notification, verification or suspicion of a release, the O&M Field Specialist shall:			
The Environmental Coordinator will notify the Environmental Team Lead, Communications & External Affairs, applicable Regulatory Agencies, and the US Pipelines & Logistics (USPL) Department of Transportation (USDOT) Team (if reported to the National Response Center [NRC] or the Washington Utilities and Transportation Commission [WUTC]) and the USPL Crisis Management Advisor.			
The District Operations Manager will make additional internal notifications as necessary (i.e. Business Unit Leader, Operations Manager, and BP Notification Center) and determine scope of response team to be activated.			

Figure D.2: Cherry Point Contact List

AFFILIATION	PHONE NUMBER	NAME OF PERSON CONTACTED	TIME CONTACTED
NORTHWEST PIPELINES DISTRICT CONTACTS			
Terry Zimmerman District Operations Manager	(219) 973-5985 (Cell)		
Joseph Paquette North Area Team Lead	(331) 229-6057 (Cell)		
Adam Groves Field Spec. Support	(360) 526-3975 (Office) (360) 420-5105 (Cell)		
Kevin Wittmer Field Spec. Support	(360) 371-7411 (Office) (360) 815-0356 (Cell)		
Kevin Washington Field Spec. Support	(360) 815-6698 (Cell) (360) 428-4214 (Pager)		
Gunter Wilder Field Spec. Support	(360) 389-7049 (Cell) (360) 384-4231 (Office)		
Alexandria Crooks Environmental Coordinator	(425) 981-2590 (Office) (425) 591-3599 (Cell)		
Michaela Decker Safety Coordinator	(312) 434-2764 (Cell)		
Pam Brady Communications & External Affairs	(360) 371-1519 (Office) (360) 920-1171 (Cell)		
Renton Control Center (Emergencies Communication help only)	(888) 271-8880 (Office) (425) 235-7726(Office)		
TULSA CONTROL CENTER CONTACTS			
Pipeline Controller / Console (24 hours)	(800) 548-6482 (Office) (918) 660-4450 (Office)		

COMPANY	CONTACT	OFFICE NUMBER	ALTERNATE NUMBERS / NOTES
CHERRY POINT REFINERY			
Cherry Point Refinery, Crude and Butane	For immediate needs and emergencies: Main Gate Security Shift Supervisor	(360) 371-1301 (360) 371-1271	Contact main gate if unable to reach shift supervisor
BP Terminal for Butane	Control Board	(360) 384-1701	
Kinder Morgan / TRANSMOUNTAIN PIPELINE, FOR 24" CRUDE			
Laurel Station USA		(360) 398-1541	
Edmonton Control Center, Canada Emergency		(780) 449-5732 (888) 876-6711	
PHILLIPS 66 REFINERY, FOR 24" CRUDE			
Security		(360) 384-8351	
Dock Control Board		(360) 384-8349	
Shift Supervisor		(360) 384-8323	

Figure D.3: Crude Line System Line Drawing



DATA SOURCES:

Ⓐ OM & ER MANUALS
Ⓑ ALIGNMENT SHEETS
Ⓒ IN-LINE INSPECTION TOOL RUNS
Ⓓ ABOVE GROUND MARKERS (AGM) – STP 199
Ⓔ MAXIMO

——— = PIPELINE INSPECTION PROGRAM
------- = FACILITY INSPECTION PROGRAM

DATA REFERENCES FOR TYPICAL DEVICE AND STATION INFORMATION

ⒶⒷⒺ— 24" RECEIVER INLET
ⒷⒸⒹ— INV. 280+75
ⒸⒹ— LAT/LON 48.87913680/-122.73417267

SEE REFERENCE DWG.:
GATE MAP LEGEND SHEET: GM_LS1_ONSHORE

SEE DWG. 06149-0015-0 FOR GATE MAP VALVE SPECIFICATION TABLES AND STOPPLE TEE LISTINGS.

REV. NO.	DATE	REVISION DESCRIPTION
0	11/15/13	CREATED PER EXEMPLAR

DIAGRAM | DATE

SYSTEM: LAKE TERRELL – CHERRY POINT
SEGMENT/FACILITY: CRUDE LINE

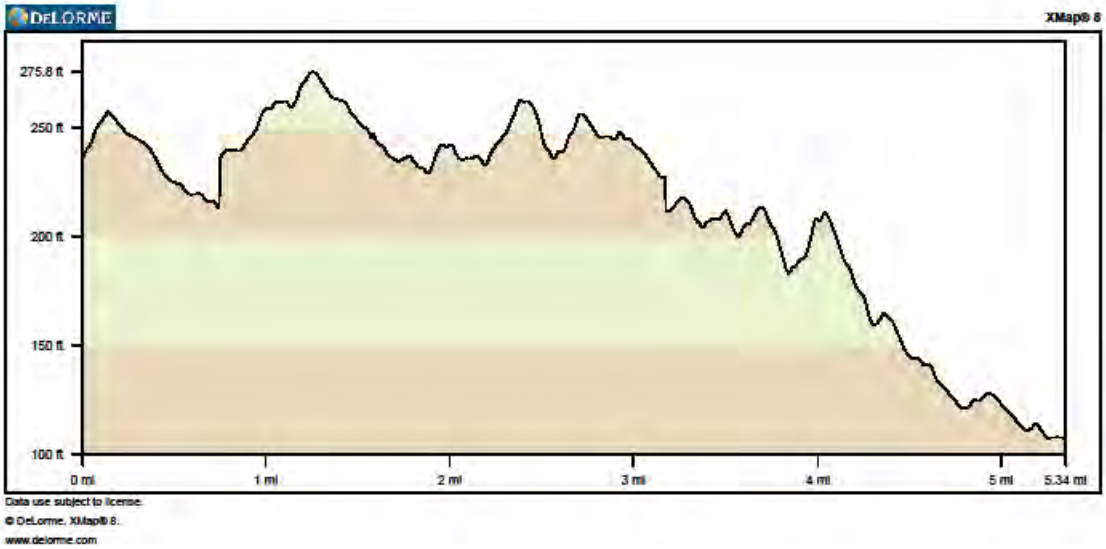
bp **US Pipelines & Logistics**
ENGINEERING AND MAINTENANCE DEPARTMENT
150 W WARRENVILLE RD
NAPERVILLE, ILLINOIS 60563

TITLE
GATE MAP
LAKE TERRELL – CHERRY POINT
CRUDE LINE

STATE WASHINGTON	COUNTY WHATCOM	TOWNSHIP N/A
DRAWN BY	DATE	SCALE N.T.S.
ALTERNATE DRAWING #	BP DRAWING # 06149-0014-0	

Figure D.4: Crude Line System Overview Map

Figure D.5: Crude Line System Elevation Profile



D.2 Line Segments and Fills

Crude Pipeline

SEGMENT	MILES	LINE FILL	ACCUMULATIVE	LINE DIAMETER
Kinder Morgan Lake Terrell to BP Cherry Point Refinery	5.3	14,932	14,932	24"

Butane Pipeline

SEGMENT	MILES	LINE FILL	ACCUMULATIVE	LINE DIAMETER
BP Cherry Point Ref to Chevron Ferndale Terminal	5	1000	1000	6"

Routine inspection of all line segments is conducted on a periodic basis. The line segments must be physically inspected, with a verbal status report issued to the Tulsa Control Center subsequent to an abnormal event encompassing the operation of these lines.

D.3 Block Valves

There are no block valves along the length of the both the crude and butane pipelines. Isolation is achieved through the mainline valves located at the receipt and delivery points.

D.4 Monitoring, Control, and Communications

The Tulsa Control Center monitors motor operated valves, temperature, pressure, and flow rate via the Hughes Network satellite communication system with the Valmet Supervisory Control and Data Acquisition (SCADA) System. There is a dial back-up communication system for this location.

The data communications is by satellite and voice communications is by cell phone and/ or regular phone system and a paging system.

Any communications outage is considered an “abnormal operating condition” by the United States Department of Transportation (USDOT) 49 Code of Federal Regulations (CFR) 195.402 (d) (iii).

D.5 Normal Operations

The TCC Controller monitors the pipeline integrity 24-7, 365 days/year utilizing the Valmet SCADA software applications.

D.6 Abnormal Operations

D.6.1 Communication Failure

This site should continue to operate normally during a Hughes Network satellite communication failure. The site is equipped with a dial back-up communications system. Failure of the Valmet SCADA System will not shut the site down. Notify a Systems Engineer if communication failure occurs at multiple sites.

D.6.2 Power Failure

Power is supplied by the Phillips 66 plant, Cherry Point Refinery, or Puget Sound Energy (PSE) for the crude line. Power is provided by the Chevron Ferndale Terminal and Cherry Point refinery for the butane line. An uninterruptible power supply system provides approximately two hours of backup power. In the event of a power failure notify a Field Specialist to investigate.

D.6.3 Other Abnormal Operations

The procedures for handling these are referenced in Section 2 of this Plan and the Operations Maintenance and Emergency Response (OMER) Manual Book I.

D.7 Reportable Spill History

There have been no USDOT reportable spills from either of the lines in the last five (5) years.

D.8 Worst Case Discharge – Crude Pipeline

The worst case discharge (WCD) volume is calculated based on the requirements set forth in 49 CFR 194.105(b) and Washington Administrative Code (WAC) 173-182-030 (67).

The worst case scenario for the Cherry Point Crude pipeline, an onshore system with no breakout tanks, is a full mainline rupture. The calculation used to define the potential spill volume is comprised of two components. The basic formula for rupture volume calculation is:

Total Volume = Initial Volume + Stabilization Volume

Initial Volume: Volume of liquid that leaves the pipeline from the point the rupture occurs until the impacted pipeline segment is isolated. The initial volume can be impacted by the system flowrate as well as the time required to isolate the impacted pipeline segment.

Initial Volume: System Flowrate x (time to recognize rupture + time to shut down & isolate)/60

Stabilization Volume: Volume of liquid that leaves the pipeline (drains out) after the impacted pipeline segment is isolated. The stabilization volume can be impacted by the location of isolation points on the pipeline system (Valves, etc.), pipeline volume (length, diameter, wall thickness), pipeline elevation profile and liquid properties.

Stabilization Volume: Σ (Linefill of drained pipe segments upstream and downstream of the release point that are higher in elevation, back to an isolation point* or to the point of highest elevation)

* Note: Check valves only isolate in one direction (opposite of normal flow direction)

Data Utilized for Analysis

Pipeline Operation Data:

- System flowrate: highest normal system flowrate
- System monitoring and control capability:
  - Time required to recognize a pipeline rupture
  - Time required to shutdown system and complete isolation

Pipeline System Data:

- Pipe Specifications:
  - L – Length
  - OD – Outside Diameter
  - WT – Wall-Thickness
- Isolation Capability:
  - Remote Controlled Block Valves
  - Hand Operated Block Valves
  - Check Valves

- Type of Liquid Transported
- Elevation Profile

Analysis Process

A software application is utilized to analyze pipeline segment data to determine the volume of media that would potentially escape from a pipeline if a rupture were to occur. Based on analysis of the pipeline operation and system data noted above the software application calculates the initial and stabilization volumes associated with a rupture at defined intervals along the pipeline segment. The rupture point identified as having the largest Total Volume (Initial + Stabilization) is identified as the WCD location.

Worst Case Discharge Calculation

Pipeline Operation Data:

- System flowrate: 8,000 bph
- System monitoring and control capability:
  - Time required to recognize and react to pipeline rupture: 15 minutes
  - Time required to shutdown system and complete isolation: 15 minutes
  - Active leak detection system
  - 24/7 pipeline control center monitoring

Pipeline System Data:

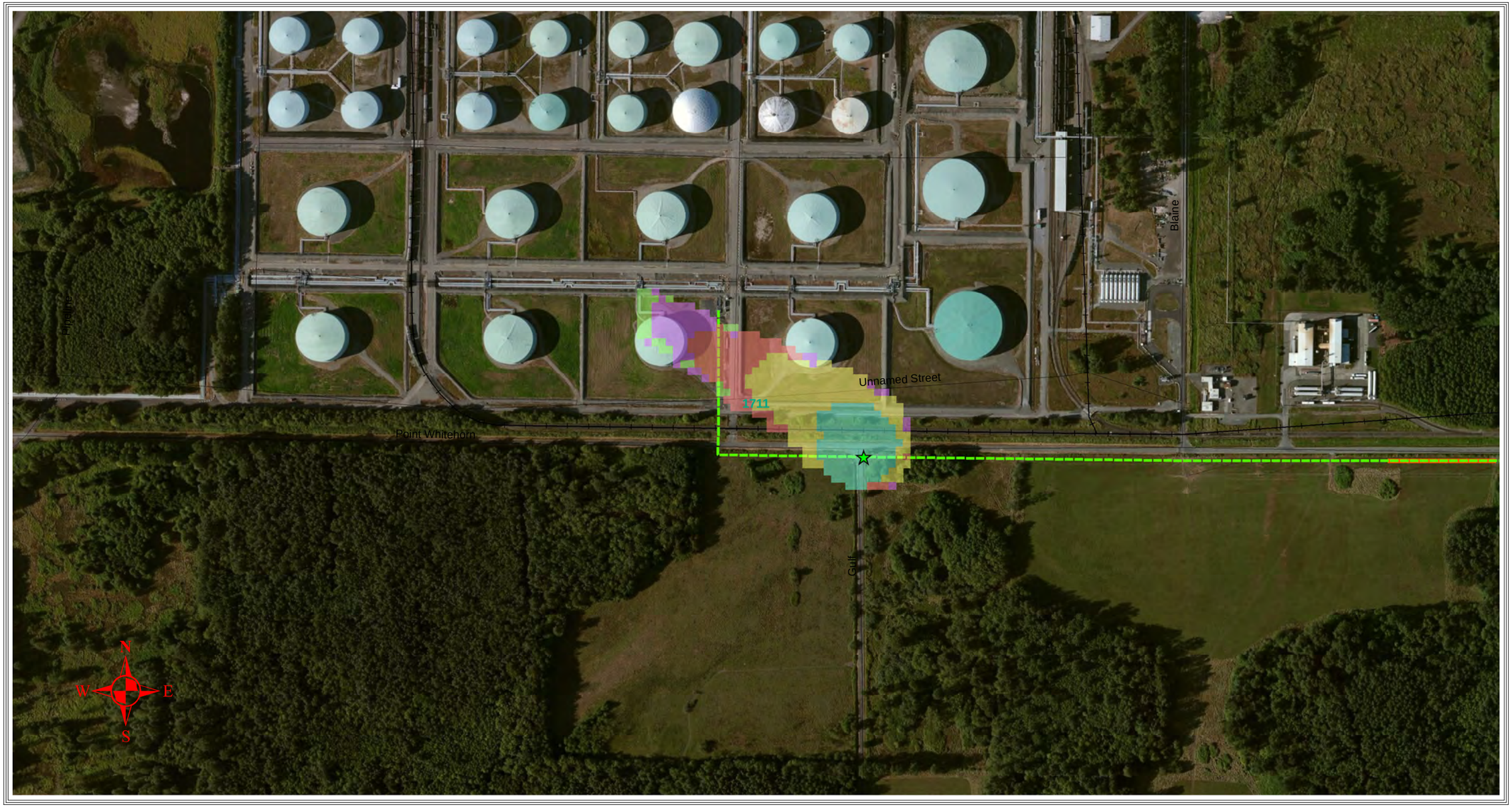
- Pipe specifications:
  - Length: 5.4 miles
  - Outside diameter: 24 inches
  - Wall-thickness: .281 - .375 inches
- Isolation capability:
  - Remote controlled block valves: Control Center operational, at beginning and end of pipeline system
  - Check valves: none
- Type of liquid transported: crude oil
- Elevation profile: utilized

The WCD for the USDOT portion of the pipeline is calculated as follows:

- WCD = [(Maximum time to detect spill and shutdown pipeline x maximum flow rate) + maximum drainage volume
- WCD = [(0.5 hours x 8,000 bph) + 6,843 bbls
- WCD = 10,843 bbls (Mile post 5.11)

The Crude Pipeline 48-hour trajectory is provided as Figure D.6, the Crude Pipeline Planning Standard Spreadsheet is provided and Figure D.7, and the Transmission Pipeline and Pipeline Tank Farms that May Impact Shorelines of State Significance is proved as Figure D.8.

Figure D.6: Crude Pipeline 48-Hour Trajectory



High Consequence Area (HCA) Map

bp Pipelines North America
150 W Warrenville Rd
Naperville, IL 60563

Potential Impact Results and HCA Layers

- Coastal Areas
- Comm Nav Water
- Drinking Water
- Ecological
- BP_PopArea_2012
- HPA
- OPA
- Buffer

HCA CA's

- D
- I
- Centerline

Impact_Time

- 0-1 Hr
- 1-5 Hrs
- 5-10 Hrs
- 10-30 Hrs
- 30-48 Hrs

GDT Data

- Hospital
- School
- Church
- HIGHWAY
- RAILROAD
- STREET
- REC AREA
- AIRPORT
- MJR WATER
- PARK
- COUNTY

bp

1:5,000

0 Miles 0.03

Northwest P.U.
Cherry Point Crude
Worst Case Discharge
48 Hour Scenario

Safety and Operations - Integrity Mgmnt

Figure D.7: Crude Pipeline Planning Standard Spreadsheet

Figure D.8: Transmission Pipelines (and Pipeline Tank Farms) That May Impact Shorelines of State Significance

Time (hours)	Boom/Assessment	Minimum Oil Recovery Rate % of Worst Case Spill Volume per 24 Hours	Minimum Storage in Barrels
1	A safety assessment of the spill by trained crew and appropriate air monitoring could have arrived	-	-
2	2,000 feet of boom available at the spill source or downstream of the source could have arrived. Alternatively, resources identified to deploy a pipeline control point to keep oil from entering surface waters or penetrating into the ground could have arrived.	-	-
6	Additional 5,000 feet of boom available for containment, recovery or protection could have arrived	Capacity to recover the lesser of 10% of worst case spill volume or 12,500 barrels (bbls) within 24-hour period could have arrived	1 times the EDRC
12	Additional 20,000 feet of boom to be used for containment, protection or recovery could have arrived	Capacity to recover the lesser of 15% of worst case spill volume or 36,000 bbls within 24-hour period could have arrived	2 times the EDRC
24	More boom as necessary for containment, recovery or protection	Capacity to recover the lesser of 20% of worst case spill volume or 48,000 bbls within 24-hour period could have arrived	3 times the EDRC
48	More boom as necessary for containment, recovery or protection	Capacity to recover the lesser of 25% of worst case spill volume or 60,000 bbls within 24-hour period could have arrived	More as necessary to not slow the response

EDRC=effective daily recovery capacity

D.9 Oil Spill Response Organization Information

Olympic Pipe Line Company LLC has contracts with both Marine Spill Response Corporation (MSRC) and National Response Corporation Environmental Services Inc. (NRCES); which maintains the resources, equipment, and capabilities necessary to respond to an oil that may weather and submerge or sink and will respond to a release, as indicated in the letters of intent provided in Appendix B of the Facility Response Plan (FRP).

The equipment is capable of being on scene within twelve hours of spill notification.

Time (hours)	Capability
1	Initiate an assessment and consultation regarding the potential for the spilled oil to submerge or sink.
6-12	Resources and personnel to detect and delineate the spilled oil such as side scan or multibeam sonar, laser fluorosensors, induced polarization, divers, remotely operated vehicles, or other methods to locate the oil on the bottom or suspended in the water column could have arrived. Additionally, containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom could have arrived.
12-24	Resources and personnel necessary to assess the impact of the spilled oil on the environment could have arrived. Types of resources that may be used for this purpose include sampling equipment. Additionally, dredges, submersible pumps, sorbents, agitators, or other equipment necessary to recover oil from the bottom and shoreline could have arrived.

APPENDIX E HAZARD EVALUATION AND RISK ANALYSIS

Table of Contents

List of Figures

E.1 Pipeline - Abnormal Conditions

Because the Pipeline and Hazardous Materials Safety Administration (PHMSA) considers the "substantial threat" term in 49 Code of Federal Regulations (CFR) Part 194.115(a) equivalent to the "abnormal conditions" term under 49 CFR Part 195.402(d), procedures to identify events and conditions that can pose a threat of worst case discharge (WCD), and actions to take for preventing and mitigating such events and conditions are described in Company's Operations Maintenance and Emergency Response (OMER) Manual.

E.2 Reportable Oil Spill History

Reportable oil spills for the Olympic Pipe Line Company LLC (Olympic) are recorded in Figure E.1.

Figure E.1: Reportable Oil Spill History Record

DATE	LOCATION	CAUSE	PRODUCT	LOSS (gallons)	RECOVERED (gallons)
5/27/1997	Castle Rock	Seal Failure	Gasoline and Diesel	1,092	462
6/10/1999	Bellingham - Whatcom Creek	Mainline rupture - 3rd party/pressure surge	Gasoline	231,000	Unknown
8/29/1999	Renton Station	Pump failure	Transmix	3,360	2,940+
4/2/2002	Bayview Products Terminal	Fitting loose	Diesel	15.12	15.12
12/28/2002	Renton Station	Gauge failure	Transmix	1,470	1,470
4/16/2004	Olympia Junction	Pressure switch failure	Gasoline	15.12	15.12
5/23/2004	Renton Station	Unknown	Gasoline	1,890	840
7/15/2005	Renton station	Sump Level Indicator	Transmix	39.9	39.9
11/7/2005	Woodinville Station	Valve Seal Failure	Gasoline	29.82	29.82
12/20/2007	Anacortes – K Booster Sta.	Sump Level Switch Failure	Transmix	6.72	5.04
5/3/2009	Bayview Terminal	Pressure Gauge	Transmix	63	63
9/19/2011	MP 7 Block Valve	Pressure Switch	Diesel	11.76	11.76
3/31/2012	Allen Station	TRV	Diesel	80	80
4/1/2012	Allen Station	TRV	Diesel	37	37
7/20/2014	Renton Station	Launcher	Diesel	8.16	8.16

DATE	LOCATION	CAUSE	PRODUCT	LOSS (gallons)	RECOVERED (gallons)
10/29/2014	Allen Station	2” Body Bleed, 20”, Unit 1	Transmix	314.4	314.4
11/02/2016	Tacoma Station	Pressure switch failure	Gasoline	11.4	11.4
08/22/2017	Portland Delivery Facility	Valve Seal Failure	Diesel	70.1	70.1
06/04/2019	Castle Rock Station	Injection Pump	Diesel	8	8
02/23/2020	Mile Post 86	Threaded O’Ring	Gasoline	67.4	18.7
02/23/2020	Mile Post 89	Threaded O’Ring	Gasoline	32.5	12.3

E.3 Discharge Scenarios

The equipment and manpower to respond to a spill are available from several sources and are listed with the equipment and contractors in Section 7. Contractor and Olympic equipment can also be found in the Western Response Resource List (www.wrrl.us). The following sections are discussions of WCD calculations and scenarios.

E.3.1 Worst Case Discharge Response Scenario

WCD calculations for the United States Department of Transportation (USDOT) are described in Appendix E.4.1. Washington Department of Ecology (WDOE) and Oregon Department of Environmental Quality (ODEQ) required WCDs are described in Appendix E.4.2. Discussion of this scenario is as follows:

Upon discovery of any size/type of spill, the following procedures would be followed:

1. First person to discover the spill would immediately notify the Renton Control Center (RCC) in accordance with Figure 2.1.
2. RCC Controller notifies Team Leader and Control Center Team Lead.
3. Control Center Team Lead notifies the District Operations Manager (Qualified Individual [QI] or Alternate QI) who would assume role as Incident Commander, as well as other personnel as needed (refer to Figure 2.1).
4. The QI may handle all aspects of a response. Among those actions would be to:
   - Conduct safety assessment and evacuate personnel as needed
   - Direct responders to shut down ignition sources
   - Direct responders to shut down and control sources of spill
   - Direct personnel to deploy containment boom or other equipment as appropriate
   - Complete spill reports and notifications as described in Figures 3.1 and 3.2.
5. The QI fills out the Incident Potential Worksheet in Figure 3.2 to assist in determining if the Facility Response Plan shall be activated, therefore activating the Incident Management Team.
6. The On-Scene Incident Commander initiates spill assessment procedures including surveillance operations, trajectory calculations, and spill volume estimating in accordance with Section 2.
7. The Incident Commander utilizes guidance checklists in Section 4 for potential issues that may need to be addressed. The primary focus would be to establish incident priorities and objectives and to brief staff accordingly.
8. The Incident Management Team develops the following plans, as appropriate (some of these plans may not be required during a small or medium spill):
   - Site Safety
   - Incident Action
   - Disposal
   - Site Security
   - Decontamination
   - Alternative Response Strategies
   - Demobilization

   Plan templates can be found in Section 5 and Figure 8.2.
9. The response continues until an appropriate level of cleanup, agreed by Unified Command is attained.
10. In the unlikely event of simultaneous spills from the pipeline, additional contractor equipment and personnel, and Mutual Response Team personnel would be mobilized as needed.

E.4 Spill Volume Calculations

E.4.1 United States Department of Transportation Pipeline and Facilities

The WCD for the USDOT portion of the pipeline and facilities, as defined in 49 CFR 194.105(b), as the largest volume of the following:

(a) The pipeline's maximum shut-down response time in hours (based on historic discharge data or in the absence of such data, the operators best estimate), multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum daily capacity of the pipeline), plus the largest drainage volume after shutdown of the line section(s) in the response zone expressed in barrels; or

(b) The largest foreseeable discharge for the line section(s) within a response zone, expressed in barrels (cubic meters), based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective or preventative action taken; or

(c) If the response zone contains one or more breakout tanks, the capacity of the single largest tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system, expressed in barrels.

Under PHMSA's current policy, operators can reduce the WCD volume derived from 49 CFR 194.105(b)(3) by no more than 75% if an operator is taking certain spill prevention measures for their breakout tanks and presents supporting information in the response plan. An operator can reduce the WCD volume based on breakout tanks in the response zones as follows:

SPILL PREVENTION MEASURES	PERCENT REDUCTION ALLOWED
Secondary containment capacity greater than 100% capacity of tank and designed according to National Fire Protection Association (NFPA) 30	50%
Tank built, rebuilt and repaired according to American Petroleum Institute (API) Standard 620/650/653	10%
Automatic high-level alarms/shutdowns designed according to NFPA/API Recommended Practice (RP) 2350	5%
Testing/cathodic protection designed according to API Std 650/651/653	5%
Tertiary containment/drainage/treatment per NFPA 30	5%
Maximum allowable credit or reduction	**75%**

All of the breakout tanks in the pipeline system are within secondary containment greater than 100% of the tanks. Tanks are built, rebuilt and repaired according to API Standards 620/650/653. Automatic high-level alarms/shutdowns are designed according to NFPA/API RP 2350. Testing and cathodic protection designed according to API Standards 650/651/653. Tertiary containment, drainage, treatment is designed per NFPA 30, As a result, the discharge volumes for the largest tank was determined by adjusting the total tank volume downward by 75%.

USDOT Worst Case Discharge Calculations

The WCD for the pipeline system is based on the largest volume calculation based on the criteria including above (E.5.1 (a), (b), and (c)).

The following calculation is based on the criteria in E.5.1 (a) The WCD of 21,764 barrels (bbls) is based on a release from anywhere along the 14 inch Renton to Portland pipeline.

- Maximum Pumping Rate is approximately 8,000 bbls per hour
  - Maximum time to detect and shutdown pipeline is 0.25 hours (15 minutes)
- Pipeline drain down is 19,764 bbls

The WCD is calculated as follows:

- WCD = [(Maximum time to detect spill and shutdown pipeline x maximum flow rate) + maximum drainage volume
- WCD = [(0.25 hours x 8000 bbls/hour) + 19,764 bbls
- WCD = 21,764 bbls

The following calculation is based on the criteria in E.5.1 (b) The WCD of 5,500 bbls is based on the largest historical release from the pipeline found in Figure E.1.

The following calculation is based on the criteria in E.5.1 (c) The WCD of 27,500 bbls is based on the capacity of the single largest tank (110,000 gallons) adjusted by the maximum allowable credit of 75%.

Based on the calculations above, the largest WCD volume is 27,500 bbls from the largest tank at the Bayview Products Terminal.

E.4.2 Washington & Oregon State Worst Case Discharge Volumes

The WCD for Washington State as defined in WAC 173-182-030(67) as the largest volume determined from three different methods, complicated by adverse weather conditions:

(1) The pipeline's maximum time to detect the release, plus the maximum shutdown response time multiplied by the maximum flow rate per hour, plus the largest line drainage volume after shutdown;

(2) The maximum historic discharge from the pipeline; an

(3) The largest single breakout tank or battery of breakout tanks without a single secondary containment system. Each operator shall determine the WCD and provide the methodology, including calculations, used to arrive at the volume.

Based on the USDOT calculations in Appendix E.4.1 above, the largest tank at Bayview Terminal was determined to be the largest WCD volume. However, in terms of Washington and Oregon State calculations, a more conservative and realistic approach was taken to ensure response capabilities are adequate across the entire length of the pipeline.

The following five worst case volumes are calculated based on the three operational areas of the pipeline: North Area, Central Area, and South Area. Additionally, the largest tank (in the North Area) was calculated as its own response zone with a separate worst case volume.

Worst Case Discharge Components

The calculation used to define the potential spill volume is comprised of two components. The basic formula for rupture volume calculation is:

Total Volume = Initial Volume + Stabilization Volume

Initial Volume: Volume of liquid that leaves the pipeline from the point the rupture occurs until the impacted pipeline segment is isolated. The initial volume can be impacted by the system flowrate as well as the time required to isolate the impacted pipeline segment.

Initial Volume: System Flowrate x (time to recognize rupture + time to shut down & isolate)/60

Stabilization Volume: Volume of liquid that leaves the pipeline (drains out) after the impacted pipeline segment is isolated. The stabilization volume can be impacted by the location of isolation points on the

pipeline system (Valves, etc.), pipeline volume (length, diameter, wall thickness), pipeline elevation profile and liquid properties.

Stabilization Volume: Σ (Linefill of drained pipe segments upstream and downstream of the release point that are higher in elevation, back to an isolation point[1] or to the point of highest elevation)

Analysis Process

A software application is utilized to analyze pipeline segment data to determine the volume of media that would potentially escape from a pipeline if a rupture were to occur. Based on analysis of the pipeline operation and system data noted above the software application calculates the initial and stabilization volumes associated with a rupture at defined intervals along the pipeline segment. The rupture point identified as having the largest Total Volume (Initial + Stabilization) is identified as the WCD location.

Worst Case Discharge Calculation Components

Pipeline Operation Data:

- System flowrate: 8,000 barrels per hour (bph)-10,000 bph
- System monitoring and control capability:
  - Time required to recognize and react to pipeline rupture: 15 minutes
  - Time required to shutdown system and complete isolation: 15 minutes
  - Active leak detection system
  - 24/7 pipeline control center monitoring

Pipeline System Data:

- Pipe specifications:
  - Length: varies, Ferndale to Portland
  - Outside diameter: 14", 16", 20"
  - Wall-thickness: varies
- Isolation capability:
  - Remote controlled block valves: Control Center shutdown block valves at each station
  - Check valves: yes
- Type of liquid transported: diesel
- Elevation profile: utilized

Calculations

In order to comply with WAC rules which state that at a minimum the total time to detect and shut down the pipeline must be equal to or less than thirty minutes. It is estimated that initial time to recognize a rupture, shut down, and isolate would take Olympic less than ten minutes. Initial volume loss and total volume loss for all planning points have been calculated in Figure E.2. Worst case volumes by planning point is provided as Figure E.3.

Initial Volume: System Flowrate x (time to recognize rupture + time to shut down & isolate) / 60 minutes

Initial Volume + Stabilization Volume = Total Volume

1 Check valves only isolate in one direction (opposite of normal flow direction)

Figure E.2: Initial Volume and Total Volume Loss Calculations

North Area
Ebey Slough
Initial Volume = 10,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 5,000 bbls Total Volume = 5,000 bbls + 14,000 bbls Total Volume = 19,000 bbls
Nooksack River
Initial Volume = 10,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 5,000 bbls Total Volume = 5,000 bbls + 8,820 bbls Total Volume = 13,820
Skagit River
Initial Volume = 10,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 5,000 bbls Total Volume = 5,000 bbls + 1,024 bbls Total Volume = 6,024
Snohomish River
Initial Volume = 10,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 5,000 bbls Total Volume = 5,000 bbls + 4,775 bbls Total Volume = 9,775 bbls
Stillaguamish River
Initial Volume = 10,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 5,000 bbls Total Volume = 5,000 bbls + 3,045 bbls Total Volume = 8,045 bbls

Central Area
Duwamish River
Initial Volume = 10,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 5,000 bbls Total Volume = 5,000 bbls + 2,184 bbls Total Volume = 7,184
Green River (1)
Initial Volume = 8,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 4,000 bbls Total Volume = 4,000 bbls + 1,786 bbls Total Volume = 5,786 bbls
Green River (2)
Initial Volume = 8,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 4,000 bbls Total Volume = 4,000 bbls + 3,168 bbls Total Volume = 7,168 bbls
Puyallup River
Initial Volume = 8,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 4,000 bbls Total Volume = 4,000 bbls + 2,740 bbls Total Volume = 6,740 bbls
Renton Station (Breakout Tank)
Total Volume = 10,000 bbls (Capacity of single tank)
South Area
Columbia River
Initial Volume = 8,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 4,000 bbls Total Volume = 4,000 bbls + 1,351 bbls Total Volume = 5,351 bbls

Cowlitz River
Initial Volume = 8,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 4,000 bbls Total Volume = 4,000 bbls + 2,390 bbls Total Volume = 6,390 bbls
Kalama River
Initial Volume = 8,000 bbls/hr x (15 minutes + 15 minutes)/60 Initial Volume = 4,000 bbls Total Volume = 4,000 bbls + 2,387 bbls Total Volume = 6,387 bbls
Lewis River
Initial Volume = 8,000 bbls/hr x (15 minutes + 15 minutes)/60 Initial Volume = 4,000 bbls Total Volume = 4,000 bbls + 2,095 bbls Total Volume = 6,095 bbls
Nisqually River
Initial Volume = 8,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 4,000 bbls Total Volume = 4,000 bbls + 19,764 bbls Total Volume = 23,764 bbls
Toutle River
Initial Volume = 8,000 bbls/hr x (15 minutes + 15 minutes) / 60 minutes Initial Volume = 4,000 bbls Total Volume = 4,000 bbls + 2,173 bbls Total Volume = 6,173 bbls

Figure E.3: Worst Case Volumes

Planning Points	Worst Case Volume (barrels)
North Area	
Bayview Products Terminal (largest tank)	110,000
Ebey Slough	19,000
Nooksack River	13,820
Skagit River	6,024
Snohomish River	9,775
Stillaguamish River	8,045
Central Area	
Duwamish River	7,184
Green River (1)	5,786
Green River (2)	7,168
Puyallup River	6,740
Renton Station – Single Tank	10,000
South Area	
Columbia River	5,351
Cowlitz River	6,390
Kalama River	6,387
Lewis River	6,095
Nisqually River	23,764
Toutle River	6,173

E.5 Planning Standard Spreadsheets

The planning standard spreadsheets identifies the type, location and travel distances for dedicated response equipment to meet the 2, 6, 12, 24 and 48 hour planning standards for transmission pipelines and pipeline tank farms found in WAC 173-182-365 based on the worst case volume. The equipment lists should be used as an evaluation that the planning standards can be met with existing dedicated equipment and not interpreted as restricting the use of all additional dedicated and non-dedicated equipment should it be needed. Figures E.4 through Figure E.18 includes the planning standard spreadsheets for worst case spill volumes.

Figure E.4: Bayview Products Terminal WCD Planning Spreadsheet

Plan Holder: BP Pipelines (North America) Northwest Pipelines District- Bayview Products Terminal

Planning Standard Summary Analysis: WAC 173-182-366 Transmission pipeline tank farms

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecology upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020**. This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRCES

Plan Holder owned equipment: Yes- Section 7.1 in plan

Worst Case Spill Volume (bbls): 110,000

Oil Products Handled by Group (Group 1-5): Gasoline (1), Diesel (3), Jet Fuel (3): Figure C.8 in plan.

Mutual Aid/Letters Of Intent: None

Analysis point description: Bayview Products Terminal, 14879 Ovenell Road, Mt. Vernon.

Alternative Planning Standard: Approved alternative. See Appendix E.5, the Hazard Evaluation and Risk Analysis Appendix

	On-water Storage (bbls)	Shore side Storage (bbls)	On-water Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	0	0	0	360	0	360	0	0	2,000	2,000	2
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	4,208	1,101	5,309	918	17,260	8,482	26,660	11,240	58,980	13,600	83,820	253
6 hr required			3,850				11,000				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	8,630	11,563	20,193	3,720	33,354	28,231	65,305	32,180	99,720	16,400	148,300	428
12 hr required			11,550				16,500				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	8,630	16,563	25,193	3,720	33,354	28,231	65,305	32,180	99,720	16,400	148,300	428
24 hr required			23,100				22,000				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	8,630	16,563	25,193	3,720	33,354	28,231	65,305	32,180	99,720	16,400	148,300	428
48 hr required			23,100				27,500				27,000	
meets standard			Yes				Yes				Yes	

Figure E.5: Columbia River WCD Planning Spreadsheet

Plan Holder: BP Pipeline- NW Pipelines District - Columbia River

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines that may impact shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecololgy upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020.** This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): 5,351

Oil Products Handled by Group (Group 1-5): refined products

Mutual Aid/Letters Of Intent: N/A

Analysis point description: Where the pipeline crosses the Columbia River. Olympic - Vancouver

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	70	70	0	0	0	0	0	2,000	0	2,000	12
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	1,434	530	1,964	2,030	11,820	2,742	16,592	10,440	20,480	3,800	34,720	128
6 hr required			535				535				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	10,334	1,553	11,887	2,948	35,408	32,217	70,573	27,795	91,420	11,400	130,615	404
12 hr required			1,605				803				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	10,334	1,553	11,887	2,948	35,408	32,217	70,573	27,795	91,420	11,400	130,615	404
24 hr required			3,211				1,070				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	54,534	1,553	56,087	2,948	35,408	88,624	126,980	31,095	92,220	11,400	134,715	418
48 hr required			3,211				1,338				27,000	
meets standard			Yes				Yes				Yes	

Figure E.6: Cowlitz River WCD Planning Spreadsheet

Plan Holder: BP Pipelines - NW Pipelines District - Cowlitz

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines that may impact shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecololgy upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020**. This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): 6,390 bbls

Oil Products Handled by Group (Group 1-5): refined products

Mutual Aid/Letters Of Intent: N/A

Analysis point description: Point where the pipeline crosses the Cowlitz River

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	0	0	0	0	0	0	0	2,500	0	2,500	3
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	2,470	838	3,308	2,852	19,778	14,245	36,875	10,440	48,440	4,800	63,680	198
6 hr required			639				639				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	8,672	1,553	10,225	3,720	33,968	31,250	68,938	32,180	95,620	9,400	137,200	422
12 hr required			1,917				959				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	8,672	1,553	10,225	3,720	33,968	31,250	68,938	32,180	95,620	9,400	137,200	422
24 hr required			3,834				1,278				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	8,672	1,553	10,225	3,720	33,968	31,250	68,938	32,180	95,620	9,400	137,200	422
48 hr required			3,834				1,598				27,000	
meets standard			Yes				Yes				Yes	

Figure E.7: Duwamish River WCD Planning Spreadsheet

Plan Holder: BP Pipelines- NW Pipelines District - Duwamish

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines that may impact shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecololgy upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020.** This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): 7,184

Oil Products Handled by Group (Group 1-5): refined products

Mutual Aid/Letters Of Intent: N/A

Analysis point description: Point where the pipeline crosses the Duwamish River and the first/northern point where the pipeline crosses the Green River.

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	100	210	310	178	890	0	1,068	0	1,000	2,000	3,000	35
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	35,355	1,291	36,646	2,018	46,472	11,501	59,991	11,240	61,900	9,600	82,740	310
6 hr required			718				718				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	96,493	1,553	98,046	4,916	73,330	74,869	153,115	35,480	124,040	12,400	171,920	503
12 hr required			2,155				1,078				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	124,789	1,553	126,342	4,916	73,330	109,703	187,949	38,420	125,240	12,400	176,060	523
24 hr required			4,310				1,437				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	164,789	1,553	166,342	4,916	74,770	109,703	189,389	39,255	125,240	12,400	176,895	528
48 hr required			4,310				1,796				27,000	
meets standard			Yes				Yes				Yes	

Figure E.8: Ebey Slough River Crossings River WCD Planning Spreadsheet

Plan Holder: BP Pipeline NW Pipelines District - Ebey Slough River Crossings

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines that may impact shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecology upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020.** This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes, not listed on the WRRL

Worst Case Spill Volume (bbls): 19,000

Oil Products Handled by Group (Group 1-5): refined products

Mutual Aid/Letters Of Intent: LOI for acess to shoreside storage from Rain for Rent and Baker Tanks

Analysis point description: Where the pipeline crosses Ebey Slough River. Planning point Olympic-Everett

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	0	0	0	0	0	0	0	2,000	0	2,000	7
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	4,150	1,091	5,241	822	17,874	11,501	30,197	11,240	52,980	6,600	70,820	244
6 hr required			1,900				1,900				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	8,672	2,753	11,425	3,720	33,968	31,250	68,938	32,180	97,620	9,400	139,200	423
12 hr required			5,700				2,850				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	8,672	2,753	11,425	3,720	33,968	31,250	68,938	32,180	97,620	9,400	139,200	423
24 hr required			11,400				3,800				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	8,672	2,753	11,425	3,720	33,968	31,250	68,938	32,180	97,620	9,400	139,200	423
48 hr required			11,400				4,750				27,000	
meets standard			Yes				Yes				Yes	

Figure E.9: Green River River WCD Planning Spreadsheet

Plan Holder: BP Pipelines - NW Pipelines Districts - Green River

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines and pipeline tank farms

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecololgy upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020**. This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): 5786

Oil Products Handled by Group (Group 1-5): group 1-3

Mutual Aid/Letters Of Intent: N/A

Analysis point description: The spreadsheet the location where the pipeline crosses the Green River. Olympic Kent

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	210	210	0	0	0	0	0	2,000	0	2,000	24
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	3,988	1,299	5,287	822	17,874	14,520	33,216	11,240	45,220	6,600	63,060	249
6 hr required			577				577				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	8,672	1,553	10,225	3,720	33,968	31,250	68,938	32,180	97,620	9,400	139,200	423
12 hr required			1,730				865				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	8,672	1,553	10,225	3,720	33,968	31,250	68,938	32,180	97,620	9,400	139,200	423
24 hr required			3,461				1,154				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	8,672	1,553	10,225	3,720	33,968	31,250	68,938	32,180	97,620	9,400	139,200	423
48 hr required			3,461				1,442				27,000	
meets standard			Yes				Yes				Yes	

Figure E.100: Kalama River WCD Planning Spreadsheet

Plan Holder: BP Pipeline- NW Pipelines District - Kalama River

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines that may impact shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecology upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020**. This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): 6387

Oil Products Handled by Group (Group 1-5):

Mutual Aid/Letters Of Intent:

Analysis point description: Where the pipeline crosses the Kalama River/Columbia River

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	70	70	0	0	0	0	0	2,000	0	2,000	13
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	1,434	530	1,964	2,030	11,820	2,742	16,592	10,440	21,480	3,800	35,720	136
6 hr required			639				639				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	52,672	1,553	54,225	3,720	35,408	41,817	80,945	35,655	98,620	12,400	146,675	442
12 hr required			1,916				958				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	57,292	1,553	58,845	3,720	35,408	54,811	93,939	38,595	104,820	12,400	155,815	457
24 hr required			3,832				1,277				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	59,831	1,553	61,384	3,720	35,408	103,703	142,831	38,595	109,620	12,400	160,615	467
48 hr required			3,832				1,597				27,000	
meets standard			Yes				Yes				Yes	

Figure E.11: Lewis River WCD Planning Spreadsheet

Plan Holder: BP Pipeline- NW Pipelines District - Lewis River

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines that may impact shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecology upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020**. This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): 6095

Oil Products Handled by Group (Group 1-5):

Mutual Aid/Letters Of Intent:

Analysis point description: Where the pipeline crosses the Lewis River/Columbia River

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	70	70	0	0	0	0	0	2,000	0	2,000	13
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	1,434	530	1,964	2,030	11,820	2,742	16,592	10,440	21,480	3,800	35,720	136
6 hr required			610				610				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	52,672	1,553	54,225	3,720	35,408	41,817	80,945	35,655	98,620	12,400	146,675	442
12 hr required			1,829				914				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	57,292	1,553	58,845	3,720	35,408	54,811	93,939	38,595	104,820	12,400	155,815	457
24 hr required			3,657				1,219				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	59,831	1,553	61,384	3,720	35,408	103,703	142,831	38,595	109,620	12,400	160,615	467
48 hr required			3,657				1,524				27,000	
meets standard			Yes				Yes				Yes	

Figure E.12: Nisqually River WCD Planning Spreadsheet

Plan Holder: BP Pipeline - NW Pipelines District - Nisqually River

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines that may impact shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecology upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020.** This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): 23,764

Oil Products Handled by Group (Group 1-5):

Mutual Aid/Letters Of Intent: LOI for access to shoreside storage from Rain for Rent and Baker Tanks

Analysis point description: where pipeline crosses the Nisqually River

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	0	0	0	0	0	0	0	4,000	0	4,000	3
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	3,318	1,169	4,487	822	20,776	14,520	36,118	11,240	45,960	6,600	63,800	235
6 hr required			2,376				2,376				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	8,672	5,653	14,325	3,720	33,968	31,250	68,938	32,180	99,620	9,400	141,200	423
12 hr required			7,129				3,565				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	8,672	5,653	14,325	3,720	33,968	31,250	68,938	32,180	99,620	9,400	141,200	423
24 hr required			14,258				4,753				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	8,672	5,653	14,325	3,720	33,968	31,250	68,938	32,180	99,620	9,400	141,200	423
48 hr required			14,258				5,941				27,000	
meets standard			Yes				Yes				Yes	

Figure E.13: Nooksack River and Cherry Point Crude Line WCD Planning Spreadsheet

Plan Holder: BP Pipelines NW Pipline District - Nooksack River and Cherry Point Crude Line

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines that may impact shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecology upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020.** This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): 13,280 (crossing at Nooksack River), 10,843 (Cherry Point Crude line - spreadsheet is run for the larger volume)

Oil Products Handled by Group (Group 1-5): Group 1-3

Mutual Aid/Letters Of Intent: N/A

Analysis point description: Where the pipelines crosses the Nooksack River - this equipment is also relevant for the BP Cherry Point Crude Line

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	0	0	0	890	0	890	0	0	2,000	2,000	1
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	3,750	1,091	4,841	822	16,024	11,501	28,347	11,240	42,220	4,600	58,060	220
6 hr required			1,328				1,328				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	8,672	1,553	10,225	3,720	34,858	31,250	69,828	32,180	95,620	11,400	139,200	422
12 hr required			3,984				1,992				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	8,672	1,553	10,225	3,720	34,858	31,250	69,828	32,180	95,620	11,400	139,200	422
24 hr required			7,968				2,656				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	8,672	1,553	10,225	3,720	34,858	31,250	69,828	32,180	95,620	11,400	139,200	422
48 hr required			7,968				3,320				27,000	
meets standard			Yes				Yes				Yes	

Figure E.14: Puyallup River WCD Planning Spreadsheet

Plan Holder: BP Pipelines- NW Pipelines District - Puyallup

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines that may impact shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecology upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020**. This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): 6740

Oil Products Handled by Group (Group 1-5): group 1-3

Mutual Aid/Letters Of Intent: N/A

Analysis point description: Where the pipeline crosses the Puyallup River

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	On-water Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	0	0	0	0	0	0	0	4,000	0	4,000	3
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	2,652	573	2,652	0	7,176	0	7,176	11,240	15,760	6,600	33,600	142
6 hr required			674				674				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	5,088	577	5,088	110	14,352	4,113	18,575	20,480	45,920	6,600	73,000	227
12 hr required			2,022				1,011				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	5,088	577	5,088	110	14,352	4,113	18,575	20,480	45,920	6,600	73,000	227
24 hr required			4,044				1,348				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	5,088	577	5,088	110	14,352	4,113	18,575	20,480	45,920	6,600	73,000	227
48 hr required			4,044				1,685				27,000	
meets standard			Yes				Yes				Yes	

Figure E.15: Skagit River WCD Planning Spreadsheet

Plan Holder: BP Pipelines - NW Pipelines District - Skagit River

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines at crossing of shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecology upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020.** This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): 6,024

Oil Products Handled by Group (Group 1-5): group 1-3

Mutual Aid/Letters Of Intent: N/A

Analysis point description: Point where the pipeline crosses the Skagit River Olympic - Mt Vernon.

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	On-water Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	0	0	0	890	0	890	0	0	2,000	2,000	2
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	4,150	1,091	4,150	822	18,764	11,501	31,087	11,240	49,980	8,600	69,820	242
6 hr required			602				602				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	8,672	1,553	8,672	3,720	34,858	31,250	69,828	32,180	95,620	11,400	139,200	422
12 hr required			1,807				904				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	8,672	1,553	8,672	3,720	34,858	31,250	69,828	32,180	95,620	11,400	139,200	422
24 hr required			3,614				1,205				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	8,672	1,553	8,672	3,720	34,858	31,250	69,828	32,180	95,620	11,400	139,200	422
48 hr required			3,614				1,506				27,000	
meets standard			Yes				Yes				Yes	

Figure E.16: Snohomish River Crossing WCD Planning Spreadsheet

Plan Holder: BP Pipeline NW Pipelines District - Snohomish River Crossing

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines at crossings of shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecology upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020.** This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): 9,775

Oil Products Handled by Group (Group 1-5): refined products

Mutual Aid/Letters Of Intent: LOI for acess to shoreside storage from Rain for Rent and Baker Tanks

Analysis point description: Where the pipeline crosses the Snohomish River. Planning point Olympic-Everett

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	0	0	0	0	0	0	0	2,000	0	2,000	7
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	4,150	1,091	5,241	822	17,874	11,501	30,197	11,240	52,980	6,600	70,820	244
6 hr required			978				978				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	8,672	2,753	11,425	3,720	33,968	31,250	68,938	32,180	97,620	9,400	139,200	423
12 hr required			2,933				1,466				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	8,672	2,753	11,425	3,720	33,968	31,250	68,938	32,180	97,620	9,400	139,200	423
24 hr required			5,865				1,955				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	8,672	2,753	11,425	3,720	33,968	31,250	68,938	32,180	97,620	9,400	139,200	423
48 hr required			5,865				2,444				27,000	
meets standard			Yes				Yes				Yes	

Figure E.17: Stillaguamish River Crossing WCD Planning Spreadsheet

Plan Holder: BP Pipeline NW Pipelines District - Stillaguamish River Crossing

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines that may impact shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecololgy upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020.** This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes, not listed on the WRRL

Worst Case Spill Volume (bbls): 8045

Oil Products Handled by Group (Group 1-5): refined products

Mutual Aid/Letters Of Intent: LOI for acess to shoreside storage from Rain for Rent and Baker Tanks

Analysis point description: Where the pipeline crosses the Stillaguamish River. Planning point Olympic-Everett

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	0	0	0	0	0	0	0	2,000	0	2,000	7
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	4,150	1,091	5,241	822	17,874	11,501	30,197	11,240	52,980	6,600	70,820	244
6 hr required			805				805				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	8,672	1,553	10,225	3,720	33,968	31,250	68,938	32,180	97,620	9,400	139,200	423
12 hr required			2,414				1,207				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	8,672	1,553	10,225	3,720	33,968	31,250	68,938	32,180	97,620	9,400	139,200	423
24 hr required			4,827				1,609				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	8,672	1,553	10,225	3,720	33,968	31,250	68,938	32,180	97,620	9,400	139,200	423
48 hr required			4,827				2,011				27,000	
meets standard			Yes				Yes				Yes	

Figure E.18: Toutle River Crossing WCD Planning Spreadsheet

Plan Holder: BP Pipelines - NW Pipelines District - Toutle River

Planning Standard Summary Analysis: WAC 173-182-365 Transmission pipelines that may impact shorelines of statewide significance

The summary analysis spreadsheet is based on a conceptual model of equipment that would be available based on the guidelines set forth in WAC 173-182 for; planning standards, determining effectiveness of recovery systems, documenting compliance with planning standards, and plan evaluation criteria. Actual times and performance in spills will depend on the conditions of the day. An electronic version of the equipment detail spreadsheet which lists all equipment can be made available by Ecology upon request.The planning standard summary analysis indicates total access to boom, storage and recovery resources required to meet the planning standard. Equipment access is based on information listed on the WRRL and information provided through the plan holder contingency plan and Primary Response Contractor applications as of **11/16/2020**. This information is subject to change as additional equipment is acquired and/or relocated. Substantive changes will result in an update of the spreadsheets.

PRC(s): MSRC, NRC

Plan Holder owned equipment: Yes

Worst Case Spill Volume (bbls): 6173 bbls

Oil Products Handled by Group (Group 1-5): refined products

Mutual Aid/Letters Of Intent: N/A

Analysis point description: Point where the pipeline crosses the Toutle River

Alternative Planning Standard: N/A

	On-water Storage (bbls)	Shore side Storage (bbls)	Total Storage (bbls)	Calm Water (EDRC)	Protected Water (EDRC)	Open Water (EDRC)	Total Recovery (EDRC)	B1 Boom (ft)	B2 Boom (ft)	B3 Boom (ft)	Total Boom (ft)	Personnel (12 hour shift)
2 hr available	0	0	0	0	0	0	0	0	2,500	0	2,500	2
2 hr required			0				0				2,000	
meets standard			Yes				Yes				Yes	
6 hr available	2,470	838	3,308	2,852	19,778	14,245	36,875	10,440	48,440	4,800	63,680	198
6 hr required			617				617				7,000	
meets standard			Yes				Yes				Yes	
12 hr available	8,672	1,553	10,225	3,720	33,968	31,250	68,938	32,180	95,620	9,400	137,200	422
12 hr required			1,852				926				27,000	
meets standard			Yes				Yes				Yes	
24 hr available	8,672	1,553	10,225	3,720	33,968	31,250	68,938	32,180	95,620	9,400	137,200	422
24 hr required			3,704				1,235				27,000	
meets standard			Yes				Yes				Yes	
48 hr available	8,672	1,553	10,225	3,720	33,968	31,250	68,938	32,180	95,620	9,400	137,200	422
48 hr required			3,704				1,543				27,000	
meets standard			Yes				Yes				Yes	

E.6 Worst Case Discharge Trajectories

A 48-hour trajectory for each WCD volume is included below and should be used for planning purposes to determine the potential spill impact to the geographic area.

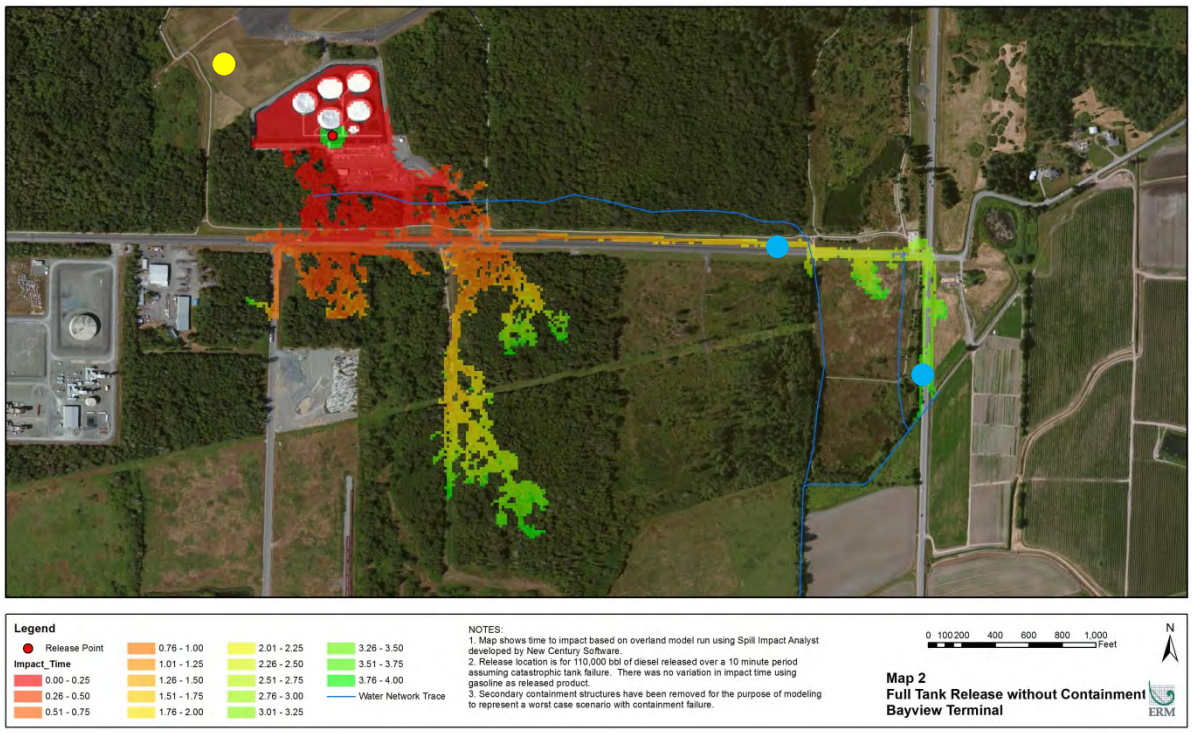
Geographic Area	Map/Modeling
Nooksack River	Response Time Modeling January Release + 48 Hour July Release + 48 Hour
Bayview Terminal	Tank Release with Containment Tank Release Without Containment
Snohomish River	Response Time Modeling January Release + 48 Hour July Release + 48 Hour December Release + 48 Hour
Nisqually River	Response Time Modeling September Release + 48 Hour December Release + 48 Hour
Columbia River	October Release + 48 Hour

E.7 Alternate Planning Standard - Bayview Products Terminal

Olympic would like to propose an alternate planning standard for a release from the largest tank at the Bayview Products Terminal. The goal of the alternate planning standard is to demonstrate that responders' initial actions, combined with resources available through existing contracts/Letters of Intent (LOIs), will minimize downstream impacts to the environment during the first 48-hrs of a response.

Olympic's Bayview Products Terminal is located at 14879 Overnell Rd, Mt. Vernon, WA. This is a land based terminal, surrounded by forested land on three sides (west, south, and east). The Terminal is bordered on the north by the Skagit Regional Airport. There are several small sloughs near the facility which all eventually lead to Padilla Bay. The most likely receptor is Indian Slough which leads to Higgins Slough and into Padilla Bay.

The model below represents a Worst Case Discharge release from the Bayview Terminal. This scenario is a release of 110,000 bbls of diesel from Tank 206 of 110,000 bbls with a failure of the concrete tank dike. The product that escapes the containment area would flow to the south and southeast. As the model shows, this product would primarily flow through the BP-owned forested area surrounding the Terminal, as well as along Ovenell Road. Product remaining within the containment area would initially pool in the southeast corner of the tank farm. The model below shows the location of product during the initial four (4) hours of a release.



- Potential earthen berm locations
- Tank Storage

Following an incident of this magnitude, the pipeline would be shut down and the station would be shut-in. Personnel would evacuate the station and muster at the Allen Station located a mile east of Bayview.

After initial notifications and evacuation, contractors would be mobilized excavator to berm ditches and direct product to BP-owned property south of Bayview for recovery. Berm sites are pre-identified on the map above. The berms would prevent product from flowing through a pathway that would ultimately reach Padilla Bay.

The Terminal's remaining tankage (Tanks 202-205 & 209) can be utilized for shoreside storage. This tankage can be made available as soon as the area is deemed safe. In an emergency situation, the volume in each tank can be reduced to a "low level" which is the minimum volume of product stored in a tank without causing damage to the internal floating roof or losing suction. Like products within the tanks can be combined to create useable storage (combining two gasoline tanks into one) via internal transfer via piping between the tanks. The transfers can be conducted locally from the facility or remotely from the Renton Control Center. The volume in the tanks can also be reduced by moving product via pipeline to Allen Station, as long as the pipe hasn't been compromised and it is safe to operate. Once reduced to the low level, the remaining capacity in the tank can be utilized to store recovered product. Assuming Tanks 202-205 and 209 are intact, the total volume of shore-side storage available at the Bayview Tank Farm is 425,261 bbls. The calculation of this volume can be found in the attached spreadsheet.

Access to the Bayview Terminal tankage can be obtained from the north via a roadway from the Skagit Regional Airport. If product needs to be transferred into the remaining tanks for storage, the tanks on the north side of the tank farm will be utilized first since they are located furthest from the pooled product area. Procedures exist to transfer product directly from vacuum trucks to the aboveground storage tanks.

The volume of store side storage available greatly exceeds the amount of on-water storage required by typical planning standards. This alternate planning standard suggests utilizing shoreside storage, in lieu of on-water storage, since there is an excess amount of shoreside storage available. Additionally, the shoreside storage is more accessible due it its proximity to the release location. Furthermore, Olympic

Pipe Line Company owns and operates the tankage to be utilized and can make the storage available as soon as safely possible without having to rely on a third party contractor. Therefore, utilizing the available shoreside storage is more suitable for the operating environment and would mitigate the impacts from a release above and beyond the current planning standards.

The following section outlines additional response actions that would occur during the first 24-hrs to contain, recover, and store diesel. These actions will prevent diesel from reaching Padilla Bay. Please note that the LOIs from all contractors mentioned below have been obtained and are enclosed with this alternate planning standard proposal.

2 hours:

- Internal notifications would begin and OSROs would be notified to initiate mobilization of response equipment and personnel.
- Snelson and/or Western Refinery Services would be contacted to mobilize excavator to berm ditches and direct product to BP-owned property south of Bayview for recovery. Berm sites are pre-identified on the attached map.
- Storage
  - Assuming Tanks 202-205 and 209 are intact, the total volume of shoreside storage available at the Bayview Tank Farm is 425,261 bbls.
  - (20,000 gallon tanks) will begin arriving from Rain For Rent. Up to 2 tanks will arrive within 2 hours (40,000 gallons total storage). The tanks will be staged northwest of the facility.
- Remediation Management contractor, Antea Group would arrive on-site to begin the assessment of groundwater impacts, plume delineation, and begin installing groundwater monitoring wells.

4 hours:

- Vacuum trucks would begin arriving to remove as much free product as possible.
- NRCES: 4 Vac trucks within 4 hours (2-220 bbl; 2-70 bbl)
- Storage:
  - An additional four (4) - 20,000 gallon tanks will arrive from Rain for Rent (80,000 gallons of total storage).

6 hours:

- Vacuum Trucks: WRS: 2- 80 bbl vac trucks, 1 - 130 bbl vac truck
- Storage: an additional four - 20,000 gallon tanks will arrive from Rain for Rent (80,000 gallons of total storage).

12 hours:

- Vacuum Trucks: WRS: 1 - 80 bbl vac truck, 1 hydrovac within 12 hours
- Storage: an additional four - 20,000 gallon tanks will arrive from Rain for Rent (80,000 gallons of total storage).

24 hours:

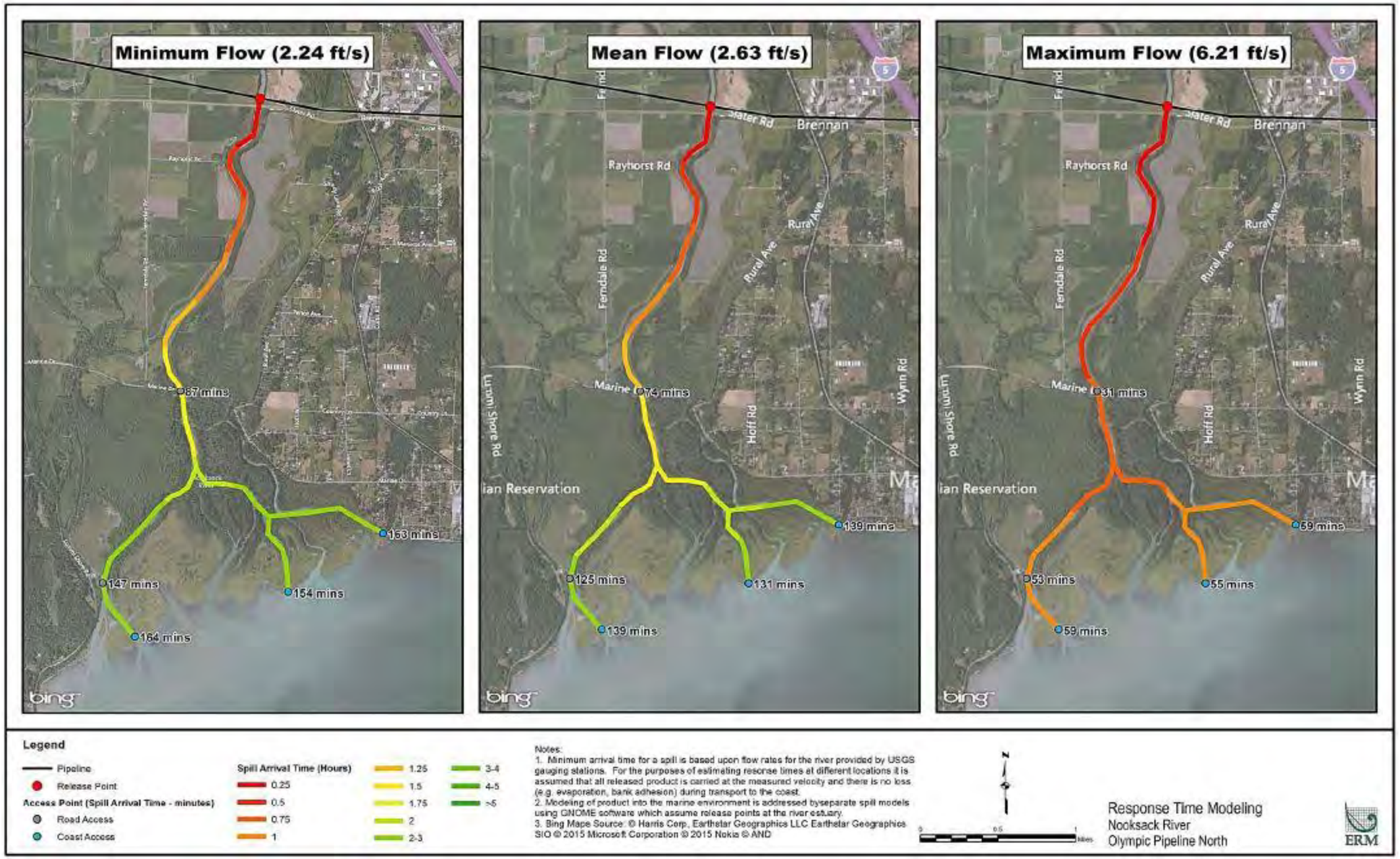
- Vacuum Trucks: WRS:1 - 130 bbl vac truck, 1 hydrovac
- Storage: an additional four - 20,000 gallon tanks will arrive from Rain for Rent (80,000 gallons of total storage).

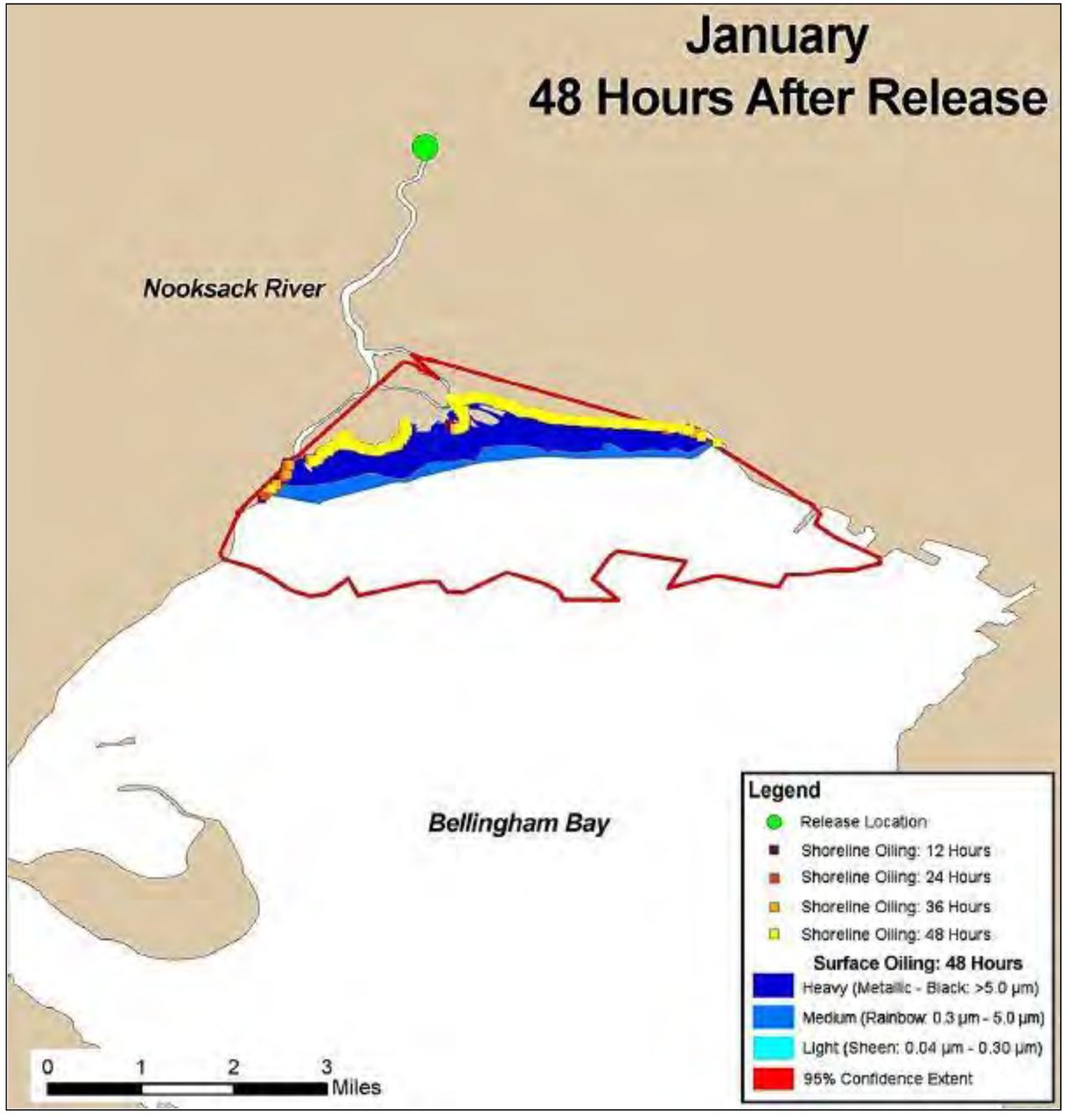
Figure E.19: Bayview Products Terminal Tank Volume Available to Store Recovered Product

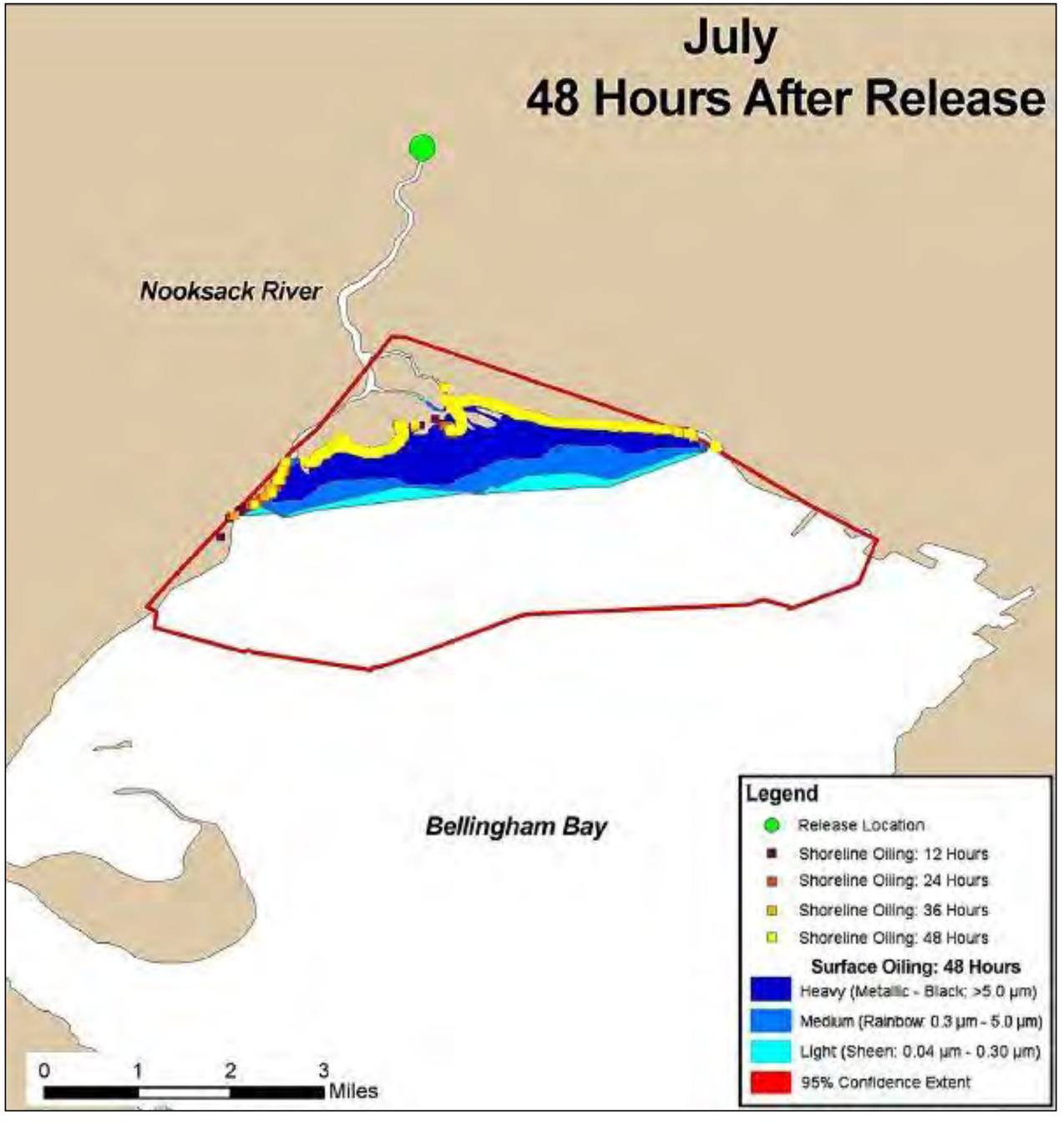
Secondary Containment Group	Tank Number	Tank Shell Capacity (bbl)	TOPs Hi-Hi Level Capacity (bbl)	TOPs Low Level Capacity (bbl)	TOPs Low Level Storage Available (bbl)	TOPs Normal Empty Level Working Capacity (bbl)	TOPs Normal Empty Level - Storage Available (bbl)	TOPs Normal Working Capacity (bbl)	TOPs Normal Working Level - Storage Available (bbl)
Formula	-	-	-	-	D-E	-	D-G	-	D-I
A	202	99,571	97,053	12,818	84,235	14,306	82,747	94,535	2,518
	203	99,205	96,687	12,818	83,869	14,306	82,381	94,169	2,518
	204	99,365	96,847	12,818	84,029	14,306	82,541	94,329	2,518
	205	98,999	96,481	12,818	83,663	14,306	82,175	93,963	2,518
	206	98,999	96,481	12,818	83,663	14,306	82,175	93,963	2,518
	209	9,174	7,641	1,839	5,802	1,910	5,731	7,075	566
TOTAL EMERGENCY STORAGE AVAILABLE					**425,261**		**417,750**		**13,156**

Note: Operations would not fill a tank to the shell capacity to avoid an overfill situation. Therefore, the emergency storage available was calculated assuming a maximum fill to the Hi-Hi Level. The Hi-Hi Level would only be reached in an emergency situation to maximize storage available for recovered product.

Figure E.20: Worst Case Discharge Trajectories




January
48 Hours After Release
Nooksack River
Bellingham Bay
0 1 2 3
Miles
Legend
Release Location
Shoreline Oiling: 12 Hours
Shoreline Oiling: 24 Hours
Shoreline Oiling: 36 Hours
Shoreline Oiling: 48 Hours
Surface Oiling: 48 Hours
Heavy (Metallic - Black: >5.0 µm)
Medium (Rainbow: 0.3 µm - 5.0 µm)
Light (Sheen: 0.04 µm - 0.30 µm)
95% Confidence Extent


July
48 Hours After Release
Nooksack River
Bellingham Bay
0 1 2 3
Miles
Legend
Release Location
Shoreline Oiling: 12 Hours
Shoreline Oiling: 24 Hours
Shoreline Oiling: 36 Hours
Shoreline Oiling: 48 Hours
Surface Oiling: 48 Hours
Heavy (Metallic - Black; >5.0 µm)
Medium (Rainbow: 0.3 µm - 5.0 µm)
Light (Sheen: 0.04 µm - 0.30 µm)
95% Confidence Extent

Legend

ReleasePoint

Time to Impact (Hrs)

0.00 - 0.25
0.26 - 0.50
0.51 - 0.75
0.76 - 1.00
1.01 - 1.25
1.26 - 1.50
1.51 - 1.75
1.76 - 2.00
2.01 - 2.25
2.26 - 2.50
2.51 - 2.75
2.76 - 3.00
3.01 - 3.25
3.26 - 3.50
3.51 - 3.75
3.76 - 4.00

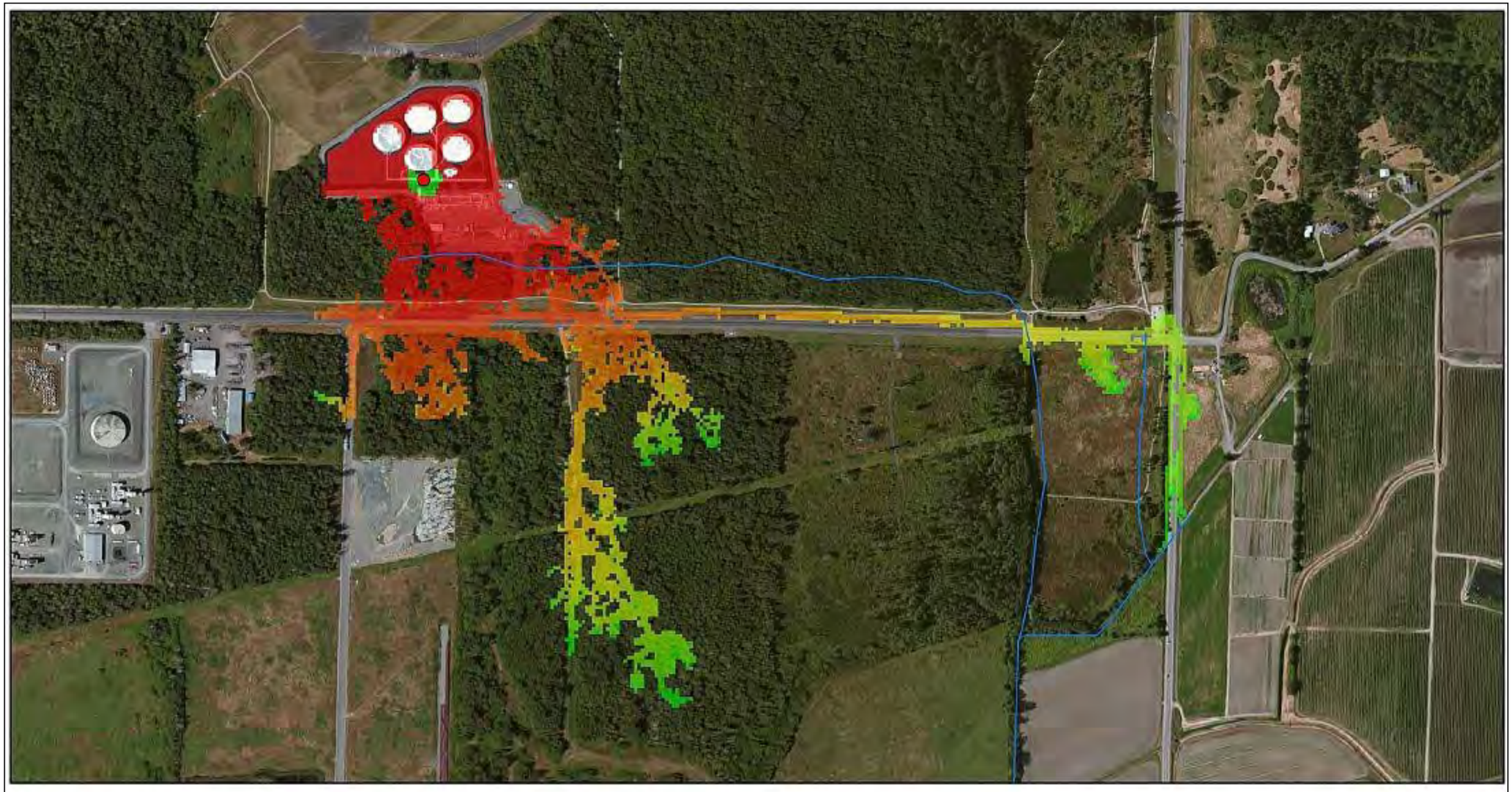
NOTES:
1. Map shows time to impact based on overland model run using Spill Impact Analyst developed by New Century Software.
2. Release location is for 110,000 bbl of diesel released over a 10 minute period assuming catastrophic tank failure. There was no variation in impact time using gasoline as released product.
3. Secondary containment area is breached due to momentum of flow and not due to insufficient storage being available within the area.

0 100 200 400 600 800 1,000 Feet

N

Map 1
Full Tank Release with Containment
Bayview Terminal

ERM



Legend

- Release Point
- Impact_Time
  - 0.00 - 0.25
  - 0.26 - 0.50
  - 0.51 - 0.75
  - 0.76 - 1.00
  - 1.01 - 1.25
  - 1.26 - 1.50
  - 1.51 - 1.75
  - 1.76 - 2.00
  - 2.01 - 2.25
  - 2.26 - 2.50
  - 2.51 - 2.75
  - 2.76 - 3.00
  - 3.01 - 3.25
  - 3.26 - 3.50
  - 3.51 - 3.75
  - 3.76 - 4.00
  - Water Network Trace

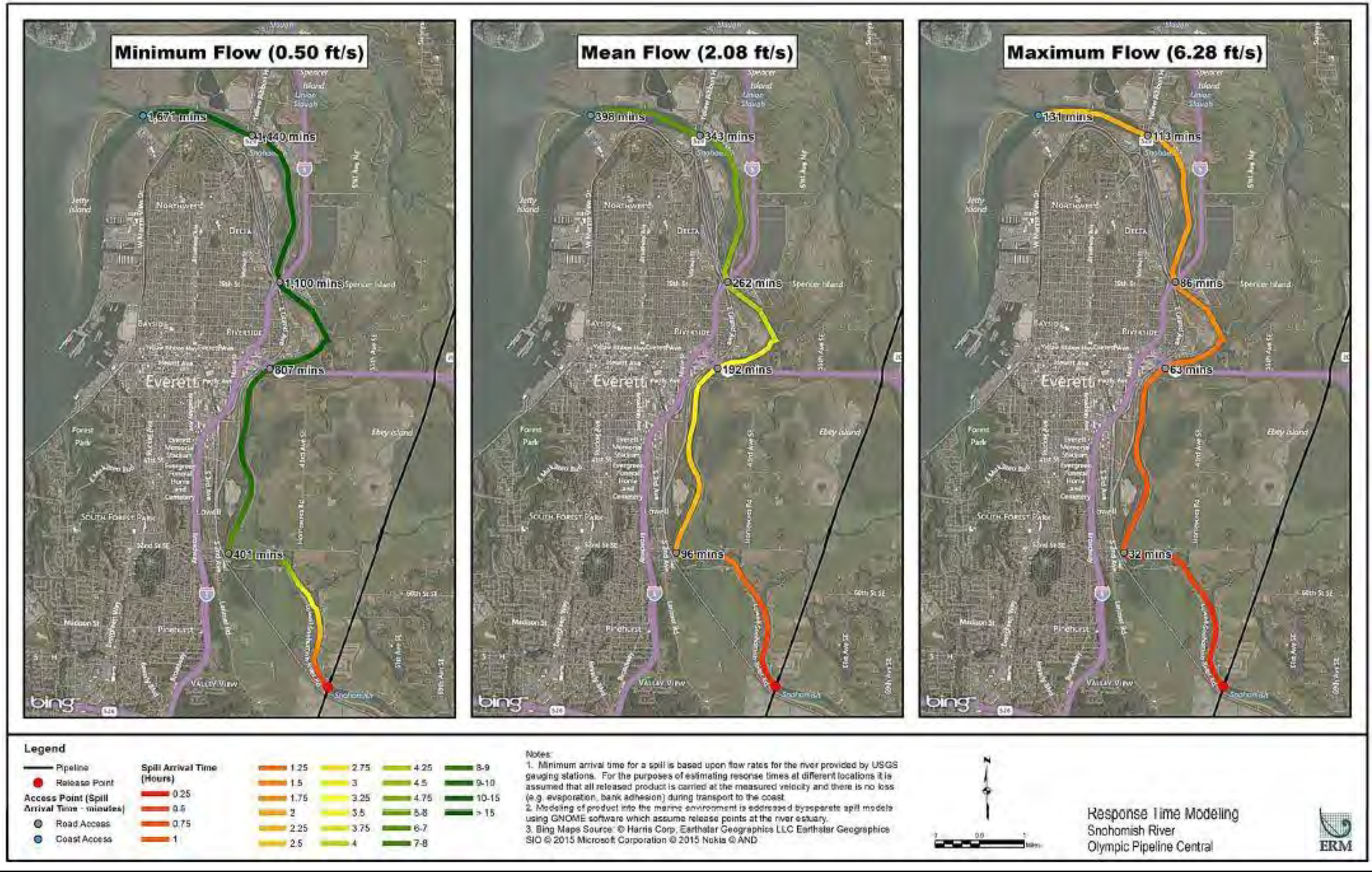
NOTES:
1. Map shows time to impact based on overland model run using Spill Impact Analyst developed by New Century Software.
2. Release location is for 110,000 bbl of diesel released over a 10 minute period assuming catastrophic tank failure. There was no variation in impact time using gasoline as released product.
3. Secondary containment structures have been removed for the purpose of modeling to represent a worst case scenario with containment failure.

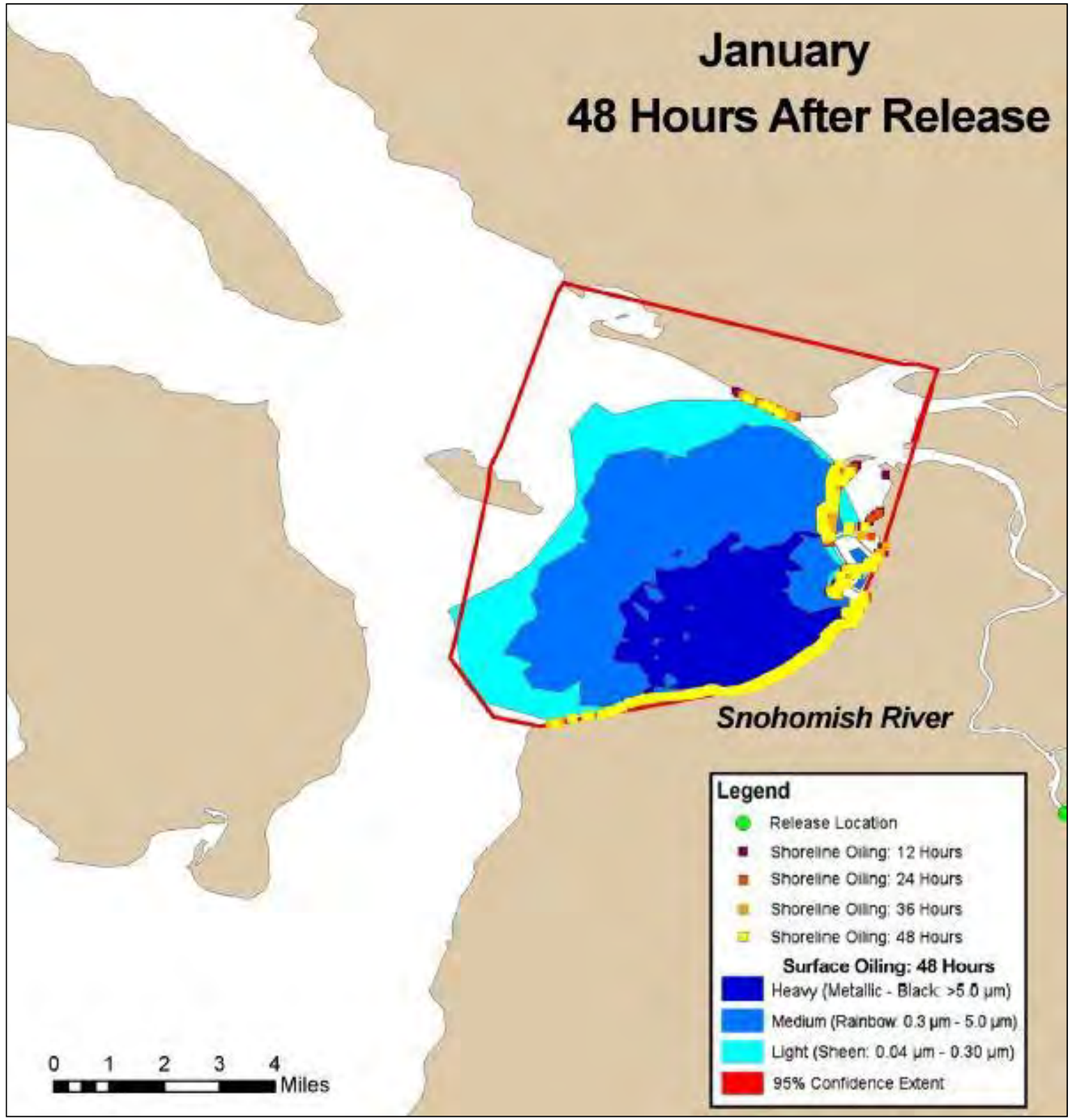
0 100 200 400 600 800 1,000 Feet

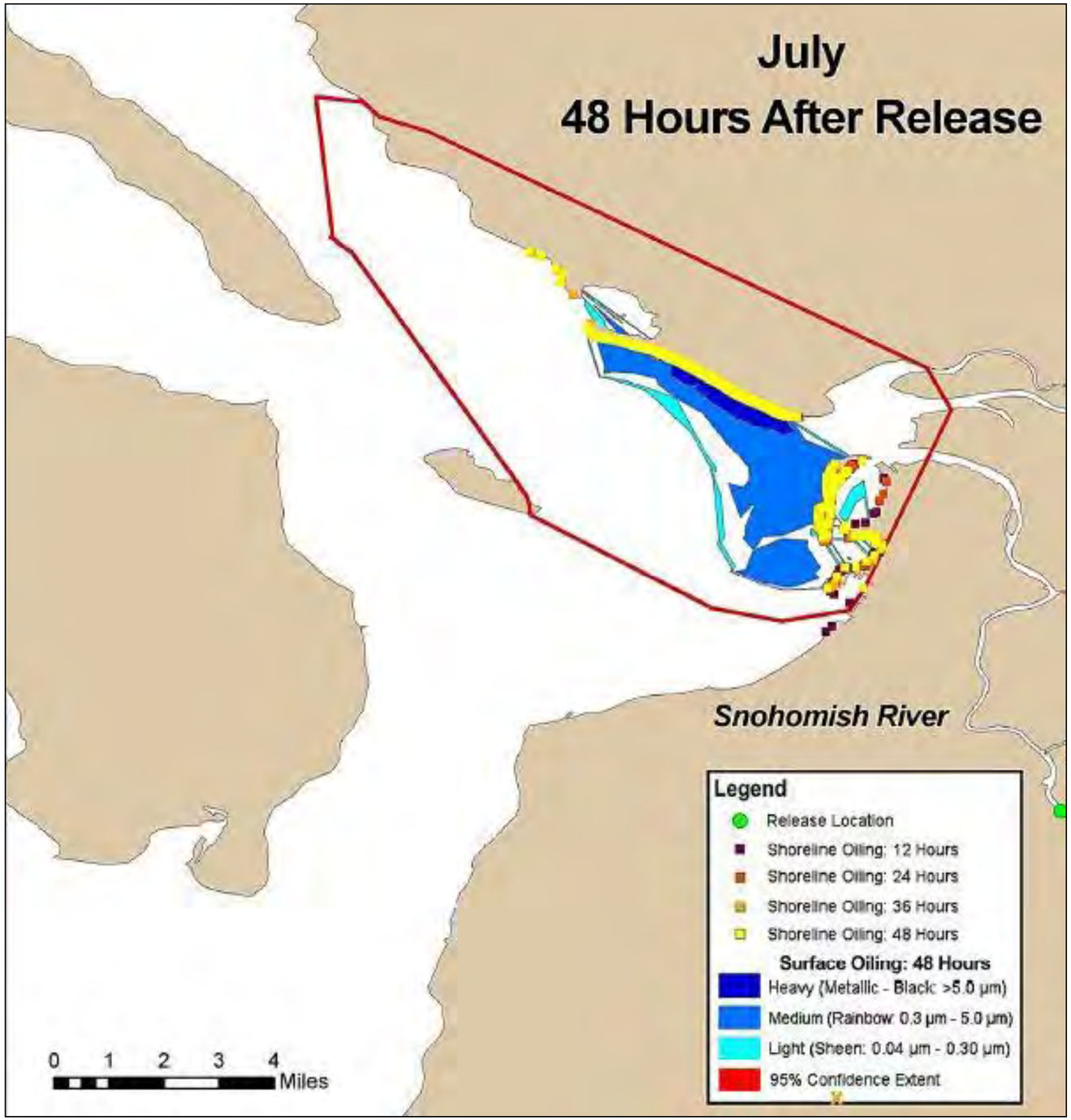
N

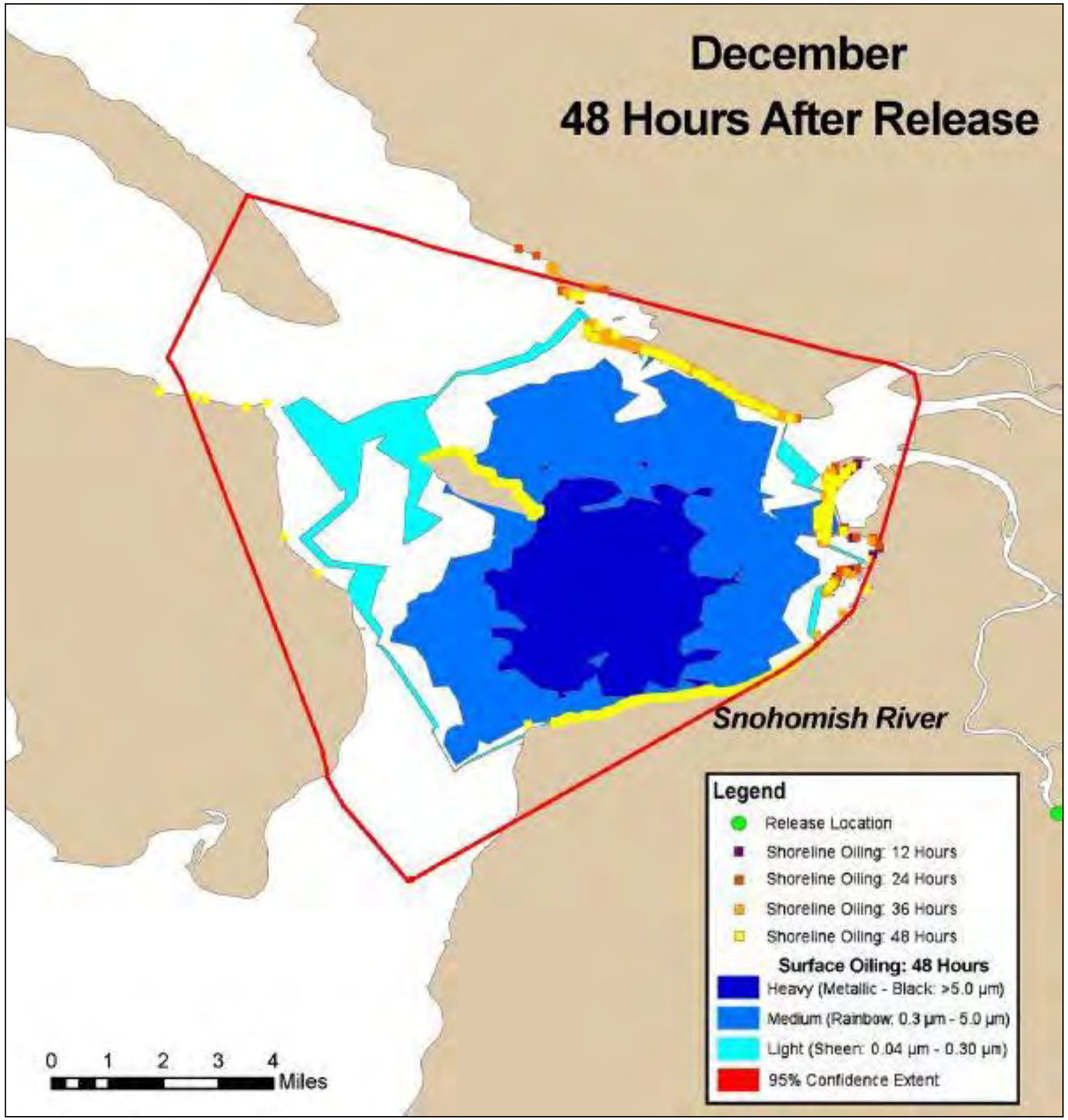
Map 2
Full Tank Release without Containment
Bayview Terminal

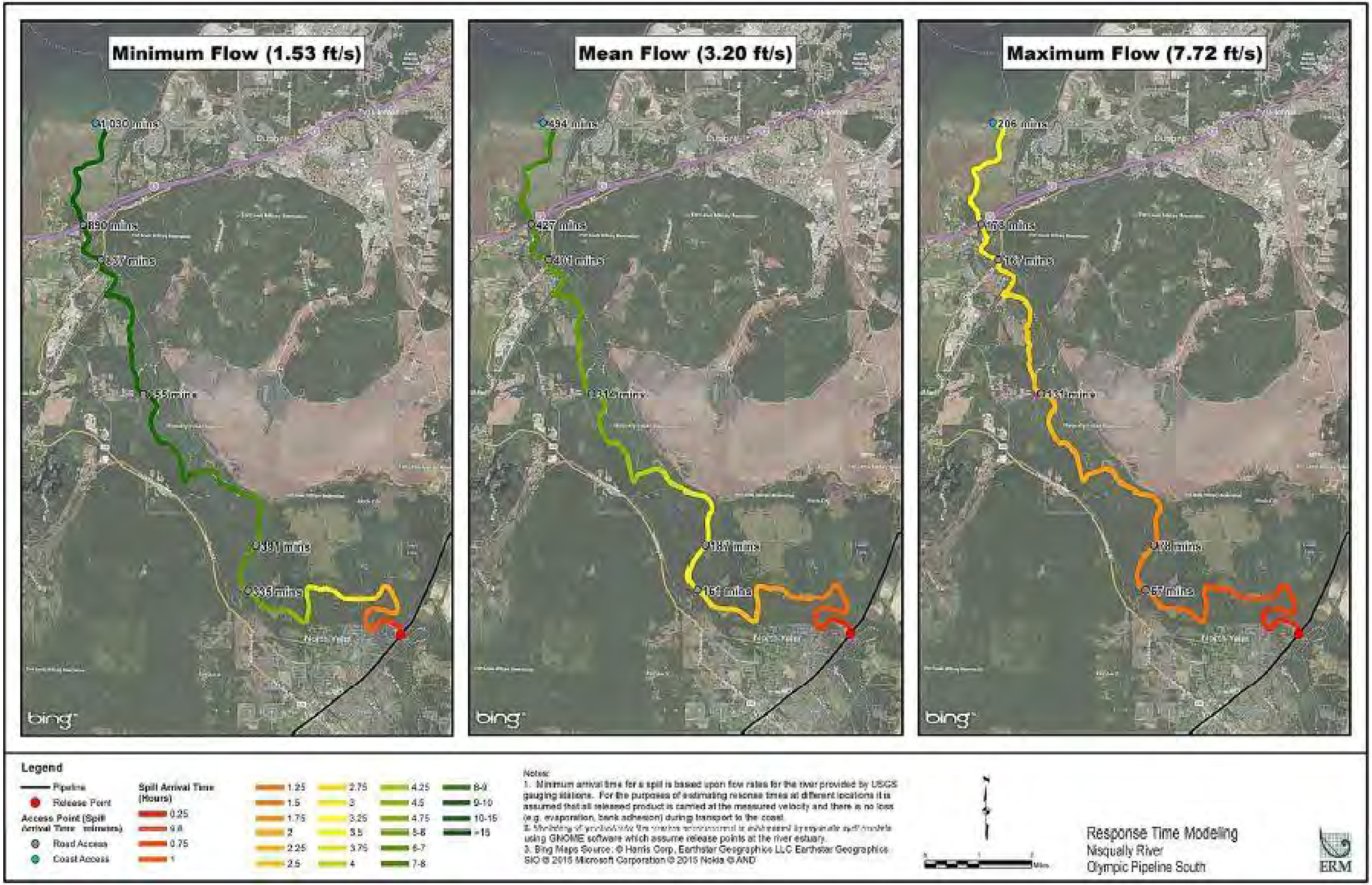
ERM

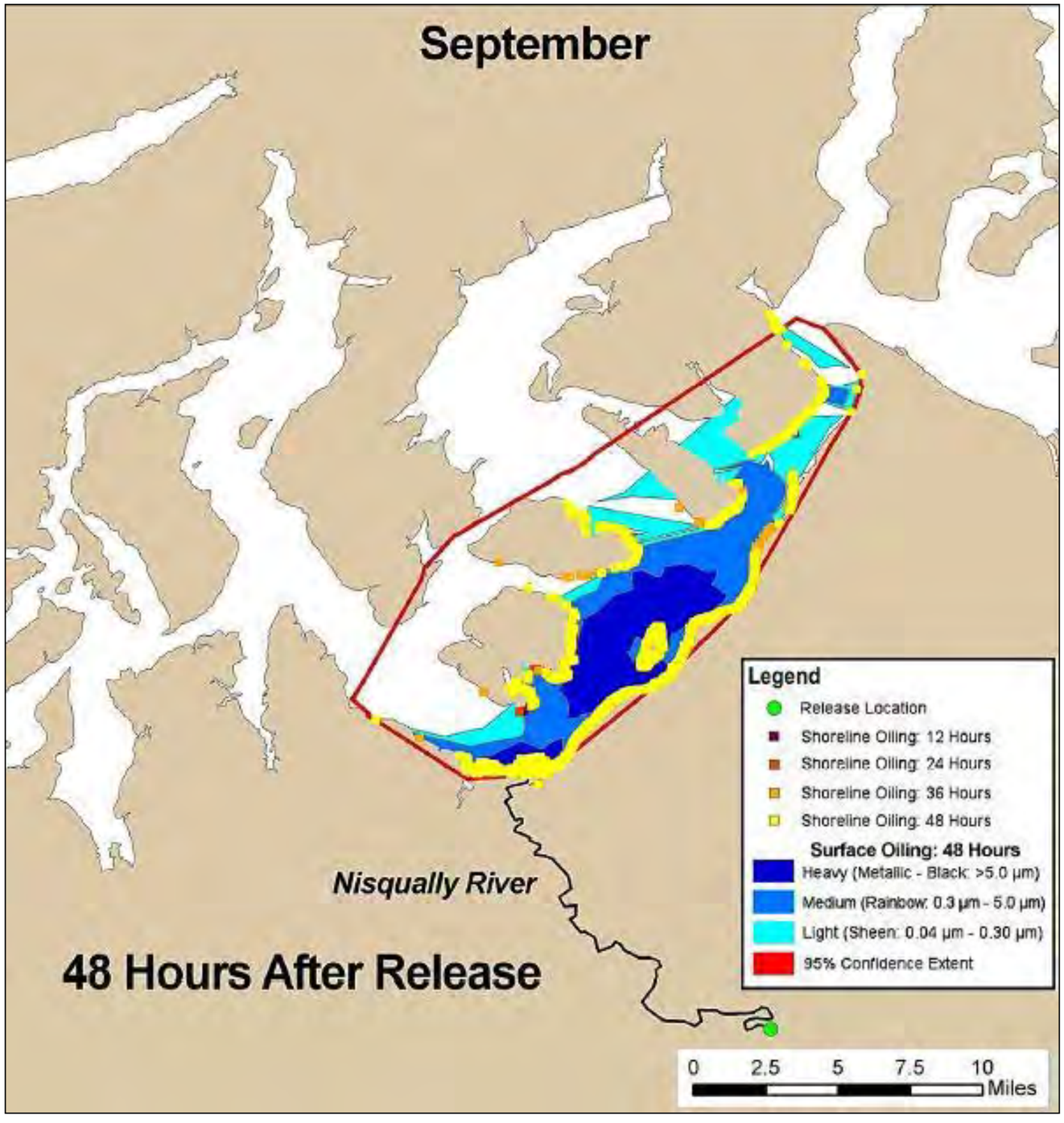

Minimum Flow (0.50 ft/s)
1,671 mins
1,440 mins
1,100 mins
807 mins
401 mins
Mean Flow (2.08 ft/s)
398 mins
343 mins
262 mins
192 mins
96 mins
Maximum Flow (6.28 ft/s)
131 mins
113 mins
86 mins
63 mins
32 mins
Everett
Spencer Island
Ebey Island
Northwest
Delta
Riverside
Bayside
South Forest Park
Pinehurst
Valley View
Snohomish
Legend
Pipeline
Release Point
Access Point (Spill Arrival Time - minutes)
Road Access
Coast Access
Spill Arrival Time (Hours)
0.25
0.5
0.75
1
1.25
1.5
1.75
2
2.25
2.5
2.75
3
3.25
3.5
3.75
4
4.25
4.5
4.75
5-6
6-7
7-8
8-9
9-10
10-15
> 15
Notes:
1. Minimum arrival time for a spill is based upon flow rates for the river provided by USGS gauging stations. For the purposes of estimating response times at different locations it is assumed that all released product is carried at the measured velocity and there is no loss (e.g. evaporation, bank adhesion) during transport to the coast.
2. Modeling of product into the marine environment is addressed byseparate spill models using GNOME software which assume release points at the river estuary.
3. Bing Maps Source: © Harris Corp, Earthstar Geographics LLC Earthstar Geographics SIO © 2015 Microsoft Corporation © 2015 Nokia © AND
N
0 0.5 1 Miles
Response Time Modeling
Snohomish River
Olympic Pipeline Central
ERM

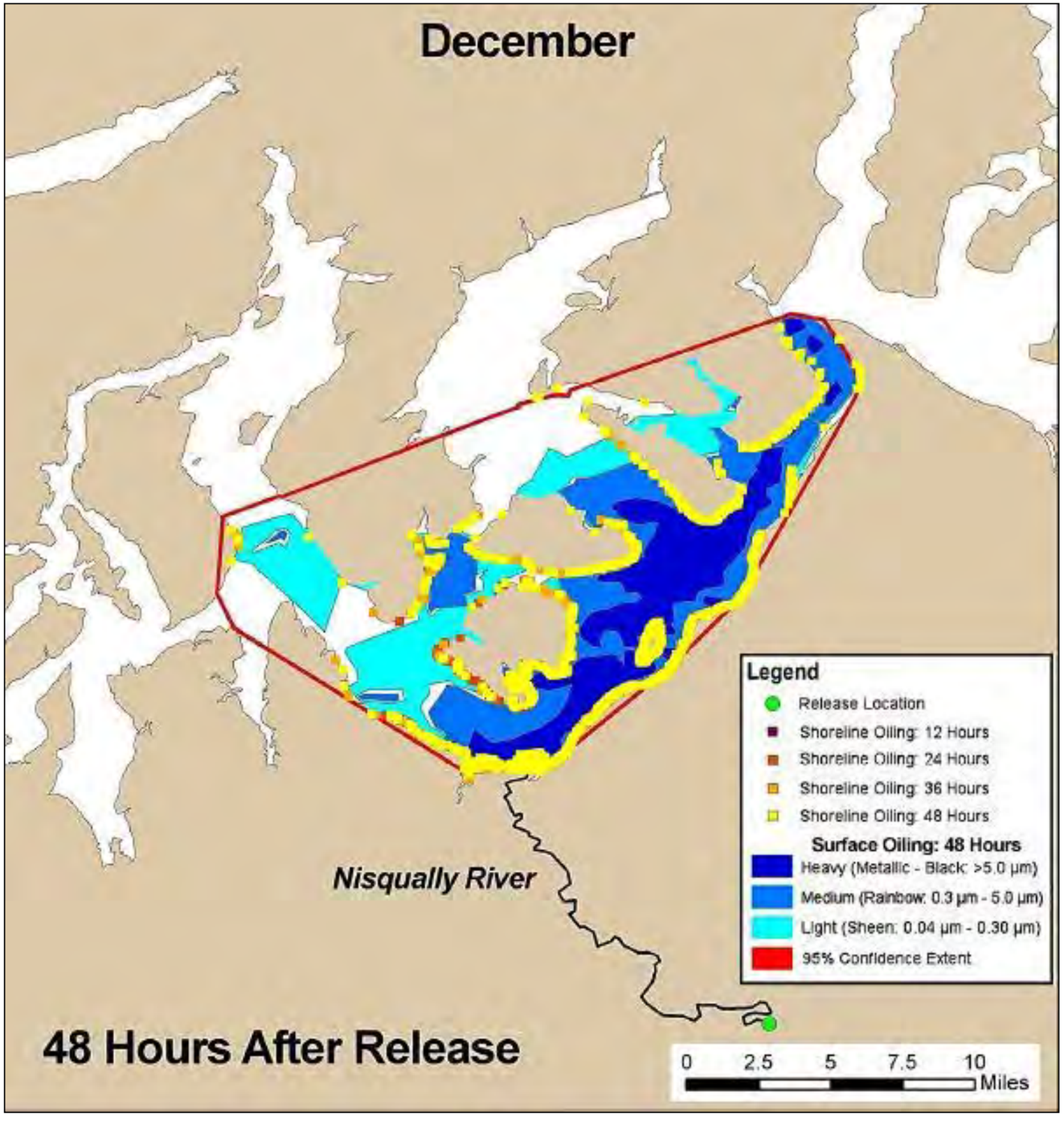

January
48 Hours After Release
Snohomish River
Legend
Release Location
Shoreline Oiling: 12 Hours
Shoreline Oiling: 24 Hours
Shoreline Oiling: 36 Hours
Shoreline Oiling: 48 Hours
Surface Oiling: 48 Hours
Heavy (Metallic - Black: >5.0 µm)
Medium (Rainbow: 0.3 µm - 5.0 µm)
Light (Sheen: 0.04 µm - 0.30 µm)
95% Confidence Extent
0 1 2 3 4
Miles

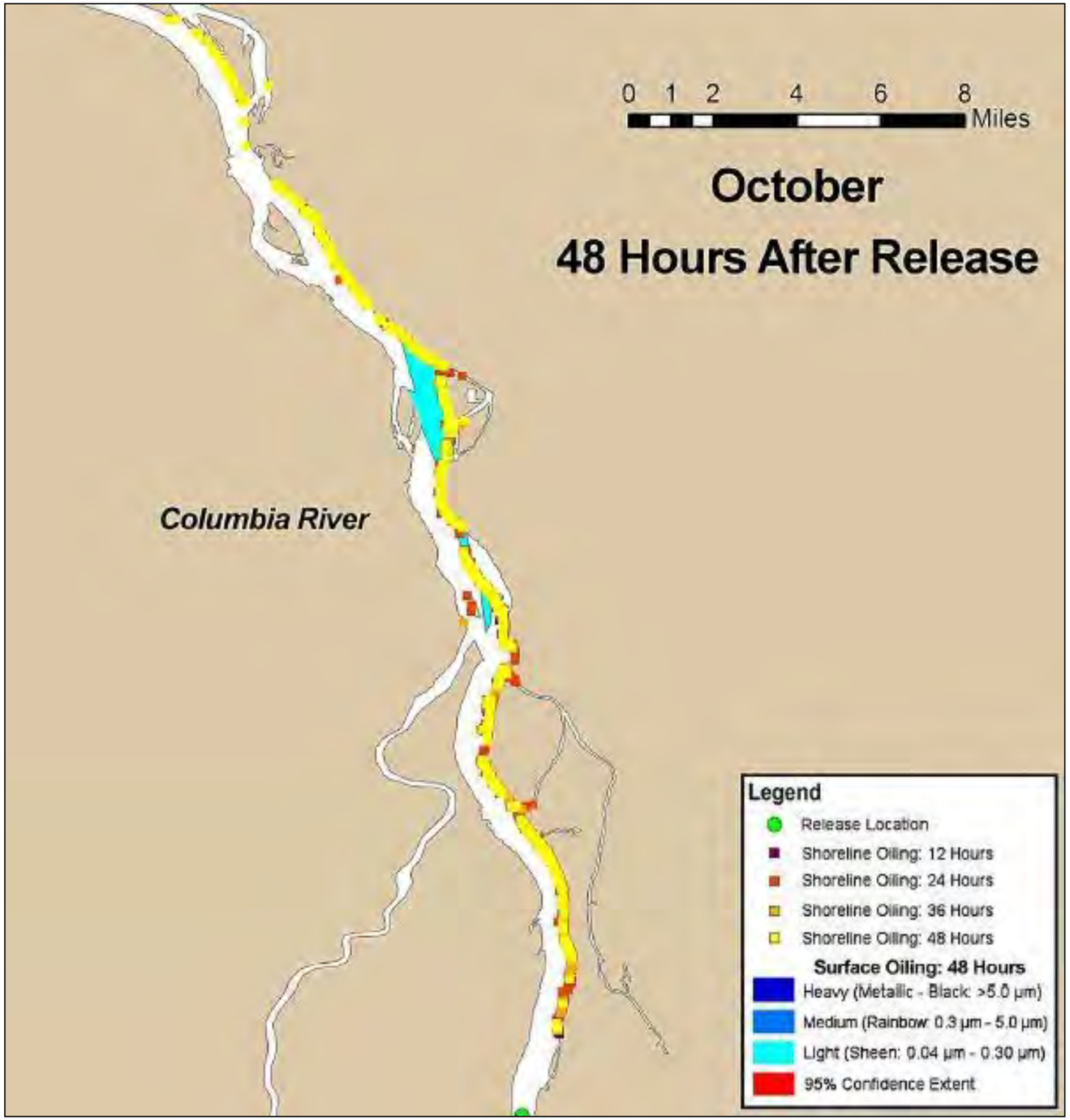

July
48 Hours After Release
Snohomish River
Legend
Release Location
Shoreline Oiling: 12 Hours
Shoreline Oiling: 24 Hours
Shoreline Oiling: 36 Hours
Shoreline Oiling: 48 Hours
Surface Oiling: 48 Hours
Heavy (Metallic - Black: >5.0 µm)
Medium (Rainbow: 0.3 µm - 5.0 µm)
Light (Sheen: 0.04 µm - 0.30 µm)
95% Confidence Extent
0 1 2 3 4
Miles


December
48 Hours After Release
Snohomish River
Legend
Release Location
Shoreline Oiling: 12 Hours
Shoreline Oiling: 24 Hours
Shoreline Oiling: 36 Hours
Shoreline Oiling: 48 Hours
Surface Oiling: 48 Hours
Heavy (Metallic - Black: >5.0 µm)
Medium (Rainbow: 0.3 µm - 5.0 µm)
Light (Sheen: 0.04 µm - 0.30 µm)
95% Confidence Extent
0 1 2 3 4
Miles


Minimum Flow (1.53 ft/s)
1,030 miles
890 miles
637 miles
391 miles
338 miles
Mean Flow (3.20 ft/s)
494 miles
427 miles
400 miles
313 miles
Maximum Flow (7.72 ft/s)
208 miles
179 miles
167 miles
133 miles
67 miles
bing
Legend
Pipeline
Release Port
Access Point (Spill Arrival Time minutes)
Road Access
Coast Access
Spill Arrival Time (Hours)
0.25
0.5
0.75
1
1.25
1.5
1.75
2
2.25
2.5
2.75
3
3.25
3.5
3.75
4
4.25
4.5
4.75
5-6
6-7
7-8
8-9
9-10
10-15
>15
Notes:
1. Minimum arrival time for a spill is based upon flow rates for the river provided by USGS gauging stations. For the purposes of estimating response times at different locations it is assumed that all released product is carried at the measured velocity and there is no loss (e.g. evaporation, bank adhesion) during transport to the coast.
2. Modelling of products to the marine environment is undertaken in separate spill models using GNOME software which assume release points at the river estuary.
3. Bing Maps Source: © Harris Corp, Earthstar Geographics LLC Earthstar Geographics SIO © 2015 Microsoft Corporation © 2015 Nokia © AND
Miles
Response Time Modeling
Nisqually River
Olympic Pipeline South
ERM


September
Nisqually River
48 Hours After Release
Legend
Release Location
Shoreline Oiling: 12 Hours
Shoreline Oiling: 24 Hours
Shoreline Oiling: 36 Hours
Shoreline Oiling: 48 Hours
Surface Oiling: 48 Hours
Heavy (Metallic - Black: >5.0 µm)
Medium (Rainbow: 0.3 µm - 5.0 µm)
Light (Sheen: 0.04 µm - 0.30 µm)
95% Confidence Extent
0 2.5 5 7.5 10
Miles


December
Nisqually River
Legend
Release Location
Shoreline Oiling: 12 Hours
Shoreline Oiling: 24 Hours
Shoreline Oiling: 36 Hours
Shoreline Oiling: 48 Hours
Surface Oiling: 48 Hours
Heavy (Metallic - Black: >5.0 µm)
Medium (Rainbow: 0.3 µm - 5.0 µm)
Light (Sheen: 0.04 µm - 0.30 µm)
95% Confidence Extent
48 Hours After Release
0 2.5 5 7.5 10
Miles


0 1 2 4 6 8
Miles
October
48 Hours After Release
Columbia River
Legend
Release Location
Shoreline Oiling: 12 Hours
Shoreline Oiling: 24 Hours
Shoreline Oiling: 36 Hours
Shoreline Oiling: 48 Hours
Surface Oiling: 48 Hours
Heavy (Metallic - Black: >5.0 µm)
Medium (Rainbow: 0.3 µm - 5.0 µm)
Light (Sheen: 0.04 µm - 0.30 µm)
95% Confidence Extent

APPENDIX F SHORELINE PROTECTION AND CLEANUP

Table of Contents

List of Figures

F.1 Shoreline Protection Guidance

Shoreline protection procedures are conducted to prevent oil impact to shoreline and reduce the impact on wildlife. Boom and skimmers are the preferred methods. These methods can be used to control or contain floating oil slicks on the water away from marshes. Shoreline protection efforts include boom, sorbents and earthen barriers. Sorbents are effective on mudflats when placed on the shoreline before oil contacts the shore. A description of shoreline types is presented in Figure F.1. Specific shoreline protection and cleanup measures, for areas possibly impacted by a potential spill are discussed in this subsection. Figure F.2 provides a summary of shoreline and terrestrial cleanup techniques. Figure F.3 provides a shoreline cleanup technique selection guide. Additional information may be obtained from the Northwest Area Contingency Plan.

F.2 Shoreline and Terrestrial Cleanup

F.2.1 General

In the event that terrestrial areas become oiled or that oil becomes stranded on a shoreline, cleanup operations should be undertaken to reduce the environmental effects of the oil. Before terrestrial and shoreline cleanup plans are implemented they require Unified Command approval. Assessment teams comprised of personnel from the appropriate agencies, Company personnel, and consultants can be utilized to determine the most appropriate cleanup method

In most instances, cleanup efforts are not subject to the same time constraints as containment, recovery, and protection operations. As a result, better planning and greater attention to detail are possible. The exception is where there is a high probability of stranded oil becoming mobilized again and migrating to previously unaffected areas. In this case, implement cleanup operations as soon as possible. If time permits, consider the following items in detail:

- Document the location, degree, and/or extent of oil conditions,
- Evaluate all environmental, cultural, economic, and political factors,
- Select optional cleanup technique,
- Mitigate physical/environmental damage associated with cleanup operations,
- Cost-effectiveness,
- Net environmental benefit assessment.

The shoreline or terrestrial oil conditions can range from those which require immediate and thorough cleanup to lightly oiled areas where no cleanup may be the most environmentally sound option. Factors that influence technique selection and whether or not cleanup will be required include:

- Oil type and amount,
- Sensitivity,
- Substrate or shoreline type,
- Intrusive nature of the techniques,
- Shoreline accessibility,
- Exposure.

Before initiating cleanup activities, assess the net environmental benefits of a proposed cleanup operation for all affected shorelines.

F.3 Contracted Resources for Shoreline Cleanup

Through a contract with National Response Corporation Environmental Services Inc. (NRCES), Olympic Pipe Line Company LLC meets all of the planning standards for shoreline cleanup (WAC 173-182-522). This includes: (a) access to one hundred trained shoreline clean-up workers; (b) access to trained shoreline clean-up supervisors; (c) access to adequate equipment for passive recovery for three miles of shoreline on three tide lines; (d) access to a shoreline clean-up mobile storage cache that can support eighty to one hundred shoreline clean-up workers with personal protective equipment, hand tools, and other logistical support for three to five days. The shoreline cleanup response trailers are detailed on the WRRL at www.wrrl.world. Details about staging of passive recovery equipment and logical resources for sourcing additional equipment are detailed in the PRC application. Information on the training program for shoreline cleanup supervisors and shoreline cleanup workers can be found in the PRC's application.

Figure F.1: Description of Shoreline Types

Types	ESI #	Description	Predicted Oil Impact	Recommended Cleanup Activity
Exposed Rocky Cliffs	1A	• The intertidal zone is steep (greater than a 30° slope), with very little width. • Sediment accumulations are uncommon and usually ephemeral, since waves remove the debris that has slumped from the eroding cliffs. • They are often found interspersed with other shoreline types. • There is a strong vertical zonation of intertidal biological communities.	• Oil is held offshore by waves reflecting off the steep cliff. • Any oil that is deposited is rapidly removed from exposed faces. • The most resistant oil would remain as a patchy band at or above the high-tide line. • Impacts to intertidal communities are expected to be of short duration. • An exception would be where heavy concentrations of light refined product (e.g. No. 2 fuel oil) came ashore very quickly.	• Cleanup is not usually required • Access can be difficult and dangerous.
Exposed Sea Walls and Piers	1B	• Seawalls and piers are particularly common in developed areas, providing protection to residential and industrial developments. • They are also common along inlets, urbanized areas, and developed beachfront sites. • They are composed of concrete and stone, wooden, or metal bulkheads and wooden pilings.	• Oil would percolate between the joints of the structures. • Oil would coat the intertidal areas of solid structures. • Biota would be damaged or killed under heavy accumulations.	• High-pressure spraying may be required in order to: • Remove oil; • Prepare substrate for recolonization of barnacle and oyster communities; • Minimize aesthetic damage; • Prevent the chronic leaching of oil from the structure.
Exposed Wave-Cut Platforms	2	• The intertidal zone consists of a flat rock bench of highly variable width. • The shoreline may be backed by a steep scarp or low bluff. • There may be a narrow, perched beach of gravel- to boulder-sized sediments at the base of the scarp. • The platform surface is irregular and tidal pools are common. • Small accumulations of gravel can be found in the tidal pools and crevices in the platform. • Pockets of sandy “tidal flats” can	• Oil will not adhere to the rock platform, but rather be transported across the platform and accumulate along the high-tide line. • Oil can penetrate and persist in the beach sediments if present. • Persistence of oiled sediments is usually short term, except in wave shadows or larger sediment accumulations.	• Cleanup is usually not required. • Where the high-tide areas are accessible, it may be feasible to remove heavy oil accumulations and oiled debris.

Types	ESI #	Description	Predicted Oil Impact	Recommended Cleanup Activity
		occur on the platform in less exposed settings. • These habitats can support large populations of encrusting animals and plants, with rich tidal pool communities.		
Fine/Medium-Grained Sandy Beaches	3	• These beaches are generally flat, wide, and hard-packed. • They are commonly backed by dunes or seawalls along exposed, outer coasts. • Along sheltered bays, they are narrower, often fronted by tidal flats. • Upper beach fauna is scarce.	• Light oil accumulations will be deposited as oily swashes or bands along the upper intertidal zone. • Heavy oil accumulations will cover the entire beach surface, although the oil will be lifted off the lower beach with the rising tide. • Maximum penetration of oil into fine-grained sand will be 10 centimeters (cm). • Burial of oiled layers by clean sand within the first few weeks will be less than 30 cm along the upper beach face. • Organisms living in the beach sands may be killed either by smothering or by lethal oil concentrations in the interstitial water. • Shorebirds may be killed if oiled, though they may shift to clean sites.	• These beaches are among the easiest beach types to clean. • Cleanup should concentrate on the removal of oil from the upper swash zone after all oil has come ashore. • Removal of sand from the beach should be minimal to avoid erosion problems; special caution is necessary in areas backed by seawalls. • Activity through oiled and dune areas should be severely limited, to prevent contamination of clean areas. • Manual cleanup, rather than road graders and front-end loaders, is advised to minimize the volume of sand removed from the shore and requiring disposal. • All efforts should focus on preventing the mixture of oil being pushed deeper into the sediments by vehicle and foot traffic.
Coarse-Grained Sand/Gravel Beaches	4	• These beaches are moderate-to-steep, of variable width, and have soft sediments. • They are commonly backed by dunes seawalls along exposed, outer coasts. • Generally, species density and diversity is low.	• Light oil will be deposited primarily as a band along the high-tide line. • Under very heavy accumulations, oil may spread across the entire beach face, though the oil will be lifted off the lower beach with the rising tide. • Penetration of oil into coarse-grained sand can reach 25 cm. • Burial of oil layers by clean sand can be rapid, and up to 60 cm or more. • Burial over one meter is possible if the oil comes ashore at the start of the disposition period.	• Remove oil primarily from the upper swash lines. • Removal of sediment should be limited to avoid erosion problems. • Mechanical reworking of the sediment into the surf zone may be used to release the oil without removal. • Activity in the oiled sand should be limited to prevent mixing oil deeper into the beach. • Use of heavy equipment for oil/sand removal may result in the removal of excessive amounts of sand; manual

Types	ESI #	Description	Predicted Oil Impact	Recommended Cleanup Activity
			• Biological impacts include temporary declines in faunal populations, which can also affect feeding shorebirds.	cleanup may be more effective.
Mixed Sand and Gravel Beaches	5	• Moderately sloping beach composed of a mixture of sand (greater than 20%) and gravel (greater than 25%). • The high-tide berm area is usually composed of sand or fine gravel (pebbles to cobbles), whereas the lower part of the beach is coarser, with cobbles to boulders. • Because of the mixed sediment sizes, there may be zones of sand, pebbles, or cobbles. • Because of the sediment mobility and desiccation of exposed beaches, there are low densities of attached animals and plants. • The presence of attached algae, mussels, and barnacles indicated beaches that are relatively sheltered, with the more stable substrate supporting a richer biota.	• During small spills, oil will be deposited along and above the high-tide swash. • Large spills will spread across the entire intertidal area. • Oil penetration into the beach sediments may be up to 50 cm; however, the sand fraction can be quite mobile, and oil behavior is much like on a sand beach if the sand fraction exceeds about 40%. • Burial of oil may be deep at and above the high-tide line, where oil tends to persist, particularly where beaches are only intermittently exposed to waves. • On sheltered beaches, extensive pavements of asphalted sediments can form if there is no removal of heavy oil accumulations, because most of the oil remains on the surface. • Once formed, pavements are very stable and can persist for many years. • Oil can be stranded in the coarse sediments on the lower part of the beach, particularly if the oil is weathered or emulsified.	• Remove heavy accumulations of pooled oil from the upper beach face. • All oiled debris should be removed. • Sediment removal should be limited as much as possible. • Low-pressure flushing can be used to float oil away from the sediments for recovery by skimmers or sorbents. High-pressure spraying should be avoided because of potential for transporting the finer sediments (sand) to the lower intertidal or subtidal zones. • Mechanical reworking of oiled sediments from the high-tide zone to the upper intertidal zone can be effective in areas regularly exposed to wave activity (as evidence by storm berms). However, oiled sediments should not be relocated below the mid-tide zone. • In-place tilling may be used to reach deeply buried oil layers in the mid-beach on exposed beaches.
Gravel Beaches	6A	• Gravel beaches are composed of sediments ranging in size from pebbles to boulders. • They can be very steep, with multiple wave-built berms forming the upper beach. • Attached animals and plants are usually restricted to the lowest parts of the beach, where sediments are less mobile.	• Deep penetration and rapid burial of stranded oil is likely on exposed beaches. • On exposed beaches, oil can be pushed over the high tide and storm berms, pooling and persisting above the normal zone of wave wash. • Long-term persistence will be controlled by the depth of penetration versus the depth of routine reworking by storm waves. • On relatively sheltered beaches, formation of asphalt pavements is	• Heavy accumulations of pooled oil should be quickly removed from the upper beach. • All oiled debris should be removed. • Sediment removal should be limited as much as possible. • Low- to high-pressure flushing can be used to float oil away from the sediments for recovery by skimmers or sorbents. • Mechanical reworking of oiled sediments from the high-tide zone to

Types	ESI #	Description	Predicted Oil Impact	Recommended Cleanup Activity
			likely where accumulations are heavy.	the upper intertidal zone can be effective in areas regularly exposed to wave activity (as evidence by storm berms). However, oiled sediments should not be relocated below the mid-tide zone. • In-place tilling may be used to reach deeply buried oil layers in the mid-beach on exposed beaches.
Rip Rap	6B	• Riprap structures are composed of cobble to boulder-size rocks. • Riprap structures are placed for shoreline protection and inlet stabilization. • Biota on the riprap may be plentiful and varied.	• On riprap structures, deep penetration of oil between boulders is likely. • If oil is left uncleaned, it may become asphalted. • Resident fauna and flora may be killed by the oil.	• It may be necessary to remove heavily oiled riprap and replace it.
Exposed Tidal Flats	7	• Primarily composed of sand and mud. • The presence of sand indicates that tidal or wind-driven currents and waves are strong enough to mobilize the sediments. • They are always associated with another shoreline type on the landward side of the flat. • The sediments are water-saturated, with only the topographically higher ridges drying out during low tide. • Biological utilization can be very high, with large numbers of fauna and heavy use by birds for roosting and foraging.	• Oil does not usually adhere to the surface of exposed tidal flats, but rather moves across the flat and accumulates at the high-tide line. • Deposition of oil on the flat may occur on a falling tide if concentrations are heavy. • Oil does not penetrate the water-saturated sediments. • Biological damage may be severe, primarily to fauna, thereby reducing food sources for birds and other predators.	• Currents and waves can be very effective in natural removal of oil. • Cleanup is very difficult (and possible only during low tides). • The use of heavy machinery should be restricted to prevent mixing of oil into the sediments. • On sand flats, oil will be removed naturally from the flat and deposited on the adjacent beaches where cleanup is more feasible.
Sheltered Rocky Shores	8A	• They consist of bedrock shores of variable slope (from vertical cliffs to wide, rocky ledges) that are sheltered from exposure to most wave and tidal energy. • The wider shores may have some surface sediments, but the bedrock	• On rocky shores, oil will adhere readily to the rough rocky surface, particularly along the high-tide line, formed a distinct oil band. • Fractures in the bedrock will be sites of pooling and oil persistence. • Even on wide ledges, the lower	• Low- to high-pressure spraying at ambient water temperatures is most effective when the oil is fresh. • Extreme care must be taken not to spray in the biologically rich lower intertidal zone or when the tidal level reaches that zone.

Types	ESI #	Description	Predicted Oil Impact	Recommended Cleanup Activity
		is the dominant substrate type. • Species density and diversity vary greatly, but barnacles, snails, mussels, clams, periwinkles, amphipods, polychaetes, rockweed, and crabs are often very abundant.	intertidal zones usually stays wet (particularly when algae covered), preventing oil from adhering to the rock surface. • Heavy and weathered oils can cover the upper zone with little impacts to the rich biological communities of the lower zone. • Where surface sediments are abundant, oil will penetrate into the crevices formed by the surface rubble and pool at the contact of the sediments and the surface. • Where the rubble is loosely packed, oil will penetrate deeply, causing long-term contamination of the subsurface sediments. • Fresh oil and light refined products have high acute toxicities that can affect attached organisms after even short exposures.	• Cutting of oiled, attached algae is not recommended; tidal action will eventually float this oil off, so sorbent booms should be deployed.
Sheltered Tidal Flats	9	• They are composed primarily of silt and clay. • They are present in calm-water habitats, sheltered from major wave activity, and frequently fronted by marshes. • Wave energy is very low, although there may be strong tidal currents active on parts of the flat and in channels across the flat. • The sediments are very soft and cannot support even light foot traffic. • There are usually large populations of clams, worms, and snails. • Bird life is seasonably abundant.	• Oil does not usually adhere to the surface of sheltered tidal flats, but rather moves across the flat and accumulates at the high-tide line. • Deposition of oil on the flat may occur on a failing tide if concentrations are heavy. • Oil will not penetrate the water-saturated sediments at all. • In areas of high suspended sediments, sorption of oil can result in contaminated sediments that can be deposited on the flats. • Biological damage may be severe.	• These are high-priority areas necessitating the use of spill protection devices to limit oil spill impact; deflection or sorbent booms and open water skimmers should be used. • Cleanup of the flat surface is very difficult because of the soft substrate and many methods may be restricted. • Manual operations and deployment of sorbents from shallow-draft boats may be helpful.
Fringing and Extensive Salt Marshes	10A	• Marshes are intertidal wetlands containing emergent, herbaceous vegetation. • Width of the marsh can vary widely,	• Oil adheres readily to marsh vegetation. • The band of coating will vary widely, depending upon the tidal stage at the	• Under light oiling, the best practice is to let the areas recover naturally. • Heavy accumulation of pooled oil can be removed by vacuum, sorbents, or

Types	ESI #	Description	Predicted Oil Impact	Recommended Cleanup Activity
		from a narrow fringe to extensive. • They are relatively sheltered from waves and strong tidal currents. • Resident flora and fauna are abundant and consist of numerous species. • Marshes provide a nursery ground for numerous fish species. • Bird life is seasonably abundant.	time oil slicks are in the vegetation. There may be multiple bands. • Large slicks will persist through multiple tidal cycles and coat the entire stem from the high-tide line to the base. • If the heavy vegetation is thick, heavy oil coating will be restricted to the outer fringe, with penetration and lighter oiling to the limit of tidal influence. • Medium to heavy oils do not readily adhere or penetrate the fine sediments, but they can pool on the surface and in burrows. • Light oils can penetrate the top few centimeters of sediments and deeply into burrows and cracks (up to one meter).	low-pressure flushing. During flushing, care must be taken to prevent transporting oil to sensitive areas down slope or along shore. • Cleanup activities should be carefully supervised to avoid vegetation damage. • Any cleanup activity must not mix the oil deeper into the sediments. Trampling of the roots must be minimized. • Cutting of oiled vegetation should only be considered when other resources present are at great risk from leaving the oiled vegetation in place.

ESI = Environmental Sensitivity Index

Figure F.2: Summary of Shoreline and Terrestrial Cleanup Techniques

Technique	Description	Primary Logistical Requirements[1]	Use Limitations[2]	Potential Environmental Effects
Removal				
1. Manual Removal	Hand tools (scrapers, wire brushes, shovels, cutting tools, wheel barrows, etc.) are used to scrape oil off surfaces or recover oiled sediments, vegetation, or debris where oil conditions are light or sporadic and/or access is limited.	Equipment Misc. hand tools Personnel 10-20 workers	• Poor access • Highly sensitive areas	• Sediment disturbance and erosion potential • Trampling of vegetation and organisms • Foot traffic can work oil deeper into soft sediments
2. Mechanical Removal	Mechanical earthmoving equipment is used to remove oiled sediments and debris from heavily impacted areas with suitable access.			
2a. Bulldozer/Front-end Loader	Used to recover moderately to heavily oiled sediments using a bulldozer to push sediments into piles for pickup by front-end loader. Front-end loader may work alone to recover sediments directly.	Equipment 1 bulldozer 2 front-end loaders Personnel 2-4 workers plus equipment operators	• Very poor trafficability • Limited access • Highly sensitive areas • Light or sporadic oil conditions	• Removes upper 2 to 12 inches of sediments • Removes shallow organisms but recolonization is typically rapid • Excessive sediment removal can cause erosion
2b. Backhoe	Used to recover surface or subsurface oiled sediments on flat or steeply sloped areas by scooping up sediments and placing directly into dump trucks or in piles for subsequent removal.	Equipment 1-2 backhoes 4-6 dump trucks Personnel 2-4 workers plus equipment operators	• Limited access • Highly sensitive areas • Unstable slopes Light or sporadic oil conditions	• Removes minimum of 6 to 12 inches of sediments • Removes shallow organisms but recolonization is typically rapid • Can cause erosion and slope instability
3. Sorbent Use	Sorbents are applied manually to oil accumulations, coatings, sheens, etc. to remove and recover the oil.	Equipment Misc. hand tools Misc. sorbents Personnel 2-10 workers	• Poor access • Highly sensitive areas • Heavy oil conditions	• Sediment disturbance and erosion potential • Trampling of vegetation and organisms • Foot traffic can work oil deeper into soft sediments

Technique	Description	Primary Logistical Requirements[1]	Use Limitations[2]	Potential Environmental Effects
4. Vacuums/Pumps/ Skimmers	Pumps, vacuum trucks, skimmers are used to remove oil accumulations from land or relatively thick floating layers from the water.	Equipment 1-2 50- to 100-bbl Vacuum trucks w/hoses 1-2 nozzle screens or skimmer heads Personnel 2-6 workers plus truck operators	• Poor access • Thin oil accumulations or light sheens • Highly sensitive shoreline areas • Excessive suction lift required	• Typically does not remove all oil • Can remove some surface organisms, sediments, and vegetation
Washing				
5. Flooding	High volumes of water at low pressure are used to flood the oiled area to float oil off and out of sediments and back into the water or to a containment area where it can be recovered. Frequently used with flushing.	Equipment 1-5 100- to 200-gpm pumping systems 1 100-ft perforated header hose per system 1-2 200-ft containment booms per system 1 oil recovery device per system Personnel 6-8 workers per system	• Highly permeable substrate • Highly sensitive areas • Poor access • Highly weathered oil or thin films or coatings • Typically does not remove all oil	• Can impact clean downgradient areas • Can displace some surface organisms if present • Sediments transported into water can affect water quality
6. Flushing	Water streams at low to moderate pressure, and possibly elevated temperatures, are used to remove oil from surface or near-surface sediments through agitation and direct contact. Oil is flushed back into the water or a collection point for subsequent recovery. May also be used to flush out oil trapped by shoreline or aquatic vegetation.	Equipment 1-5 50- to 100-gpm/ 100-psi pumping systems with manifold 1-4 100-ft hoses and nozzles per system 1-2 200-ft containment booms per system 1 oil recovery device per system Personnel 8-10 workers per system	• Highly permeable substrate • Highly sensitive areas • Poor access • Highly weathered oil or thin films or coatings • Typically does not remove all oil	• Can impact clean downgradient areas • Will displace many surface organisms if present • Sediments transported into water can affect water quality • Hot water can be lethal to many organisms • Can increase oil penetration depth
7. Spot (High Pressure) Washing	High pressure water streams are used to remove oil coatings from hard surfaces in small areas where	Equipment 1-5 1,200- to 4,000-psi units with hose and spray	• Poor access • Highly sensitive area • Safety hazard from	• Will remove most organisms if present • Can damage surface being

Technique	Description	Primary Logistical Requirements[1]	Use Limitations[2]	Potential Environmental Effects
	flushing is ineffective. Oil is directed back into water or collection point for subsequent recovery.	wand 1-2 100-ft containment booms per unit 1 oil recovery device per unit <u>Personnel</u> 2-4 workers per unit	high pressure water stream • Relatively soft or unconsolidated substrates	cleaned • Can affect clean downgradient or nearby areas
In Situ				
8. Passive Collection	Sorbent/snare booms or other sorbent materials are anchored at the waterline adjacent to heavily oiled areas to contain and recover oil as it leaches from the sediments.	<u>Equipment</u> 1,000-2,000 ft sorbent/snare boom 200-400 stakes or anchor systems <u>Personnel</u> 4-10 workers	• Poor access • High currents/waves • Lightly oiled sediments • Oil removal process is slow	• Significant amounts of oil can remain on the shoreline for extended periods of time
9. Sediment Tilling	Mechanical equipment or hand tools are used to till light to moderately oiled surface sediments to maximize natural degradation processes.	<u>Equipment</u> 1 tractor fitted with tines, dicer, ripper blades, etc. or 1-4 rototillers or 1 set of hand tools <u>Personnel</u> 2-10 workers	• Poor access • Heavily oiled area • Highly sensitive area • Oil can be mixed deeper into substrate	• Significant amounts of oil can remain on the shoreline for extended periods of time • Disturbs surface sediments and organisms
10. In Situ Bioremediation	Fertilizer is applied to lightly or moderately oiled areas to enhance microbial growth and subsequent biodegradation of oil.	<u>Equipment</u> 1-2 fertilizer applicators 1 tilling device if required <u>Personnel</u> 2-4 workers	• May cause algal bloom and short-term water quality problems • Heavily oiled areas	• Significant amounts of oil can remain on the shoreline for extended periods of time • Can disturb surface sediments and organisms
11. Log/Debris Burning	Oiled logs, driftwood, vegetation, and debris are burned to minimize material handling and disposal requirements. Material should be stacked in tall piles and fans used to ensure a hot, clean burn.	<u>Equipment</u> 1 set of fire control equipment 2-4 fans 1 supply of combustion promoter <u>Personnel</u>	• Local air quality regulations • Close proximity to populated areas • High wind conditions • Heavy precipitation	• Heat may impact local near-surface organisms • Substantial smoke may be generated • Heat may impact adjacent vegetation

Technique	Description	Primary Logistical Requirements[1]	Use Limitations[2]	Potential Environmental Effects
		2-4 workers		
12. Natural Recovery	No action is taken and oil is allowed to degrade naturally.	None required	• Heavy oil conditions • Highly sensitive shorelines • High oil remobilization potential	• Oil may persist for significant periods of time • Remobilized oil or sheens may impact other areas • Higher probability of impacting wildlife

1. Per 1,000 feet of shoreline or oiled area. Potential sources of equipment are provided in Section 5.0.
2. In addition to fire and explosion hazard.

F.3.1 Cleanup Technique Selection

Shoreline

In the event the techniques recommended above do not apply to a particular spill situation along the pipeline, other techniques should be considered for implementation. The other techniques that may be applicable are generally dependent on the:

- Oil type.
- Oiling conditions/degree of impact.
- Environmental, safety, and political considerations.
- Unusual circumstances that may be present at the time of the spill.

The following guidelines can be used to identify the most appropriate cleanup technique(s) for that situation.

Selection of an appropriate shoreline cleanup technique is primarily dependent on the following factors:

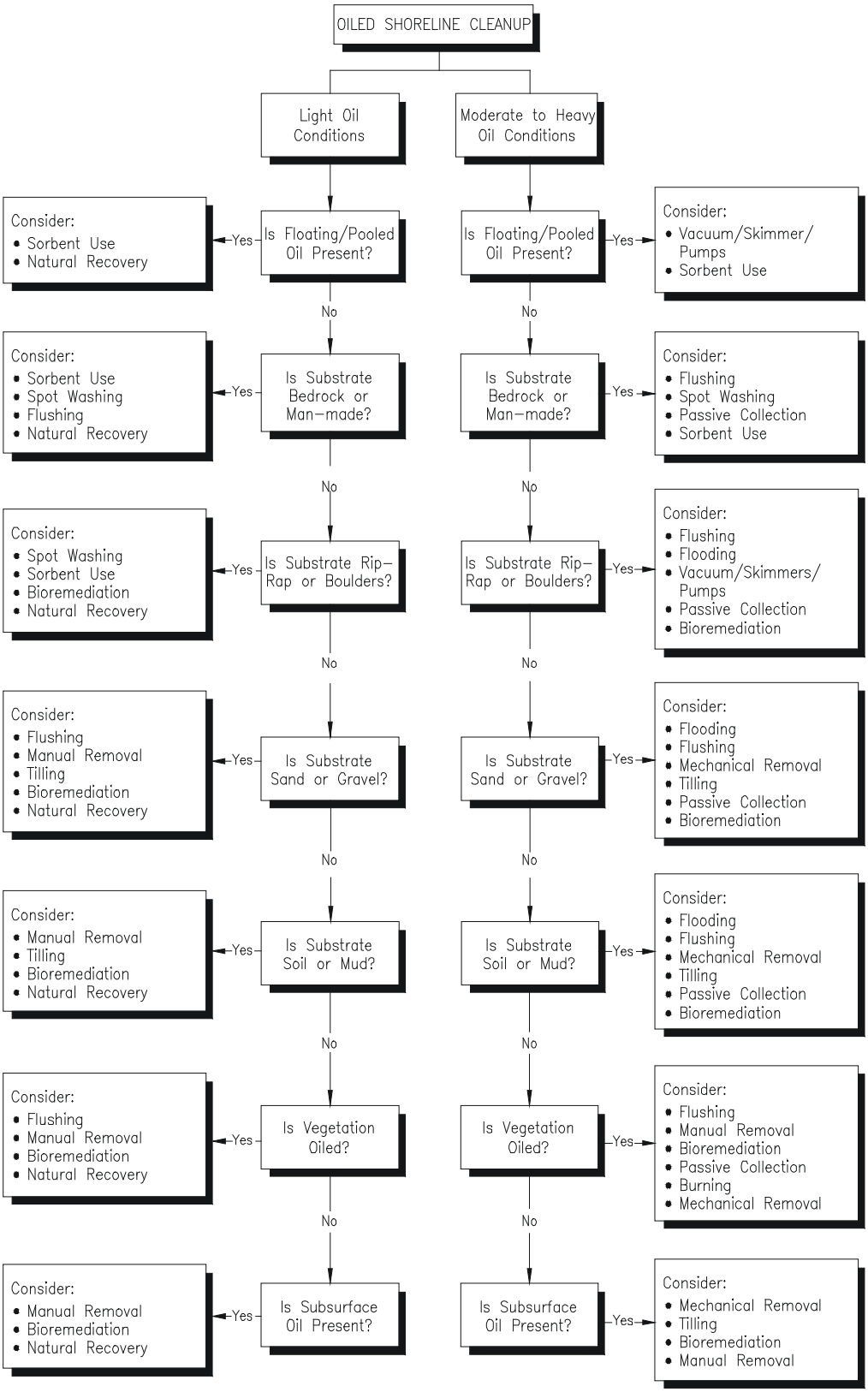
- **Substrate type** - Finer grained sediments typically require different techniques than coarse grained sediments and sediment type can affect trafficability (i.e., ability to traverse the area without losing traction) for heavy equipment.
- **Oil conditions** - Heavier oil conditions and larger areas may require more intrusive or mechanical methods, whereas lighter conditions may not require any form of cleanup.
- **Slope** - Heavy equipment use may not be appropriate on steeper or unstable banks.
- **Shoreline sensitivity** - Intrusive techniques may create a greater impact than the oil itself.
- **Penetration depth** - Significant penetration can reduce the effectiveness of several techniques.

Figure F.3 includes a shoreline cleanup technique selection guide.

These figures should only be used as a guide to identify the most appropriate techniques based on a limited number of factors and not a definitive list of techniques that can be used for selected situations.

A number of other factors can influence technique selection and result in techniques other than those identified in the figures as the most appropriate for a given situation. Final selection of cleanup techniques should be conducted in consultation with the state and federal On-Scene Coordinators (OSCs), the appropriate natural resource trustees, if applicable, and the particular landowner(s) or manager(s) prior to implementation.

Figure F.3: Shoreline Cleanup Technique Selection Guide



APPENDIX G BP US PIPELINES & LOGISTICS PACIFIC NORTHWEST PERFORMANCE UNIT CLAIMS PLAN

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This document is intended to be used by the BP - US Pipelines & Logistics (USPL) Olympic Pipe Line Company LLC (Olympic). Olympic is comprised of Olympic Pipe Line and the BP butane, natural gas, and Cherry Point crude oil line.

Guidance follows with respect to receiving, processing and closing related claims.

G.1 Background Information

An Incident Management Team (IMT) responding to a release may find it necessary to implement a formal claims process for the public. In that event, this document outlines the following items:

- Who is responsible for managing the claims process;
- When and how BP will direct the public in filing claims;
- The standard claim form to be used;
- How completion requirements are broadcast; and
- If and when claims centers are implemented.

G.2 Objectives

The primary objectives of this document are to:

- Set forth a claims plan for a pollution incident in waters of the State involving releases from Olympic assets.; and
- Help the IMT quickly implement a program designed to efficiently intake, investigate, and respond to related public compensation claims.

G.3 BP Claims Personnel

G.3.1 Oversight/Administration of Claims

During an incident, the IMT Incident Commander (hereinafter, “IC”) has executive oversight of the Claims Process Plan (CPP) and its implementation.

The Compensation and Claims Unit is a unit of the IMT’s Finance Section, and as such, the Finance Section Chief has direct responsibility for compensation claims in the IMT system.

G.3.2 Periodic Claims Plan Review and Updates

BP will conduct periodic reviews of this plan and update it as needed for business purposes or when required by law.

G.4 Legal Considerations

G.4.1 Legal Analysis

The IMT’s Law Officer will provide the Finance Section advice ensuring that this claims plan, and any claims program under it, will comply with all applicable laws and regulations.

G.4.2 Other Legal Responsibilities

An IMT Legal Advisor may, if directed, also:

- Assist in drafting or approving messaging;
- Assist in procuring appropriate translation services, as required;
- Draft contracts, as needed;
- Develop and implement comprehensive document retention plan, if needed for business or legal purposes;
- Develop claims standards, protocols, methodologies and/or calculators;
- Draft claims review manual, if needed;
- Draft claims correspondence, if needed;
- Assist in legal review of claims, if needed;
- Liaise with necessary government agencies and political entities;
- Engage in discussions/negotiations with government officials and other parties;
- Assist in preparing training materials/program for adjusters/accountants, if needed;
- Assist in training adjusters/accountants, if needed;
- Assist with designing reporting and auditing guidelines, if desired; and
- Provide other assistance as requested.

G.5 Impact Assessment and Engagement

BP's claims strategy will be linked to a comprehensive impact assessment that analyzes the effects of an oil spill or discharge. BP must consider, through the IMT, who will be involved in this process and assign roles to the extent possible. BP may also consider retaining third parties to assist in this process.

In the event of release, as impact of the incident becomes clear, BP will initiate preliminary conversations with the stakeholders regarding joint arrangements for assessing oil spill damages.

G.6 Communications

Any claims plan must include a communications plan. In the event of a release, a comprehensive communications strategy will aid in the success of a claims program. Factors that the Unified Command (UC) will discuss include:

- Communications objectives;
- Potential audiences;
- Potential issues;
- Potential delivery mechanisms;
- The timing of communications;
- Personnel roles and responsibilities;
- Communications with key stakeholders, including politicians and BP shareholders;
- How information regarding the CPP will be disseminated, including formats, locations, etc; and
- Language and translation concerns.

The Information Officer should be prepared to issue draft communications and will work with the Finance Section and Legal Officer to coordinate public information as needed.

G.6.1 Communications Strategy

Once a CPP is approved by UC, it will be communicated with the Law Officer and Finance Section Chief.

G.6.2 Claims Information & Advertising

The UC will determine what types of communications will be used to inform the public of the CPP program.

The IMT's Information and Law Officers, shall determine any claims advertising requirements that may exist, and work with Finance Section Chief to create a program.

No public announcement should be made without the approval by UC.

Due consideration should be given to providing claims forms, advertising, or other materials in various languages in addition to the primary language(s) of the country.

Potential forms of communications may include one or more of the following:

- Newspaper advertisements
- Radio advertisements
- Television advertisements
- Website
- Social Media
- Telephone hotlines
- Individual letters to known affected parties
- Community outreach, e.g., signs at community locations
- Coordination with local employers and businesses
- Government outreach
- Incident specific Pollution Incident and Environmental Response (PIERS) websites

G.7 Security and Fraud

A claims program is susceptible to various types of fraud. The final claims plan should address measures that may be taken to anticipate fraudulent claims, and to build checks into the claims intake and review systems so that they can be detected and appropriately addressed.

Maintaining physical security of individuals and facilities and preventing fraud are both critically important to BP, and to the successful compensation of claimants.

G.8 Claims Process

The IMT IC, with assistance from the Finance Section and Law Officers, will oversee the claim response and will be administered by the Compensation and Claims Unit Leader.

G.8.1 Claims Staffing

BP will identify additional staffing needs and fill roles as needed to ensure prompt and

efficient claims processing.

G.8.2 Contracts Administration

If required, BP will enter into contracts or other reliable arrangements with any third-party contractors. The BP IMT Law Officer and the Procurement Unit Leader are responsible for any such contracts or arrangements to ensure compliance with all relevant laws or regulations.

G.8.3 Invoices and Payments

BP IMT Law Officer, Finance Section Chief and the Claims and Compensation Unit Leader will establish invoicing requirements that, as well as an internal system of checks and controls related to contract oversight.

G.8.4 Claims Contact Information

BP's IMT has the ability to activate dedicated e-mail and telephone service for the purpose of claims intake within 48 hours of an incident.

If the number of likely claims warrants the establishment of a separate telephone number to handle claim inquiries, BP will contract that service.

BP may elect to utilize the existing contract with Crawford & Company to provide claims support services. This service can be activated directly or through the BP Notification Center.

G.8.5 Local Claims Centers

The establishment of a local claim center, or multiple centers, will be considered if there is a significant community need or the number of expected or anticipated claims warrants it.

BP, through the IMT, is committed to provide:

- For a minor release, claims can be managed by the IMT Finance Section without the establishment of local claims centers.
- For a significant release, at the discretion of the BP IMT IC in coordination with UC, local claims center(s) can be established for as long as necessary.

G.8.6 Claims Forms

Event Claim Form (Figure G.1) may be used in the submission of claims to the company. This form will be made available to all claimants in hard copy form or electronically.

Other forms may be used if they provide an equivalent level of information as that found on the Event Claim Form.

G.8.7 Submitting Claims to BP

Claims (with supporting documentation) may be submitted to the IMT, or as otherwise communicated during a response.

Questions regarding claims, or the status of claims already submitted, will be handled through the Finance Section.

Completed claim forms must be legible, signed in blue or black ink by the claimant, provide a monetary amount claimed, and be accompanied by supporting documentation. In good faith, BP is committed to working with claimants to help them understand the type and amount of documentation that might be required to support their claim, but ultimately the responsibility to prove their claim remains with them.

G.8.8 Claims Adjudication and Timeframes

The CPP shall have a system for identifying claims concerning urgent medical, safety, or sustenance requirements. These claims will be promptly considered. Other consequential and business related

claims will undergo intake and processing functions.

This process does not amend, waive, or alter any statute of limitations but does recommend a response be made to the claimant so as to not prejudice any right to timely file in a court having jurisdiction.

Claims related to the reimbursement of Uncompensated Oil Spill Removal Costs will be accepted by the Responsible Party up to a period no less than the state and federal minimum periods; other types of claims will be accepted for no less than one year after the incident, or longer if state or federal law requires.

Natural Resource Damage (NRD) claims are handled separately from other claims and may be accepted in a manner and timeframe agreed to by the Responsible Party and the lead federal and/or state trustee agency.

G.8.9 Claims Documentation

The amount and type of proof and documentation needed by BP to make a decision on a claim depends on many factors, including the claim type and the monetary amount claimed.

The following types of claims may be submitted after a release. Example types of documentation are also included below within the listing of each claim type. The examples provided are for reference only; they may or may not represent everything needed by BP to adjudicate a claim.

Removal Costs: Costs to prevent, minimize, mitigate, or clean up the oil spill.

Examples of Proof and Documentation that may be needed:

- Timesheets;
- Receipts;
- Checks;
- Proof payment;
- Witness statements; or
- Other evidence of the cost and scope of work performed.

Business Losses: Direct and Consequential Business Losses

Examples of Proof and Documentation that may be needed:

- Financial statements for at least two years prior to spill and from the year of the spill;
- Signed copies of business income tax returns and schedules for at least three years prior to spill;
- Details on efforts to mitigate business losses or why no efforts were taken;
- For hotels, daily and monthly occupancy information for two years prior to spill and the year of the spill;
- Description of marine charter business losses caused by the spill;
- Evidence that charter vessel(s) was in the area impacted by the spill and were unable to carry on their business due to the spill;
- Maps or descriptions of the area showing charter business location within spill area;
- Signed copies of income tax returns (for charter boat business) and schedules for at least three years prior to spill;
- Details on expenses not paid out during period being claimed (e.g., wages);
- Booking records for three years prior to spill and year of spill;
- List of charter rates, including any services the business specializes in (e.g., sport fishing);

- Copies of any logs relating to boating activities for the year prior to and the year of the spill; or
- Registration documents for the vessel.

Loss of Subsistence Use of Natural Resources: Loss of subsistence use claim if natural resources claimants depend on for subsistence use purposes that have been injured, destroyed, or lost by an oil spill incident.

Examples of Proof and Documentation that may be needed:

- Proof that injury, destruction, or loss of natural resources would have been used by the claimant to obtain food, shelter, clothing, medicine, or other minimum necessities of life.
- Documentation identifying each specific natural resource for which compensation for loss of subsistence use is being claimed
- •Description of the actual subsistence use you make of each specific natural resource you identify;
- Description of how and to what extent claimant's subsistence use of the natural resource was affected by the injury to, destruction of, or loss of, each specific natural resource;
- Description of claimant's efforts to mitigate subsistence use loss; or
- Description of alternative source(s) or means of subsistence available to claimant during the period.

Loss of Government Revenue: Net loss by Federal, State, or Local Governments of taxes, royalties, rents, fees, or net profit shares due to the injury, destruction, or loss of real property, personal property, or natural resources.

Examples of Proof and Documentation that may be needed:

- Description of what revenues were impacted and how the spill caused a loss of revenues;
- Documentation showing costs incurred because revenue was not collected;
- The total assessment or revenue collected and related expenditures for comparable revenue periods, typically covering two years prior to the incident;
- Copies of statutes, regulations, ordinances, etc., outlining applicable authority to raise such revenues, property affected, method of assessment, rate of assessment, and method and dates of collection of assessment; or
- Government financial reports showing total assessment or revenue collected for comparable periods, typically covering two years.

Increased Public Service Costs: Net costs by State & Local Governments for providing increased or additional public services during or after response activities, including protection from fire, safety, or health hazards, caused by a discharge of oil or directly attributable to response to the oil spill incident.

Examples of Proof and Documentation that may be needed:

- Documentation showing justification for the public services provided, including documentation of what specific services were provided and the relationship to the spill;
- Documentation showing when services were provided during and after the oil spill response;
- Documentation showing services were in addition to services normally provided;
- Documentation showing the net cost for the services and the methods used to compute those costs;
- Reports showing the increased public services were required;
- Detailed description of what increased services were necessary and why, including a distinction between response activities, safety acts, and law enforcement acts, and if the increase was actually incurred or if normal resources were diverted for use;
- Daily reports on the activities of the government personnel and equipment involved;

- Payroll verification of the government hourly rate at the time;
- Verification of the standard government equipment rates for any equipment claimed;
- Signed and dated records of the spill including hourly rates for labor and equipment;
- Explanation as to whether rates are fully loaded or not and formulas used; or
- Certification that rates used reflected actual costs incurred and did not include punitive damages.

G.9 Claims Administration

In the event an oil spill affects private or public property within the State, the BP IMT shall make public aware of the process to be used to accept, process, and pay claims. This published document is the CPP.

Documents required to submit a claim should be attached to the CPP. Drafts of these documents are attached.

G.9.1 Types of Claims

Compensation and allowable types of claims will be guided by state and federal law. Precisely what will entail a legitimate claim will be determined during the claims process and is likely to vary depending upon the circumstances.

Claim types might include:

- Damage to real property
- Damage to personal property
- Loss of income
- Subsistence claims
- Removal (clean-up) costs

G.9.2 Standards of Compensability

The IMT's published CPP will outline the applicable standards for compensability. These standards will comply with all relevant laws and regulations.

To the extent allowable by law, BP may consider the following elements in its claim's determinations, among others:

- Claimant's geographic proximity to the oil spill or discharge
- The traditional legal principle of proximate cause
- Mitigation and offsets

G.9.3 Payment

BP Legal and local counsel should be consulted with respect to claims payment processes. BP Legal may consider the following factors:

- Establishing an account to fund claims
- Account audits and compliance
- Payment processing
- Currency of payments
- Form of payments - check, cash, electronic transfer

- Check issuance procedures
- Lost or returned checks
- Expired checks

BP Legal will also ensure that the claims program's payment processes include safeguards to prevent bribes or other illegal payments in order to ensure compliance with applicable state and federal regulations.

G.10 BP Policies and Controls

The IMT IC, Finance Section Chief, and Law Officer will work together to ensure that the IMT claims program is consistent with BP's internal policies and controls.

Figure G.1: Example Oil Spill Claim Form

1. Claimant Information:

Name: _____

Address: _____

Telephone: _____ Home: _____

Office: _____ Mobile : _____

Fax: _____ E-mail: _____

2. Provide claims details, if available:

Date & Time Injury or Damage Discovered: _____

_____

Location of Injury or Damage: Position (Lat/Long) of Injury or Damage: _____

_____

3. Describe the injury or damage you are claiming:

_____

_____

_____

4. Did you have any prior contact with BP regarding your claim? If so, with whom?

_____

_____

_____

5. What is the type of claim you are submitting and what is the total monetary amount you are claiming in U.S. dollars?

Claim Type: _____

Total Amount Claimed: $ _____

6. Have you or your legal representative submitted the claim to an insurer or another responsible party before submitting this claim to BP?

(Yes/No) – if "yes" provide date claim submitted to insurer or other RP and provide contact information

No _____

Yes _____

_____

_____

7. If the claim was submitted to an insurer of another responsible party, what response (written or verbal) or payment did you receive? (i.e. Insurer or RP took no action, denied the claim, stated they had no money to pay the claim, made only a partial payment, or other – explain)

_____

_____

_____

8. Have you commenced an action in court to recover costs which are the subject of this claim? (Yes/No) – if "yes" provide contact information for your attorney (name, address, telephone number), the court in which action is pending, and the civil action number

No _____

Yes _____

_____

_____

9. What actions did you take, if any, to minimize the injury or damages you claim?

_____

_____

_____

10. Witnesses: (Provide the name, address, telephone number, & email address) of anyone who witnessed the injury or damage you claim. Also provide a summary of each witness's knowledge of the injury or damage claimed, and/or the incident which caused the injury or damage.

Name: _____

Address: _____

Telephone: _____ Home: _____

Office: Mobile :

Fax: E-mail:

Summary:

Name:

Address:

Telephone: Home:

Office: Mobile :

Fax: E-mail:

Summary:

Name:

Address:

Telephone: Home:

Office: Mobile :

Fax: E-mail:

Summary:

11. List of Documents & Attachments:

12. Claimant's Signature & Date:

I, the undersigned, agree that upon acceptance of any compensation from BP, I will cooperate fully in any claim or action by BP to recover costs paid out in claims from any 3rd Party or entity that may also be responsible for the oil spill. This cooperation shall include, but is not limited to, immediately reimbursing to the Fund any compensation received from any other source for the same costs and/or damages and, providing any documentation, evidence, testimony, and other support, as may be necessary for the Fund to recover such compensation.

I, the undersigned, certify that, to the best of my knowledge and belief, the information contained in this claim represents all material facts and is true. I understand that misrepresentation of facts may result in legal action against me.

Signature of Claimant Date

13. Legal Representative's Signature & Date:

Is this claim being presented to BP by your legal representative? If so, the legal representative must also sign this claim and provide contact information.

Signature of Legal Representative's Date

Name: _____

Address: _____

Telephone: _____ Home: _____

Office: _____ Mobile : _____

Fax: _____ E-mail: _____

APPENDIX H CROSS-REFERENCE

Table of Contents

List of Figures

Figure H.1: Washington Department of Ecology Cross-Reference Index

ECOLOGY REQUIREMENTS (WASHINGTON ADMINISTRATIVE CODE [WAC] 173-182-130)	LOCATION
(1) This section applies to those plan holders who, on the effective date of this chapter, have approved or conditionally approved plans, primary response contractors (PRCs) with approved applications, and spill management teams (SMTs) and wildlife response service providers (WRSPs) that apply for ecology approval to be cited in contingency plans. Each update must contain all necessary content and meet the requirements of this chapter.	Section 1.1
(2) Within six months from rule effective date, SMTs and WRSPs shall begin to submit applications for review and approval in accordance with WAC 173-182-830, 173-182-840, and 173-182-850.	Section 1.1
(3) Within twelve months from the rule effective date, plan holders shall update their plans to comply with the following as applicable to the plan holder:	Section 1.2
(a) Contingency plan general content (WAC 173-182-230 (3)(e)), contractor contact information.	Figure 3.5
(b) Spill management teams (WAC 173-182-280).	Section 4
(c) Transfer sites for covered vessels at locations where transfers occur, and for facilities with a vessel terminal (WAC 173-182-355).	Section 2.5
(d) Planning standards for shoreline cleanup (WAC 173-182-522).	Section 6
(e) Binding agreement (WAC 173-182-220).	Section 1.3
(f) Field document (WAC 173-182-240(2)).	Section 7
(g) Type and frequency of drills (WAC 173-182-710(6)), commitment to participating in the multiple plan holder deployment drill.	Appendix A
(h) Planning standards for air monitoring to protect oil spill responders and the public (WAC 173-182-535).	Section 2.6
(i) Planning standards for in situ burning (WAC 173-182-330).	Appendix D – Figure D.9
(j) Planning standards for dispersants (WAC 173-182-325).	Appendix D pg. D-19
(k) Planning standard for spills of oils that, depending on their chemical properties, environmental factors (weathering), and method of discharge, may submerge or sink (WAC 173-182-323).	Figure D.10
(l) Planning standards for wildlife response (WAC 173-182-540 (1), (2)(a), (b), (c), (e) and (f), (3), and (4)).	Appendix D
(4) Within eighteen months from rule effective date, vessels enrolling under either an umbrella contingency plan or a multiple vessel contingency plan must ensure that their enrollment includes contracted access to a state-approved SMT or in-house team which meets the requirements of WAC 173-182-280, 173-182-830, 173-182-840, and 173-182-850.	N/A
(5) Within eighteen months from rule effective date, plan holders must include	Section 2.4

ECOLOGY REQUIREMENTS (WASHINGTON ADMINISTRATIVE CODE [WAC] 173-182-130)	LOCATION
details about benthic and seafloor resources at risk from nonfloating oil spills in accordance with requirements for response and protection strategies under WAC 173-182-510. This requirement may be met by citing the geographic response plans developed as annexes to the northwest area contingency plan. If the relevant GRPs have not been updated by the phase-in date, then plan holders shall have thirty days from the date the GRP is published to ensure the plan is updated to reference the GRP and incorporate relevant details in their contingency plan in accordance with WAC 173-182-510 (2)(b).	
(6) Within twenty-four months from the effective date of this chapter, plan holders shall meet the requirements in WAC 173-182-540 (2)(d).	Section 1
(7) To the extent to which plan holders rely on primary response contractor (PRC) applications, spill management team (SMT) applications, or wildlife response service provider (WRSP) applications to demonstrate compliance for plan holder planning standards, these applications must also be updated correspondingly.	Section 3
(8) Each plan update will be given a thirty day public review and comment period. Ecology will approve, disapprove, or conditionally approve the plan update no later than sixty-five days from the update submittal date.	Section 1

ECOLOGY REQUIREMENTS (WAC 173-182-140 and 142)	LOCATION
At least once annually, plan holders shall review the plan for accuracy and either:	Section 1
(1) Update and submit the amended page(s) of the plan to ecology for review and approval; or	Section 1.1 Figure 1.1 and 1.2
(2) If no plan changes are needed, send a letter to ecology confirming that the existing plan is still accurate.	Section 1.2
(1) At any point during the five year approval period, if there is a temporary or permanent significant change in the personnel or response equipment described in the plan, the plan holder shall: (a) Notify ecology in writing within twenty-four hours of the change; and (b) Provide both a schedule for the prompt return of the plan to full operational status and a proposal for any backfill to compensate for the temporary significant change. This proposal shall be reviewed by ecology.	Section 1
(2) Changes which are considered significant include: (a) Loss of equipment that results in being out of compliance with any planning standard; (b) If greater than ten percent of available boom, storage, recovery, dispersants, in situ burn or shoreline clean-up equipment is moved out of the homebase as depicted on the WRRL [Worldwide Response Resource List]; (c) Transfers of equipment to support spill response for out-of-region spills; (d) Permanent loss of initial response personnel listed in command and general staff ICS [Incident Command System] positions provided in the	Figure 5.11

ECOLOGY REQUIREMENTS (WAC 173-182-140 and 142)	LOCATION
plan; (e) Permanent loss of personnel designated as the binding agreement signer; (f) Changes in normal operating procedures as described below: (i) For facilities, changes in the oil types handled; permanent changes in storage capacity; changes in handling or transporting of any product; permanent changes in oil processing; and (ii) For vessels, changes in the oil types handled. (g) Changes in equipment ownership if used to satisfy a plan holder planning standard; or (h) Modification or discontinuing of any mutual aid, letter of intent or contract agreement.	
(3) Notification by facsimile or email will be considered written notice.	Section 1
(4) Failure to report changes in the plan could result in the loss of plan approval.	
(5) If the proposed change to the plan is to be made permanent, the plan holder then shall have thirty calendar days to distribute the amended page(s) of the contingency plan to ecology for review and approval.	Section 1.2
(6) If ecology finds that, as a result of a change, the plan no longer meets approval criteria; ecology may place conditions on approval or disapprove the plan.	Section 1

ECOLOGY REQUIREMENTS (WAC 173-182-145)	LOCATION
Every plan holder, including each person enrolled in a plan covering multiple persons, is required to implement the Washington approved plan in any response to a spill and drill. A decision to use a different plan must first be approved by the state and federal on-scene coordinators.	Appendix A

ECOLOGY REQUIREMENTS (WAC 173-182-150)	LOCATION
Plan holders are required to conduct post-spill review procedures to review both the effectiveness of the plan and make plan improvements. Debriefs with ecology and other participating agencies and organizations may be appropriate if unified command has been established during a spill, and are required when significant plan updates are identified or significant lessons can be recorded and implemented.	Section 8.2, Figure 8.3

ECOLOGY REQUIREMENTS (WAC 173-182-210)	LOCATION
(1) Plan holders shall format and maintain plans to maximize their usefulness during a spill. Information shall be readily accessible and plans will contain job aids, diagrams and checklists for maximum utility.	Section 5
(2) Plans shall be divided into a system of numbered, tabbed chapters, sections and annexes/appendices. Each plan shall include a detailed table of contents based on chapter, section, and annex/appendix numbers and titles, as well as tables and figures.	Entire document

ECOLOGY REQUIREMENTS (WAC 173-182-210)	LOCATION
(3) Plans shall be formatted to allow replacement of pages with revisions without requiring replacement of the entire plan.	Entire document

ECOLOGY REQUIREMENTS (WAC 173-182-220)	LOCATION
(1) Each plan shall contain a written statement binding the contingency plan submitter to its use. The person(s) signing the agreement shall be authorized to make expenditures to implement the requirements in subsection (2) of this section. The binding agreement shall be signed by: (a) An authorized representative(s) of a nonprofit corporation established to provide oil spill contingency plan coverage; (b) An authorized owner, or operator, or a designee with authority to bind the owners and operators of the facilities or vessels covered by the plan; (c) An authorized resident agent of the vessel(s) submitting the plan; (d) An authorized representative(s) of a company contracted to the vessel or facility and approved by ecology to provide containment and clean-up services.	Section 1.5
(2) The binding agreement must be submitted with the plan. Form number ECY 070-612 may be used. If an alternative form is used, it must include the name, address, phone number, email address, and website of the submitting party. In the binding agreement the signatory shall:	Section 1
(a) Verify acceptance of the plan and commit to a safe and immediate response to spills and to substantial threats of spills that occur in, or could impact Washington waters or Washington's natural, cultural and economic resources;	Section 1.5
(b) Commit to having an incident commander in the state within six hours after notification of a spill;	
(c) Commit to the implementation and use of the plan during a spill, and to the training of personnel to implement the plan;	
(d) Verify authority and capability to make necessary and appropriate expenditures in order to implement plan provisions; and	
(e) Commit to working in unified command within the incident command system to ensure that all personnel and equipment resources necessary to the response will be called out to cleanup the spill safely and to the maximum extent practicable.	

ECOLOGY REQUIREMENTS (WAC 173-182-230)	LOCATION
(1) Contingency plans must include all of the content in this section.	Entire document
(2) In Washington state, the NWACP [Northwest Area Contingency Plan] serves as the statewide master oil and hazardous substance contingency plan required by RCW 90.56.060. Plan holders shall write plans that refer to and are consistent with the NWACP.	Section 2
(3) All contingency plans must include the following:	See below

ECOLOGY REQUIREMENTS (WAC 173-182-230)	LOCATION
(a) Each plan shall state the federal or state requirements intended to be met by the plan.	Section 1.1
(b) Each plan shall state the size of the worst case spill	Appendix D
(i) For transmission pipelines, more than one worst case spill volume for different line sections or response zones on the entire pipeline may be submitted to ecology for consideration. The methods and calculations used to determine the worst case discharge volumes must be included in the plan.	Appendix E.4
(ii) For vessel umbrella plans that enroll both tank vessels and nontank covered vessels and that rely on supplemental resources for approval, specify the worst case discharge volume and product type for both tank and nontank covered vessels for each port covered by the contingency plan.	N/A
(iii) For multiple facilities using a single plan, separate worst case spill volumes are required for each facility.	
(c) Each plan shall have a log sheet to record revisions and updates to the plan. The log sheet shall identify each section amended, including the date of the amendment, verification that ecology was notified and the name of the authorized person making the change. A description of the amendment and its purpose shall also be included in the log sheet, or filed as an amendment letter to be inserted in the plan immediately after the log sheet.	Figure 1.1
(d) Each plan shall have a cross-reference table reflecting the locations in the plan of each component required by this chapter.	Figure H.1
(e) Each plan shall include contact information for any PRC, SMT, or WRSP contracted resources necessary to meet plan holder planning standards. Contact information must include the name, address, twenty-four-hour phone number, or other means of contact at any time of the day.	Figure 3.6
(i) A contract or letter summarizing the terms of the contract signed by the PRC, SMT, or WRSP shall be included in the plan.	Appendix B
(ii) If the contract is not submitted, that document shall be available for inspection, if requested by the department.	
(iii) For mutual aid agreements that a plan holder relies on to meet the planning standards, the plan shall include a copy of the agreement and describe the terms of that document in the plan.	
(iv) If a plan holder relies on a PRC, SMT, WRSP or other contractor to staff ICS positions for the spill management team, then the commitment must be specified in writing.	N/A
(v) If the entire contract for additional spill management team support is not included in the plan, that document shall be made available for inspection, if requested by ecology.	
(f) Each plan must contain the procedures to track and account for the	Section 5.5

ECOLOGY REQUIREMENTS (WAC 173-182-230)	LOCATION
entire volume of oil recovered and oily wastes generated and disposed of during spills. The responsible party must provide these records to ecology upon request.	
(4) Additional facility plan content. Facility plans shall include:	Figure 1.3A, Figure 1.3B, Figure 1.3C
(a) The name, location, type and address of the facility;	
(b) Starting date of operations;	
(c) Description of the operations covered by the plan:	
(i) List the oil handling operations that occur at the facility location.	
(ii) Inventory all tanks and list the tank capacity.	Appendix C; Figure C.7
(iii) All oil(s) or product(s) handled by name and include; density, gravity, API, oil group number, and sulfur content (sweet/sour).	Appendix C; Figure C.8
(iv) Include a written description and map indicating site topography, stormwater and other drainage systems, mooring areas, pipelines, tanks, and other oil processing, storage, and transfer sites and operations.	Figure 1.4, Section 6, Geographic Response Plans (North, Central, South)
(v) A description of the geographic area that could be impacted from a spill at the location based on a forty-eight hour worst case spill trajectory analysis.	Appendix E.6
(vi) For pipelines, a narrative describing how the response zone was identified shall be submitted as part of the plan.	Figure 1.3A, Figure 1.3B, Figure 1.3C
(5) Additional vessel plan content. Except as provided in subsections (6) and (7) of this section, vessel plans shall also include: (a) Name of each vessel covered under the plan; (b) The name, location, and address of the owner or operator; (c) Official identification code or call sign; (d) Country of registry; (e) All ports of call or areas of expected operation in Washington waters; (f) List all oil(s) or product(s) by name and include; density, gravity, API, oil group number, sulfur content (sweet/sour) and general ship capacity for amounts carried as cargo or fuel; (g) Description of the operations covered by the plan; and (h) A diagram indicating cargo, fuel, and ballast tanks and piping, power plants, and other oil storage and transfer sites and operations.	N/A
(6) Plans covering multiple vessels with different owners shall also include the following:	
(a) In lieu of providing vessels names, call signs and country of registry, plan holders shall maintain accurate enrollment or member lists with vessel specific information provided by covered vessels and shall provide ecology twenty-four hour access to the enrolled vessels list via the internet in a format acceptable to ecology. The list shall be updated	

ECOLOGY REQUIREMENTS (WAC 173-182-230)	LOCATION
daily, or at a minimum every three days. The list must at a minimum include the following: (i) Vessel name; (ii) Vessel type; (iii) Worst case discharge oil type and quantity; (iv) The name and API gravity of the densest oil being handled on the enrolled vessels; (v) Qualified individual/spill management team; (vi) Agent; and (vii) Protection and indemnity (P&I) club.	
(b) Plans covering multiple vessels shall include a list of the types of vessels and the typical oil types by group and volumes. In addition, vessel diagrams indicating cargo, fuel, and ballast tanks and piping, power plants, and other oil storage and transfer sites and operations shall be available for inspection by ecology. The procedure for the plan holder to acquire vessel diagrams needs to be documented in the plan.	N/A
(7) Umbrella plans shall list the name of the entities that provide supplemental equipment.	Appendix G
(8) Plans shall include concise procedures to establish a process to manage oil spill liability claims of damages to persons or property, public or private, for which a responsible party may be liable.	Appendix G

ECOLOGY REQUIREMENTS (WAC 173-182-232)	LOCATION
(1) Approved umbrella plans provide an efficient and cost-effective mechanism for enrolling vessel owner and operators in contingency plan coverage. Umbrella plans provide response resources to meet the requirements of this chapter. The umbrella plan may be approved for more than one worst case discharge, by port, in areas of operation covered by the plan. Any owner or operator of a covered vessel having a worst case discharge volume that exceeds resources under contract to the umbrella plan may still enroll only if, the vessel owner or operator maintains a contract with another primary response contractor that will provide supplemental response resources, and if those combined resources are sufficient to meet the requirements of this chapter. The vessel owner or operator must provide documentation that authorizes the umbrella plan holder to activate the supplemental response resources, sufficient to meet the worst case discharge of the covered vessel, during a drill, spill or substantial threat of a spill. Documentation must demonstrate the agreement and includes, but is not limited to, authorized representative and commitment letters from contractors, qualified individuals, insurance representatives, member signed enrollment agreements or other letters of intent.	N/A
(2) The plan must describe the process for activation of the supplemental resources and shall include the documentation described in subsection (1) of this section. The process for accessing supplemental equipment will be tested in drills.	

ECOLOGY REQUIREMENTS (WAC 173-182-240)	LOCATION
(1) Each plan shall contain a field document which lists time-critical information for the initial emergency phase of a spill and a substantial threat of a spill. The owner or operator of the covered vessel or facility shall make the field document available to personnel who participate in oil handling operations and shall keep the field document in key locations at facilities, docks, on vessels and in the plan. The locations where field documents are kept must be listed in the plan, provided that plan holders covering multiple persons shall not be subject to enforcement if the owner or operator of an enrolled vessel fails to keep the field documents in the location specified in the plan. Plans covering multiple persons shall include procedures to ensure each vessel covered by the plan is provided the field document prior to entering Washington waters. This can include by electronic means.	Field Document
(2) At a minimum, the field document shall contain:	
(a) A list of the procedures and equipment to detect, assess and document the presence and size of a spill;	
(b) Spill notification procedures and a call out list that meets the requirements in WAC 173-182-260 and 173-182-262 or 173-182-264 as applicable, and a form to document notifications; and	
(c) A checklist that identifies significant steps used to respond to a spill, listed in a logical progression of response activities.	

ECOLOGY REQUIREMENTS (WAC 173-182-242)	LOCATION
(1) Covered vessels that transit to or from a Washington port through the Strait of Juan de Fuca, except for transits extending no further west than Race Rocks Light, on Vancouver Island, Canada, must include the following information in their contingency plan:	N/A
(a) Documentation of the vessel owner/operators contracted access to an emergency response towing vessel (ERTV) at Neah Bay;	
(b) Detailed information about the ERTV's capabilities and circumstances of potential activation and call out;	
(c) A commitment in the plan to participate in drills that test compliance with the requirements of RCW 88.46.135; and	
(d) Procedures for call out of the ERTV must be included in the field document.	
(2) Plan holders may request drill credit for an actual deployment of the tug to respond to a spill or vessel emergency, provided the plan holder follows the requirements in WAC 173-182-730.	

ECOLOGY REQUIREMENTS (WAC 173-182-250)	LOCATION
(1) Plan holders and responsible parties are required to document their initial spill actions and the plan shall include the forms that will be used for such documentation.	Figure 3.2

ECOLOGY REQUIREMENTS (WAC 173-182-250)	LOCATION
(2) The plan shall describe what equipment will be used to conduct initial spill assessment, including equipment effective during darkness and low visibility conditions, such as visual methods, tracking buoys, trajectory modeling, aerial overflights, thermal or infrared imagery.	Section 2.3
3) The plan must state how safety assessment including initial air monitoring will be conducted for all types of spills, including spills to groundwater.	Section 2.4, 2.2.9 and Section 2.4 and 5.3
(4) The plan must list procedures that will be used to confirm the occurrence, and estimate the quantity and nature of the spill. An updated report is required if the initially reported estimated quantity or the extent of the contamination changes significantly.	Section 2.3

ECOLOGY REQUIREMENTS (WAC 173-182-260)	LOCATION
(1) Each plan shall include procedures which will be taken to immediately notify appropriate parties that a spill has occurred. The plan shall identify the central reporting office or individuals responsible for implementing the notification process.	Section 3
(2) Each plan shall include a list of the names and phone numbers of required notifications to government agencies, response contractors and spill management team members, except that the portion of the list containing internal call down information need not be included in the plan, but shall be available for review by ecology upon request and verified during spills and drills.	Figure 3.2, 3.3, 3.5, 3.6
(3) The procedure shall establish a clear order of priority for immediate notification.	Section 3.1, Figure 3.1, Figure 3.2

ECOLOGY REQUIREMENTS (WAC 173-182-262)	LOCATION
(1) The owner or operator of a covered vessel must notify the state through the Washington emergency management division of a discharge or substantial threat of a discharge. Notification must be made within one hour of the discharge or substantial threat of a discharge, or as soon as is feasible without further endangering the vessel or personnel.	N/A
(2) Vessel discharge notifications are in addition and made subsequent to notifications that the owner or operator of a covered vessel must provide to the United States Coast Guard. Vessels enrolled in plans covering multiple vessels must notify the plan holder in addition to the state, unless the state has already been notified by the plan holder on behalf of the vessel owner or operator.	
(3) Notification of the discharge or substantial threat of a discharge initiates activation of the plan. Upon notification, the vessel owner/operator will coordinate as appropriate with: (a) The state of Washington and the United States Coast Guard to take any necessary actions to protect the public health, welfare, and natural resources of the state; and (b) The plan holder for plan implementation as described in the plan.	
(4) Notification procedures must be included in the plan.	

ECOLOGY REQUIREMENTS (WAC 173-182-262)	LOCATION
(5) The substantial threat of a discharge may be determined or affected by the following conditions: (a) Ship location and proximity to land or other navigational hazards; (b) Weather; (c) Tidal currents; (d) Sea state; (e) Traffic density; (f) Condition of vessel; and (g) Timing or likelihood of vessel repairs.	N/A

ECOLOGY REQUIREMENTS (WAC 173-182-264)	LOCATION
(1) Facility plans shall contain procedures for notifications for spills to ground and to permeable secondary containment that threaten to impact waters of the state.	Section 3.1, Figure 3.1, Figure 3.2, Figure 3.3, Figure 3.4, Section 2.2.9
(a) All spills are considered reportable spills except; (i) Spills which are known to be less than forty-two gallons that do not impact surface or groundwater. (ii) CERCLA [Comprehensive Environmental Response, Compensation, and Liability Act] releases. (iii) On-facility air releases to the atmosphere only. (iv) Releases from underground storage tanks regulated under chapter 173-360 WAC. (v) Preexisting sources of releases identified as RCRA [Resource Conservation and Recovery Act] solid waste management units. (vi) Spills contained within areas controlled by NPDES [National Pollutant Discharge Elimination System] permitted systems that are not likely to threaten groundwater and do not exceed applicable federal reportable quantities.	
(b) A spill is considered to have not impacted ground if it occurs on a paved surface such as asphalt or concrete. A spill to dirt or gravel is considered to have impacted ground and is reportable.	
(2) Plan holders must also include procedures in their plan to address spills of an unknown volume. When addressing a spill of an unknown volume, plan holders shall use best professional judgment and may consider the following circumstances in determining when to make notifications: (a) Whether the spill is ongoing; and (b) Whether the spill is located in an area that is adjacent to waters of the state or where there is a pathway to waters of the state, and the environmental conditions, such as rain events, or known shallow groundwater make impacts to waters of the state likely.	

ECOLOGY REQUIREMENTS (WAC 173-182-270)	LOCATION
(1) Plan holders and PRCs are required to maintain response equipment in a state of constant readiness, and in accordance with manufacturer specifications.	Section 7.1.2, Figure 7.1, 7.2, 7.3, 7.4

(2) Plan holders and PRCs that own equipment shall develop schedules, methods, and procedures for equipment maintenance. Maintenance records shall be kept for at least five years and made available if requested by ecology.	Section 7.1.2

<table>
<tr><th>ECOLOGY REQUIREMENTS (WAC 173-182-280)</th><th>LOCATION</th></tr>
<tr><td>(1) Each plan shall contain information on the personnel (including contract personnel as applicable) who will be available to manage an oil spill response. To meet the requirement, the plan shall include:</td><td>See below</td></tr>
<tr><td>(a) An organizational diagram depicting the chain of command for the spill management team for a worst case spill.</td><td>Figure 4.3 and 4.4</td></tr>
<tr><td>(b) For the purpose of ensuring depth of the spill management team, a table detailing the names of personnel to fill the following ICS roles or the name of the SMT contracted to fill the roles.
(i) Personnel may be listed a maximum of two times.
(ii) Personnel filling key roles do not need to be a resident in Washington state.
<table>
<tr><th>ICS Position</th><th>Name</th><th>Name</th><th>Name</th></tr>
<tr><td>Responsible Party Incident Commander</td><td></td><td></td><td></td></tr>
<tr><td>Public Information Officer</td><td></td><td></td><td></td></tr>
<tr><td>Liaison Officer</td><td></td><td></td><td></td></tr>
<tr><td>Safety Officer</td><td></td><td></td><td></td></tr>
<tr><td>Operations Section Chief</td><td></td><td></td><td></td></tr>
<tr><td>Planning Section Chief</td><td></td><td></td><td></td></tr>
<tr><td>Logistics Section Chief</td><td></td><td></td><td></td></tr>
<tr><td>Finance Section Chief</td><td></td><td></td><td></td></tr>
<tr><td>Wildlife Branch Director</td><td></td></tr>
<tr><td>Air Operations Branch Director</td><td></td></tr>
<tr><td>Situation Unit Leader</td><td></td></tr>
<tr><td>Resources Unit Leader</td><td></td></tr>
<tr><td>Documentation Unit Leader</td><td></td></tr>
<tr><td>Environmental Unit Leader</td><td></td></tr>
</table>
Additional SMT rosters which detail greater position depth available to support the plan holder may be maintained at the plan holder's office and be made available to ecology upon request. If a primary response contractor, SMT, or WRSP is used to fill positions, they must have an approved application on file with the state and they must agree in writing, either through contract or other approvable means, to staff the positions. The capacity and depth of spill management teams will be evaluated in plan holder drills and spills.</td><td>Figure 4.5</td></tr>
<tr><td>(c) A job description for each spill management position, or a reference to the incident management handbook with position description. If the job descriptions are consistent with the NWACP, then the plan holder may reference the NWACP rather than repeat the information.</td><td>Section 4</td></tr>
<tr><td>(d) A detailed description of the planning process which will be used to manage a spill or a reference to the incident management handbook with planning process descriptions and meeting agendas. If the process</td><td>Section 2</td></tr>
</table>

ECOLOGY REQUIREMENTS (WAC 173-182-280)	LOCATION
is consistent with the NWACP then the plan holder may reference the NWACP rather than repeat the information.	
(2) The plan shall address the type and frequency of training that each individual listed in subsection (1)(b) of this section receives. The training program at a minimum shall include as applicable ICS, NWACP policies, use and location of GRPs, the contents of the plan and worker health and safety as applicable to the role. A combination of training and experience in drills and spills may be used to describe SMT personnel capabilities within response roles. The training program shall include participation in periodic announced and unannounced exercises and participation should approximate the actual roles and responsibilities of the individual specified in the plan. New employees shall complete the training program prior to being assigned job responsibilities which require participation in emergency response situations.	Appendix A.2
(3) The plan shall identify a primary and two alternate incident commander representatives that can form unified command at the initial command post, and that could arrive in state within six hours.	Figure 3.2
(4) The plan shall include a narrative description of estimated time frames for arrival of the remainder of the spill management team in state.	Section 4.3 and Section 4.4
(5) The plan shall list a process for orderly transitions of initial response staff to incoming local, regional or away team personnel, including transitions between shift changes.	N/A
(6) Plans covering multiple vessels must maintain a list of the spill management team(s) for each vessel enrolled under the plan, and must describe the transition process from plan personnel to the incoming vessel owner or operator's team. The plan must include checklists and documentation to facilitate an effective transition. Vessels enrolling under an umbrella contingency plan or a multiple vessel contingency plan must ensure that their enrollment includes contracted access to a state-approved SMT or in-house team.	N/A

ECOLOGY REQUIREMENTS (WAC 173-182-310)	LOCATION
(1) Ecology shall apply a planning standard when determining the ability of a plan holder to meet the purposes of these regulations. Each planning standard is subject to being verified at scheduled or unannounced drills. In an actual spill event, initial deployment shall be guided by safety considerations. The responsible party must address the entire volume of an actual spill regardless of the planning standards.	Figure E.2
(2) The planning standards described in this chapter do not constitute cleanup standards that must be met by the holder of a contingency plan. Failure to remove a discharge within the time periods set out in this section does not constitute failure to comply with a contingency plan for purposes of this section or for the purpose of imposing administrative, civil, or criminal penalties under any other law.	

ECOLOGY REQUIREMENTS (WAC 173-182-315)	LOCATION
Each facility plan holder shall plan to obtain nondedicated work boats and operators that will be available to deploy GRPs, enhance skimming, to provide logistical support or other uses during a spill. At a minimum, the plan shall describe a plan that will support the worst case spill response with work boats and operators that could have arrived on-scene beginning at forty-eight hours.	Section 7.1.3, Appendix B, Appendix E.6

ECOLOGY REQUIREMENTS (WAC 173-182-317)	LOCATION
(1) This section applies to owners and operators of covered vessels and covered vessel plan holders who are required to have a plan for the use of VOO [vessels of opportunity]. In order to enhance the ability to respond to spills using nondedicated resources, Washington state approved PRCs cannot be identified in the plan as VOO. The VOO may be used in the following ways: (a) Protecting of sensitive habitats through the placement of oil spill booms; (b) On-water oil recovery in the nearshore environment; (c) Providing logistical spill response support; or (d) Supporting other tactical actions.	N/A
(2) In order for a commercial vessel to be considered for the VOO program, the owner or operator will self-register through the online process developed by ecology, or through use of a form provided by ecology. VOO operators must renew their information annually, and will supply the following information as applicable to the vessel: (a) Name of vessel; (b) Length of vessel; (c) Year, make, and model of the vessel; (d) Vessel engine type(s) and horsepower; (e) Number of passengers certified to carry; (f) Number of cabins/berths; (g) The vessel's Lloyds Registry and/or International Maritime Organization (LR/IMO) number or official number; (h) Vessel operator contact information; (i) Vessel crew training records relevant to oil spill response; (j) Date of the most recent marine survey; (k) Date of the most recent USCG [United States Coast Guard] compliance inspection or boarding; (l) Date of expiration of USCG Certificate of Compliance or Certificate of Inspection, or Fishing Vessel Safety Examination Decal. (m) Vessel P&I club affiliation; (n) Vessel homeport and vessel hailing port; (o) Residence(s) of vessel owner and crew; (p) Tactics vessel would like to support; (q) Seasonal operations of the vessel; (r) Drug testing program for captain and crew; and (s) Plan holder or PRC with which the vessel is contracted. VOO operators may contract with multiple plan holders or primary response contractors.	

ECOLOGY REQUIREMENTS (WAC 173-182-317)	LOCATION
(3) In order for a recreational vessel to be considered for the VOO program the owner or operator will self-register through the online process developed by ecology, or through use of a form provided by ecology. VOO operators must renew their information annually, and will supply at a minimum the following information to the extent applicable to the vessel: (a) Name of vessel; (b) Length of vessel; (c) Year, make, and model of the vessel; (d) Vessel engine type(s) and horsepower; (e) Number of cabins/berths; (f) The state registration number and/or USCG documentation number or other official number; (g) Vessel owner contact information; (h) Vessel owner/crew training relevant to oil spill response; (i) Date of the most recent marine survey; (j) Date of the most recent USCG Auxiliary Dockside Courtesy Inspection; (k) Vessel insurance information and coverage plan; (l) Vessel homeport and vessel hailing port; (m) Tactics vessel would like to support; (n) Residence of vessel owner; and (o) Plan holder or PRC with which the vessel is contracted. VOO operators may contract with multiple plan holders or primary response contractors.	N/A
(4) For planning purposes VOO will be organized by regions, see map of VOO regions below. The regions are designed to ensure adequate numbers of VOO for contracting. Covered vessel plan holders shall have contracted access to VOO in the regions they transit or operate. VOO from all regions may be cascaded into the spill area if the VOO capability is appropriate for the operating environment. The regional areas include: (a) Region 1: Cape Flattery/Strait of Juan de Fuca. (b) Region 2: San Juan Islands/North Puget Sound. (c) Region 3: South Puget Sound/Central Puget Sound. (d) Region 4: Lower Columbia River. (e) Region 5: Admiralty Inlet/Hood Canal and North Central Puget Sound. (f) Region 6: Grays Harbor.	N/A

ECOLOGY REQUIREMENTS (WAC 173-182-317)	LOCATION
Vessel of Opportunity Regions  **NOTE: In the event of a spill VOOs from any region may be called to the site to assist with the response.** **Legend** **Region** 1- Strait of Juan de Fuca 2- San Juan Islands/ North Puget Sound 3- South Puget Sound and Central Puget Sound 4-Lower Columbia River 5- Admiralty Inlet/Hood Canal and North Central Puget Sound 6- Grays Harbor Map Created by WA Department of Ecology, Spill Preparedness Section, 12/3/2012	
	Region | **Minimum Number of Tier 1 Vessels** 1 | 18 2 | 12 3 | 12 4 | 12 5 | 12 6 | 6
(5) For each region a vessel plan holder transits or operates the plan holder must have a contract with the prescribed number of Tier I VOO below. VOO are nondedicated resources; the minimum number of VOO required assumes that one out of every two contracted vessels may be available at any time. In each region a percentage of the VOO must be pretrained and capable of the following tactics: On-water recovery in the nearshore environment, protection of sensitive areas, and logistical support with no more than fifty percent to be pretrained exclusively for logistical support. (a) Region 1: Plan holders must have contracts with a minimum of eighteen VOO at the Tier I level. (b) Region 2: Plan holders must have contracts with a minimum of twelve VOO at the Tier I level. (c) Region 3: Plan holders must have contracts with a minimum of twelve VOO at the Tier I level. (d) Region 4: Plan holders must have contracts with a minimum of twelve VOO at the Tier I level. (e) Region 5: Plan holders must have contracts with a minimum of twelve VOO at the Tier I level. (f) Region 6: Plan holders must have contracts with a minimum of six VOO at the Tier I level.	N/A
(6) Plan holder obligations, as identified within this section, are subject to an adequate number of suitable and capable vessels enrolling with ecology. Plan holders may propose for review and approval an alternative planning standard for a VOO region if, after a good faith effort to contract with the minimum numbers of VOO, the plan holder is not successful. The alternative proposal must provide an equivalent or higher level of protection in terms of spill preparedness and response when compared with the planning standard. This proposal will be subject to a thirty-day public review and comment period, which	

ECOLOGY REQUIREMENTS (WAC 173-182-317)	LOCATION
includes, but is not limited to, interested local and tribal governments and other stakeholders. The alternative proposal must include: (a) Documentation that there are insufficient numbers of VOO registered. (b) Documentation describing the selection criteria and a description of how the Tier II enrolled vessels do not meet the criteria. (c) A detailed description of the alternative being proposed.	
(7) Vessels of opportunity will be designated in one of the following two tiers: (a) Requirements for Tier I designated vessels include: (i) Under contract with the plan holder. (ii) Pretrained crew through a combination of classroom training, computer based education, equipment familiarization, and field training exercises appropriate to the tactics the vessel may be assigned, including: (A) hazwoper training must be appropriate to the tactics the vessel may be assigned as set forth in Title 29 of Code of Federal Regulations (C.F.R.) 1910.120; (B) Basic incident command system training; (C) Participation annually in at least one on-water training for the tactics for which the VOO is contracted; (D) Participate in at least one on-water deployment drill every three years. (iii) The department shall be invited to attend all VOO training events. (iv) Training records must be maintained for a period of five years. Training records shall be made available to the department upon request. (v) The vessel should agree under contract to make best efforts, if available, to mobilize within twelve hours of call out with crew as trained per this section. (b) Tier II designated vessels include: Commercial and recreational vessels that self-identify their interest in participation in the VOO program but are not under contract to a plan holder. Vessel plan holders shall describe in their contingency plan the process for rapidly training and contracting the Tier II vessels for at least logistical support tactics.	N/A
(8) VOO drill requirements: (a) Plan holders shall incorporate Tier I VOO into deployment drills and tabletop drills. (b) Tabletop drills may incorporate simulated call out of vessels of opportunity by identifying the vessel and crew available to respond on the day of the drill. Data collected during the simulated call out shall include vessel name, crew names, estimated time of arrival on scene, availability on the day of the spill and the ability to support the response over days or weeks, and the task force or staging assignment of the vessel of opportunity.	

ECOLOGY REQUIREMENTS (WAC 173-182-320)	LOCATION
Each facility plan shall provide for aerial oil tracking resources capable of being on-scene within six hours of spill notification. At a minimum, these resources must be capable of supporting oil spill removal operations for three, ten-hour operational periods during the initial seventy-two hours of the discharge.	Section 2.3.1; Figure 3.6

ECOLOGY REQUIREMENTS (WAC 173-182-321)	LOCATION
Covered vessels operating or transiting the lower Columbia River, Grays Harbor, Strait of Juan de Fuca, Puget Sound, or Washington coast, shall document the following aerial surveillance capability through the plan: (1) Access to a helicopter or fixed wing, under contract or other approved means, that is appropriately located and could have arrived with a trained aerial oil spill spotter (spotter) to those planning standard areas plan holders operate or transit within six hours of spill notification. The contracted asset must have the following capability: (a) Be capable of supporting oil spill containment and removal operations by providing oil spotting capability for at least ten hours per day during the initial seventy-two hours of an oil discharge. (b) Have a trained spotter on board the aerial asset capable of acquiring, interpreting, recording and communicating oil location and other information to the command post or field operations at regular intervals. The spotter must be equipped with a high definition photographic or video capability and be able to collect and disseminate the following data about the environmental and operational picture including the location of the oil, environmental impacts, and spill resources on-scene: (i) Latitude and longitude of the location, impacts, or spill resources; (ii) Azimuth and altitude that the picture was taken; (iii) Bearing that the picture was taken; (iv) Estimated extent of oiling; and (v) Time and date.	Appendix E
(2) Plans must also include logistical sources of additional resources not under contract that may be utilized as additional spotting resources to maximize the effectiveness of enhanced skimming, or as resources to identify the extent of oil to inform shoreline clean-up and assessment teams and shoreline clean-up activities.	Figure 3.4
(3) In order to provide best achievable technology for aerial oil surveillance, vessel plan holders must also provide for access to a helicopter or fixed wing asset, under contract or other approved means, with the capability to provide a strategic picture of the overall spill; assist in location of slicks when they are not visible by persons operating at, or near, the water's surface or at night; extend the hours of clean-up operations to include darkness and poor visibility; and identify oceanographic and geographic features toward which oil may migrate. (a) The aerial asset must be appropriately located and could have arrived with trained aerial observers to those planning standard areas plan holders operate or transit within twelve hours of spill notification. (b) The aerial asset must be equipped with a suite of equipment that could support the capabilities described in this subsection. At least two remote sensing systems must be included in the suite and one of them	Section 2.4

ECOLOGY REQUIREMENTS (WAC 173-182-321)	LOCATION
must be a high definition mounted infrared (IR) camera designed to support aerial operations from aerial platforms. If the IR camera is not mounted, then plan holders must demonstrate how the handheld system will be effective from an aerial platform. Plan holders must submit for approval the systems included in the suite. For the IR camera, the following capability descriptions must be included in the submission: (i) IR camera with sensors capable in the thermal or mid-IR range; (ii) A sensor which provides high resolution for airborne imaging; (iii) Continuous optical zoom capability appropriate for use from an aerial platform; (iv) Tested minimum thermal resolution and/or the tested minimum resolvable temperature difference; and (v) Plan holders must submit for review and approval the systems included in the suite. Plan holders may submit for review and approval alternative testing data. This alternative proposal will be subject to a thirty-day public review and comment period which includes, but is not limited to, interested local and tribal governments and other stakeholders. (c) The trained oil spill aerial observer on board could begin gathering the following from the scene of the spill once on-site: (i) Graphically displaying processed multispectral data (at a minimum displaying the IR and optical windows), photographic images and other information onto electronic marine charts creating high contrast composite images; (ii) Ability to reference a map image to a geographic location; (iii) Location extent and relative thickness information for a reported oil sheen or slick; (iv) Transmitting processed images and other information to the unified command primary command post; (v) Archiving all processed data and images; and (vi) Integrating spill images and other information with spill management software.	
(4) Plan holders must have access to personnel trained in aerial surveillance and as spotters to direct skimmers into the thickest oil to enhance on-water recovery and to support the activities described above. The names of individuals with this training, their home base and training levels must either be listed in the plan or made available to ecology upon request. At a minimum, personnel must be trained in aerial observation at the level set forth in federal regulations currently located at 33 C.F.R. 155.1050 (l)(2)(iii). A copy of this regulation is available through ecology upon request.	Section 2.3

ECOLOGY REQUIREMENTS (WAC 173-182-324)	LOCATION
(1) Plan holders carrying, handling, storing, or transporting oils that may weather and sink when spilled to the environment must have a contract with a PRC that maintains the resources and/or capabilities necessary to respond to a spill of nonfloating oils. Examples of these types of oils include, but are not limited to, crude oil, diluted bitumen, group V oils, low American Petroleum Institute oil, decant, asphalt, and asphalt products.	Appendix D pg. D-19

<table>
<tr><th>ECOLOGY REQUIREMENTS (WAC 173-182-324)</th><th>LOCATION</th></tr>
<tr><td>(2) The plan holder or contracted primary response contractor must have the necessary personnel and equipment capable within the time frames outlined in the table below:
<table>
<tr><th>Time (hours)</th><th>Capability</th></tr>
<tr><td>1</td><td>Initiate an assessment and consultation regarding the potential for the spilled oil to submerge or sink.</td></tr>
<tr><td>6-12</td><td>Resources and personnel to detect and delineate the spilled oil such as side scan or multibeam sonar, laser fluorosensors, induced polarization, divers, remotely operated vehicles, or other methods to locate the oil on the bottom or suspended in the water column could have arrived.
Additionally, containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom could have arrived.</td></tr>
<tr><td>12-24</td><td>Resources and personnel necessary to assess the impact of the spilled oil on the environment could have arrived. Types of resources that may be used for this purpose include sampling equipment.
Additionally, dredges, submersible pumps, sorbents, agitators, or other equipment necessary to recover oil from the bottom and shoreline could have arrived.</td></tr>
</table></td><td>Figure 3.5</td></tr>
<tr><td>(3) The contingency plan must detail the process for identifying if the oil handled has the potential to submerge or sink and include a description of the process for detecting, delineating, and recovering nonfloating oils in the areas that may be impacted. In lieu of including nonfloating oils response details in the contingency plan, plan holders may cite the nonfloating oils response tools found in the NWACP.</td><td>Section 2</td></tr>
</table>

ECOLOGY REQUIREMENTS (WAC 173-182-325)	LOCATION
(1) Plan holders carrying, handling, storing, or transporting Group 2, 3, or 4 persistent oil that is known to be dispersible and that may impact when spilled in any area where preapproval or case-by-case use of dispersants is available as per the NWACP, must plan for the use of dispersants.	N/A
(2) The plan holder must identify the locations of dispersant stockpiles, and dispersant type, capable of dispersing the lesser of five percent of the worst case spill volume or twelve thousand barrels per day, using a dispersant to oil ratio of one to twenty.	Section 5.6
(3) The plan holder must describe the methods of transporting equipment and supplies to a staging area, and appropriate aircraft or vessels to apply the dispersant and monitor its effectiveness.	N/A
(4) The plan holder must describe operational support capability, including the platforms and spotters used to deploy dispersants, monitor the operational efficacy of the dispersant application to support operational decision making,	Section 5.6

ECOLOGY REQUIREMENTS (WAC 173-182-325)	LOCATION
and ensure safety of response personnel.	
(5) These resources must be capable of being on-scene within twelve hours of spill notification.	N/A

ECOLOGY REQUIREMENTS (WAC 173-182-330)	LOCATION
(1) Based on the NWACP in situ burning policy, plan holders operating in areas where in situ burning may be considered as a response option shall plan for the use of in situ burning as appropriate to the oil types handled and operating environments covered under the plan.	Section 5.6.2
(2) The plan holder must identify the locations of two fire booms, air monitoring equipment, personal protective equipment, igniters and aircraft or vessels, or other appropriate means to be used to deploy the igniters.	N/A - Due to the pipeline proximity to areas of population.
(3) The fire booms must be five hundred feet in length each and have an additional one thousand feet of conventional boom, tow bridles and work boats capable of towing the boom for on-water burning operations.	
(4) The plan holder must describe the methods of transporting the equipment to a staging area, and appropriate aircraft, vessels, and personnel resources to monitor its effectiveness at the scene of an oil discharge.	
(5) These resources must be capable of being on-scene within twelve hours of spill notification.	

ECOLOGY REQUIREMENTS (WAC 173-182-335)	LOCATION
(1) Plan holders shall identify both on-water devices and shoreside interim storage locations. (a) For marine waters, shoreside storage can be identified to meet fifty percent of storage requirements in the tables in WAC 173-182-355 through 173-182-450, if the plan holders can demonstrate that recovered oil can be transported to the shoreside storage. (b) For freshwater environments, shoreside storage can be identified to meet sixty-five percent of the storage requirements in the tables below, if the plan holders can demonstrate that recovered oil can be transported to the shoreside storage.	Figure E.2
(2) For covered vessel plan holders, at least twenty-five percent of the total worst case discharge volume at twenty-four hours, from the planning standard tables in WAC 173-182-355 through 173-182-450, must be dedicated to on-water storage.	Section 7.1.3 and Figure E.2
(3) For facility plan holders, one hundred percent of the storage requirements may be met through shoreside storage assets provided shoreside storage is the most appropriate method for containing recovered oil, given the limitations of geography and local environmental conditions, as required in the tables in WAC 173-182-355 through 173-182-450.	N/A

ECOLOGY REQUIREMENTS (WAC 173-182-345)	LOCATION
Plan holders and PRCs that own equipment shall provide information for ecology to determine the effectiveness of the recovery systems and how the equipment meets the planning standards. To avoid duplication, plan holders relying upon a PRC to meet the necessary planning standards may reference the information submitted in the PRC's application, as approved by the department. Ecology will use the criteria in ASTM International F 1780-97 (reapproved 2018).	Appendix E
Determination of efficiency of recovery systems in varied operating environments and product types: (1) For all skimmers, describe how the device is intended to be transported and deployed. List the boom and work boats associated with each water based skimming system. Identify the pumps and pumping capacity that will be used to transfer product to storage devices.	Section 2
(2) For all oil recovery systems that rely on a vessel of opportunity or nondedicated transport asset, include a statement on how the asset would be located and secured. Include in the plan the mobilization time needed to ensure the assets are available, as well as the time needed to set up the oil recovery system, and the personnel that will be used in the operations. This may require longer mobilization time than those described in this chapter.	Section 2.5.3

ECOLOGY REQUIREMENTS (WAC 173-182-348)	LOCATION
(1) Plan holders and PRCs that own recovery equipment shall request an EDRC using the following procedures and the criteria in Title 33 C.F.R. 155, Appendix B, Section 6, "Determining Effective Daily Recovery Capacity for Oil Recovery Devices."	Appendix B, Figure E.2
(2) When calculating the EDRC, the formula R = T x 24 hours x E will be used. R = Effective daily recovery capacity T = Throughput rate in barrels per hour (nameplate capacity) E = 20 percent (efficiency factor).	
(3) Equipment owners may request an alternative EDRC by providing all of the following information:	
(a) A description of the recovery system which includes skimmer, boom, pump, work boats, and storage associated with the device;	
(b) Description of deployment methods that will be used to enhance the recovery system to maximize oil encounter rate during spills;	
(c) Documented performance during verified spill incidents; and	
(d) Documentation of laboratory testing using ASTM standard methods (ASTM F 631-15) or equivalent test approved by the U.S. Coast Guard.	
(4) The following formula will be used to calculate the effective daily recovery capacity for this alternative approach: R = D x U R = Effective daily recovery capacity D = Average oil recovery throughput rate in barrels per hour U = 10 (hours of operation). 10 hours is used for potential limitations due to	

ECOLOGY REQUIREMENTS (WAC 173-182-348)	LOCATION
available daylight, weather, sea state, and percentage of emulsified oil in the recovered material. EDRC is limited to the storage capacity of the proposed recovery system. For each skimming system identify the oil storage associated with each recovery system. State the storage capacity integral to the oil recovery system, if applicable. Describe how recovered oil is to be transported to/from interim storage.	

ECOLOGY REQUIREMENTS (WAC 173-182-349)	LOCATION
(1) Each covered vessel plan holder that operates or transits in the Neah Bay, Cathlamet, or San Juan Islands planning standard areas must provide a technical manual that includes all of the equipment appropriate for the operating environment that is necessary to meet the recovery and storage requirements, through the forty-eight hour time frame.	N/A
(2) The technical manuals will be used to inform the five year BAP [best achievable protection] cycle and support ecology's determination that the response systems, training levels, and staffing demonstrate best available protection.	
(3) Plan holders must use a systems approach to identify the equipment, including WRRL identification or other unique identification numbers, that will be used to describe the response systems in the technical manual. For each recovery system described include the following: (a) An operational picture or diagram of the recovery system, the EDRC for the system, and associated temporary storage; (b) The infrastructure and support resources necessary for deployment; (c) Associated vessels necessary to enhance the skimmer; (d) At least three hundred feet of boom to enhance the skimmer or an alternative based on manufacturers recommendations; (e) The mobilization time and home base for the equipment; (f) The ownership or mechanism for accessing the equipment for example, under contract, subcontract or letter of intent to the plan holder or other approved means; (g) If applicable, the ability of the recovery system to be used to support night operations; (h) The minimum number of personnel necessary to deploy the equipment for a twelve hour shift and the training level of personnel appropriate to operate the equipment and carry out recovery; (i) If alternative speeds are given for equipment associated with a recovery system the information should be included in the equipment description; and (j) The oil type(s) the associated skimmer is optimized for.	
(4) For the storage requirement include the following: (a) An operational picture or diagram and capacity of the storage system; (b) The infrastructure and support resources necessary for deployment; (c) The mobilization time and home base for the equipment; (d) The ownership or mechanism for accessing the equipment for example, under contract, subcontract, or letter of intent to the plan holder	

ECOLOGY REQUIREMENTS (WAC 173-182-349)	LOCATION
or other approved means; (e) The minimum number of personnel necessary to deploy the equipment for a twelve hour shift and the training level of personnel appropriate to operate the equipment; (f) If applicable, the ability of the storage system to be used to support night operations; (g) If alternative speeds are given for equipment associated with the storage device the information should be included in the equipment description.	
(5) The technical manual is a standalone planning standard and is not intended to be used to demonstrate compliance with any other planning standards. Technical manuals are not intended to bind the use of any specific tactics during a drill or spill or to imply a guarantee of what will occur in a real spill event.	N/A

ECOLOGY REQUIREMENTS (WAC 173-182-350)	LOCATION
The plan holder shall describe how the planning standards found in this chapter are met.	See below
(1) Each plan shall provide a spreadsheet on the resources intended to meet the planning standards as described in this chapter. This spreadsheet shall account for boom, recovery systems, storage, and personnel.	Figure E.2
(2) Ecology will analyze the planning standard spreadsheet provided to determine whether the plan holder has access to equipment and personnel necessary to meet the planning standards.	
(3) For purposes of determining plan adequacy, plan holders will include time for notification and mobilization of equipment and personnel. The time needed for a resource to move to the spill site is the sum of the notification, mobilization, and travel times. For dedicated resources owned by the plan holder, the mobilization planning factor to be used by the plan holder, PRC and ecology is thirty minutes. For all other dedicated response equipment the mobilization planning factor is one hour. Nondedicated resources shall have a mobilization planning factor of three hours or the time specified in the letter of intent, mutual aid agreement or contract.	
(4) Equipment travel speeds shall be computed using a speed of thirty-five miles per hour for land and five knots for water. Ecology may use geographic information systems (GIS), standard nautical charts, street maps and available online mapping programs to determine the length of time it will take equipment to cover a given distance.	
(5) Plan holders may request approval for alternative notification, mobilization, and travel time by providing documentation to justify the request, such as actual performance during spills, drills, planned equipment moves, or unannounced drills.	
(a) The request shall include date and time of performance or test, under average or typical weather/sea state conditions and transportation information.	
(b) If ecology accepts these alternative response times, then these response times will be tested in training exercises, planned drills, unannounced drills, or spills to verify alternative calculations.	

ECOLOGY REQUIREMENTS (WAC 173-182-350)	LOCATION
(c) If ecology grants plan holder or PRC owned response equipment an alternative mobilization, transit speed, recovery or storage volume, through the plan review process, and the alternative is not demonstrated to the satisfaction of the department during a drill or spill, it may result in disapproving the alternative.	-

ECOLOGY REQUIREMENTS (WAC 173-182-355)	LOCATION
Transfer sites for covered vessels at locations where transfers occur, and for facilities with a vessel terminal.	N/A

ECOLOGY REQUIREMENTS (WAC 173-182-365)	LOCATION
Transmission pipelines that may impact shorelines of statewide significance.	Figure D.10

ECOLOGY REQUIREMENTS (WAC 173-182-366)	LOCATION
Transmission pipeline tank farms.	Figure D.10

ECOLOGY REQUIREMENTS (WAC 173-182-370)	LOCATION
Those covered vessel and facility plan holders that transit or operate within San Juan County must meet this standard. The resources to meet the two and three hour standards must be resident.	N/A

ECOLOGY REQUIREMENTS (WAC 173-182-375)	LOCATION
Those covered vessel and facility plan holders that transit or operate north of State Highway 20, east of a line drawn from Shannon Point on Fidalgo Island to Kelly's Point on Guemes Island, south of a line drawn from Clark Point on Guemes Island and William Point on Samish Island must meet the following standards. Some of the GRPs [geographic response plans] may be deployed by land.	N/A

ECOLOGY REQUIREMENTS (WAC 173-182-380)	LOCATION
Commencement Bay Quartermaster Harbor planning standard. Those covered vessel and facility plan holders that transit or operate within a five nautical mile radius of a point at Lat. 47°19'29"N Long. 122°27'23"W (WGS 1984) must meet the following standards.	Appendix E

ECOLOGY REQUIREMENTS (WAC 173-182-385)	LOCATION
Nisqually planning standard. Those covered vessel and facility plan holders that transit or operate within a five nautical mile radius of a point at Lat. 47°06'43"N Long. 122°41'53"W (WGS 1984) must meet the following standards.	Appendix E

ECOLOGY REQUIREMENTS (WAC 173-182-390)	LOCATION
Dungeness planning standard. Those covered vessel and facility plan holders that transit or operate within a five nautical mile radius of a point at Lat. 48°10'56"N Long. 123°06'38"W (WGS 1984) must meet the following standards.	Appendix E

ECOLOGY REQUIREMENTS (WAC 173-182-395)	LOCATION
Neah Bay staging area. Those covered vessel and facility plan holders that transit or operate within a five nautical mile radius of a point at Lat. 48°23'06"N Long. 124°35'59"W (WGS 1984) must meet the following standards. This area is very rugged, in order to accomplish deployment of resources logistical considerations will need to be planned for. Access to GRP locations may need to be done by helicopter or by land access, plans must identify all of the equipment that could be used to deploy GRPs. The boom and recovery resources to meet the two, three, four and six hour standards must be resident.	Appendix E

ECOLOGY REQUIREMENTS (WAC 173-182-400)	LOCATION
Copalis, Flattery Rocks and Quillayute Needles planning standard. Those covered vessel and facility plan holders that transit or operate within the jurisdictional waters of Washington state east of the Three Nautical Mile Line and north of latitude 47°06'00"N, and south of latitude 48°09'00"N (WGS 1984) must meet the following standards. This area is very rugged, in order to accomplish deployment of resources logistical considerations will need to be planned for. Access to GRP locations may need to be done by helicopter or by land access, plans must identify all of the equipment that could be used to deploy GRPs.	Appendix E

ECOLOGY REQUIREMENTS (WAC 173-182-405)	LOCATION
Grays Harbor planning standard. Those covered vessel and facility plan holders that transit or operate within Washington waters in a five nautical mile radius of a point at Lat. 46°54'52.25"N Long. 124°10'26.45"W (WGS 1984) outside the entrance to Grays Harbor must meet these standards.	Appendix E

ECOLOGY REQUIREMENTS (WAC 173-182-410)	LOCATION
Willapa planning standard. Those covered vessel and facility plan holders that transit or operate within Washington waters in a five nautical mile radius of a point at Lat. 46°41'31.2"N Long. 124°5'41.99"W (WGS 1984) outside the entrance to Willapa Bay must meet these standards.	Appendix E

ECOLOGY REQUIREMENTS (WAC 173-182-415)	LOCATION
Cathlamet staging area. Those covered vessel and facility plan holders that transit or operate on the Columbia River between statute mile 36 and statute mile 42 must meet the following standards. The resources to meet the two and three hour planning standards must be resident.	Appendix E

ECOLOGY REQUIREMENTS (WAC 173-182-420)	LOCATION
Vancouver planning standard. Those covered vessel and facility plan holders that transit or operate on the Columbia River between statute mile 99 and statute mile 107 must meet the following standards.	Appendix E

ECOLOGY REQUIREMENTS (WAC 173-182-430)	LOCATION
Tri-cities planning standard. Those covered vessel and facility plan holders that transit or operate on the Columbia River between statute mile 316 and statute mile 322 must meet the following standards.	Appendix E

ECOLOGY REQUIREMENTS (WAC 173-182-450)	LOCATION
Planning standards for the Washington coast. These standards apply to covered vessels that enter Washington waters at the Columbia River, Grays Harbor or the Strait of Juan de Fuca, and offshore facilities. Plan holders shall be capable of sustaining a worst case spill response and shall develop an addendum specific to Washington's coast, including: (1) The capability, if applicable, for in situ burning, dispersant, and mechanical recovery;	Appendix E
(2) Surveillance equipment (including fixed wing, helicopters and low visibility equipment) to provide for aerial assessment of spill within six hours of spill notification;	
(3) Time frames and mechanisms to cascade in equipment and other resources for up to seventy-two hours;	
(4) Ten thousand feet of boom appropriate for shoreline protection, containment and/or ten thousand feet of open water boom for enhanced skimming, containment or other use to arrive within twelve hours; and	
(5) Twenty thousand feet of boom appropriate for containment, protection or recovery to arrive within twenty-four hours.	

ECOLOGY REQUIREMENTS (WAC 173-182-510)	LOCATION
(1) Plan holders shall have methods to track and contain spilled oil and enhance the recovery and removal operations that are described in the plan.	Section 2
(2) Each plan shall include a description of how environmental protection will be	See below

ECOLOGY REQUIREMENTS (WAC 173-182-510)	LOCATION
achieved, including:	
(a) Protection of sensitive shoreline and island habitat by excluding, diverting, deflecting, collecting, or blocking oil movement;	Appendix F, Olympic Geographic Response Plans (North, Central, South)
(b) The plan shall include a description of the sensitive areas and develop strategies to protect the resources, including information on natural resources, coastal and aquatic habitat types and sensitivity by season, breeding sites, presence of state or federally listed endangered or threatened species, and presence of commercial and recreational species, physical geographic features, including relative isolation of coastal regions, beach types, and other geological characteristics; (i) Identification of sensitive resources will not be limited to surface and shoreline species at risk from floating oil spills but will also include water column and benthic species at risk from sunken, submerged, or nonfloating oil spills. (ii) Additional nonfloating oils considerations include identification of waterway depths, water density, sediment load, sea floor or river bottom types, and response options based on those factors.	Section 6
(c) Identification of public resources, including public beaches, water intakes, drinking water supplies, and marinas;	
(d) Identification of shellfish resources and methods to protect those resources;	
(e) Identification of significant economic resources to be protected in the geographic area covered by the plan; and	
(f) Each facility with the potential to impact a "sole source" aquifer or public drinking water source must identify the types of substrate and geographical extent of sensitive sites.	
(3) The GRPs have been developed to meet these requirements and plans may refer to the NWACP to meet these requirements. If approved GRPs do not exist in the NWACP, plan holders will work with ecology to determine alternative sensitive areas to protect.	Section 6, Olympic Geographic Response Plans (North, Central, South)
(4) Each plan shall identify potential initial command post locations.	Section 7.1.5 and Figure 7.7

ECOLOGY REQUIREMENTS (WAC 173-182-515)	LOCATION
(1) Plan holders shall create and maintain a geographic information planning tool that supports the plan holder in mapping and tracking spilled oil, decision making, and enhancing the recovery and removal operations that are described in the plan.	Section 2.2.3
(2) The tool must include the following as applicable to the areas which may be impacted by a pipeline spill:	

ECOLOGY REQUIREMENTS (WAC 173-182-515)	LOCATION
(a) Pipeline details which include location information for line segments, block valves, break out tanks, containment structures, control stations, safety equipment, pipeline right of way, access points, and pipeline control points;	Section 2.2.3
(b) Sensitive natural, cultural and economic area information including applicable geographic response plans (GRP);	
(c) Information about public resources, water intakes, sole source aquifers, existing monitoring wells and drinking water supplies;	
(d) Topography of the area; and	
(e) Oil spill response equipment staging information.	
(3) The tool must be described and referenced in the contingency plan, but is not required to be included in the plan.	
(4) The plan holder must commit in writing to utilizing the tool during drills and spills.	
(5) The tool must be updated at a minimum once every five years or in response to lessons learned during drill and spill events.	

ECOLOGY REQUIREMENTS (WAC 173-182-522)	LOCATION
(1) Each contingency plan shall include procedures for identifying shoreline types that could be impacted by an oil spill and procedures to determine appropriate response tactics for the potentially impacted shorelines during spills. The plan should describe contracted access to shoreline clean-up workers and shoreline clean-up equipment to ensure the following capability can plan to arrive within twenty-four hours of spill notification: (a) Plan holders must have contracted access to one hundred trained shoreline clean-up workers. The shoreline clean-up workers must have appropriate safety and Hazwoper training and will not be counted towards other planning standards. The training should enable clean-up workers to safely perform clean-up actions under the direction of the supervisors and the work assignment as developed by the unified command. (b) Plan holders must have contracted access to trained shoreline clean-up supervisors. Training for supervisors must include safety, Hazwoper, and relevant ICS courses. For planning purposes a ratio of 1:10 supervisors to clean-up workers should be available under contract to the plan holder. The shoreline clean-up supervisors will not be counted towards other planning standards. Supervisors must understand the ICS process and be able to direct workers consistent with the work assignments as developed by unified command. (c) Plan holders shall have access to adequate equipment for passive recovery for three miles of shoreline on three tide lines. The plan must identify the staging location(s) of the shoreline clean-up equipment. (d) The plan holder must have access to a shoreline clean-up mobile storage cache that can support eighty to one hundred shoreline clean-up workers with personal protective equipment, hand tools, and other logistical support for three to five days.	Appendix B, F

ECOLOGY REQUIREMENTS (WAC 173-182-522)	LOCATION
(2) Plan holders must describe how data collection, communications, data transmission and data management will be conducted.	Section 5
(3) The plan shall describe how the plan holder will obtain additional resources necessary to support fourteen additional days of shoreline cleanup. The description should include vendor names, contact information, resources, and approximate time frames for resources to arrive at a staging area.	Appendix F

ECOLOGY REQUIREMENTS (WAC 173-182-530)	LOCATION
(1) Each facility plan shall include a description of the methods to be used to immediately assess groundwater spills.	Section 2.2.9
(2) Facility plan holders shall include contact information in the plan for resources typically used to investigate, contain and remediate/recover spills to groundwater.	Section 2.2.9 And Section 3

ECOLOGY REQUIREMENTS (WAC 173-182-535)	LOCATION
Plans will include a narrative description of applicable federal, state, and local requirements and the plan holder's resources for conducting air monitoring to protect oil spill responders and the public, including: (1) A description of how initial site safety assessment for responders will occur; (2) A description of how work area air monitoring will occur; (3) A description of how community air monitoring (area wide monitoring) will occur; (4) A description of air monitoring instruments and detection limits that will be used by responders when monitoring for public safety; (5) A description of action levels for various oil constituents of concern based on products handled by the pipeline (benzene, H_2S, etc.); (6) A description of data management protocols and reporting time frames to the unified command; (7) A description of communication methods to at-risk populations; (8) A description of how evacuation zones and shelter-in-place criteria are established.	Section 2.4 Section 6

ECOLOGY REQUIREMENTS (WAC 173-182-540)	LOCATION
Plan holders must plan to respond to and care for wildlife injured or endangered by oil spills. Wildlife response actions shall be conducted in accordance with applicable federal and state regulations and the Northwest Area Contingency Plan. (1) The plan must include contact information for any PRC or WRSP, available under contract or other approvable means, and that maintain the required equipment, personnel, permits, materials, and supplies, for conducting wildlife response operations in accordance with the capabilities detailed below.	Section 6
(2) The plan shall describe the equipment, personnel, and resources for wildlife response, including: (a) Equipment and personnel that may be used to support an initial impact assessment and wildlife reconnaissance via air, land, or water in the spill	

ECOLOGY REQUIREMENTS (WAC 173-182-540)	LOCATION
area. (b) Equipment and personnel for whale reconnaissance, if these animals may be present in the areas the plan holder operates or transits, including: (i) Contact information for providers of aircraft capable of supporting aerial reconnaissance, and deterrence, beyond the immediate spill area to locate whales, which may include southern resident killer whales. (ii) Contact information for persons or organizations that can identify whales, which may include southern resident killer whales, from aerial observation and support field reconnaissance activities. (c) Equipment and personnel that may be used to deter the types of wildlife likely to be found within the areas where the plan holder operates or transits, including the types and staging locations of the deterrent equipment. This equipment must have the capability to arrive on-scene within twelve hours of spill notification. (d) Based on the areas the plan holder operates or transits, equipment and personnel to conduct monitoring and deterrence operations to prevent whales, which may include southern resident killer whales, from encountering spilled oil. The plan shall include contact information for a list of vessels, which may be whale watching vessels, which have been vetted, trained, and equipped to support killer whale deterrent operations. The accuracy of the contact information will be verified in tabletop drills. The deployment capability will be tested in multiple plan holder deployment drills. (e) Equipment and supplies for mobile field stabilization activities, such as, conducting the initial health assessment and treatment of impacted wildlife prior to transport to an oiled wildlife rehabilitation facility. The mobile field stabilization asset must be enclosed, a minimum of one hundred eighty square feet, lighted and heated, and capable of arriving on-scene within twelve hours of spill notification. (f) Wildlife rehabilitation facilities, space, and equipment suitable to conduct wildlife rehabilitation activities. Wildlife rehabilitation facilities shall meet the WDFW [Washington Department of Fish and Wildlife] rehabilitation requirements detailed in WAC 220-450-100. The plan holder must have access under contract or other approvable means to wildlife rehabilitation spaces and necessary supporting supplies and equipment as described below. The facility spaces and equipment must have the capability to be strategically placed to support the response within twenty-four hours of spill notification. The facility space must meet the following minimum requirements: (i) A minimum of two thousand four hundred square feet of space to house and treat wildlife. This space shall have the ability to be configured to support intake, prewash stabilization, wash/rinse, drying, and isolation/intensive care activities as needed. A minimum of four wash and rinse stations will have the ability to be located within this space. (ii) A minimum of one thousand square feet of space to support rehabilitation activities. This space shall have the ability to be configured to support animal food preparation, medical lab, dry storage, morgue and necropsy areas. (iii) Pools with a minimum of one thousand two hundred square feet of surface area are required. Pool dimensions will be such	Section 6

ECOLOGY REQUIREMENTS (WAC 173-182-540)	LOCATION
that no point in a pool will be greater than eight feet from a side. Pools will have the ability to be filled with freshwater to a minimum depth of three feet. (iv) Access to laundry and cold/freezer storage capacity to support wildlife response. These spaces may be located offsite. (v) Include a diagram of how the equipment could be configured and provide details about at least one strategic staging location for the rehabilitation facility.	
(3) The plan holder shall have contracted access to wildlife response service provider personnel that are appropriately trained to staff and manage the wildlife response within an incident command structure. At a minimum, one person that could have arrived in state within the first twelve hours of spill notification to coordinate with state, federal, tribal, and other response partners to initiate wildlife impact assessment, reconnaissance, deterrence, capture, stabilization, and rehabilitation operations as needed.	Section 6
(4) The plan holder shall have contracted access to wildlife response service provider personnel to conduct and manage the various field aspects of a wildlife response including impact assessment, reconnaissance, deterrence, capture, stabilization, and rehabilitation. At a minimum, two personnel that could have arrived within the first twelve hours of spill notification to support these activities. An additional seven personnel, for a total of nine that could have arrived within twenty-four hours of spill notification to support these activities.	

ECOLOGY REQUIREMENTS (WAC 173-182-610)	LOCATION
Plan holders shall prepare a plan that demonstrates capability, to the maximum extent practicable, of promptly and properly removing oil and minimizing environmental damage from a variety of spill sizes, up to and including worst case spills. Ecology will evaluate plans based on these conditions:	Section 2
(1) Only ecology approved PRC resources, plan holder owned resources and resources guaranteed through contract, written mutual aid agreements, or letters of intent shall be counted when calculating the planning standards. In the case of nondedicated storage devices, these will be derated by fifty percent of maximum storage volume (counted at a one to two ratio) and acquisition of these resources will be tested in unannounced drills.	Appendix B
(2) Ecology will count equipment if it is appropriate for the operating environment within the geographic area defined in the plan. Ecology will use criteria from sources such as the ASTM International documents, World Catalogue, manufacturer's recommendations, the Worldwide Response Resource List (WRRL), the federal Oil Spill Removal Organization guidelines, the Field Operations Guide resource typing guidelines and drills and spills to make approval and verification determinations on operating environments.	
(3) Ecology will count boom if it is appropriate to the operating environment and support equipment is identified. Support equipment for boom means transportation devices, cranes, anchors, boom tackle, connectors, work boats and operators.	
(4) Ecology will only count dedicated response resources towards the two hour standards.	

ECOLOGY REQUIREMENTS (WAC 173-182-620)	LOCATION
(1) A plan holder may request that ecology review and approve a plan based on alternative planning standards. Such requests should be submitted with the plan and shall be subject to a thirty day public review period and comment period which includes, but is not limited to, interested local and tribal governments and other stakeholders.	Appendix E
(2) The proposal must include, at a minimum:	
(a) A reference to which planning standard(s) in this chapter the proposal will be substituted for;	
(b) A detailed description of the alternative proposal including equipment, personnel, response procedures, and maintenance systems that are being proposed; and	
(c) An analysis of how the proposal offers equal or greater protection or prevention measures as compared to the requirement in this chapter.	
(3) Ecology may approve the alternative compliance proposal if, based upon the documents submitted and other information available to the agency, it finds that:	
(a) The alternative compliance proposal is complete and accurate; and	
(b) The alternative compliance proposal provides an equivalent or higher level of protection in terms of spill preparedness and response when compared with the planning standards found in this chapter.	
(4) Ecology may reconsider an approval at any time, in response to lessons learned from spills, drills, and significant plan changes which indicated that the requirements of this section for approval are not met.	

ECOLOGY REQUIREMENTS (WAC 173-182-621)	LOCATION
Oil spill contingency plan best achievable protection five-year review cycle. (1) Ecology will review the planning standards at five-year intervals to ensure the maintenance of best achievable protection to respond to a worst case spill and provide for continuous operation of oil spill response activities to the maximum extent practicable and without jeopardizing crew safety. (2) Ecology will adopt a five-year review cycle to ensure that the planning standards are updated to include proven new response technologies and response processes. In addition plan holders and other interested parties will be provided an opportunity to present information and proposals regarding spill prevention credits to support an alternative worst case discharge volume for the contingency plan. The review cycle is designed to evaluate BAP by assessing contributing elements including: (a) Best achievable technology; (b) Staffing levels; (c) Training procedures; and (d) Operational methods. (3) The review cycle will be used to evaluate a variety of spill operations, tools, and technologies including, but not limited to, the following: (a) Advancing systems for the removal of oil from the surface of the water; (b) Improving the performance of existing skimmer/boom and storage	Ecology Responsibility

ECOLOGY REQUIREMENTS (WAC 173-182-621)	LOCATION
systems technology; (c) Improving the performance of in situ burn and dispersants technology; (d) Broadening the environmental conditions under which oil spill cleanup can take place; (e) Ensuring that the technology is deployable and effective in a real world spill environment; (f) Considering tools or technology that are designed, produced, and manufactured in an energy-efficient process and products are reusable, recyclable, and reduce waste; and (g) Improving equipment, training, and techniques associated with oiled wildlife response. (4) Ecology may use the following processes to inform and update the use of BAP in the planning standards by: (a) Convening an advisory committee(s) to assist ecology during the five year review cycle and promote BAP. (b) Evaluating the recovery systems identified in the technical manual during the five-year cycle to determine best achievable technology, and inform the development of future planning standards. (c) Sponsoring a technology conference during the five-year cycle in cooperation with persons, organizations, and groups with interests and expertise in relevant technologies; or (d) Conducting or reviewing studies, inquiries, surveys, or analyses appropriate to the consideration of new technologies, plan evaluation methods including EDRC, or best operational practices. (5) Ecology may prepare reports following either of the actions described in subsection (4) of this section. These reports will identify the new technologies, processes, techniques or operational practices that ecology considers to represent BAP. (6) Ecology will provide an opportunity for a thirty-day public review and comment period on any draft reports. (7) Ecology will use the developed reports to update the contingency planning rule as necessary every five years.	Ecology Responsibility

ECOLOGY REQUIREMENTS (WAC 173-182-630)	LOCATION
(1) Upon receipt of a plan, ecology shall evaluate whether the plan is complete, and if not, the plan holder shall be notified of any deficiencies within five business days. The public review and comment period does not begin until a complete plan is received.	Ecology Responsibility
(2) Once a plan has been determined to be complete, ecology shall notify interested parties, including local and tribal governments and make the plan available for public review and comment. Ecology will accept comments on the plan no later than thirty days after the plan has been made publicly available. No later than sixty-five days from the date of public notice of availability, ecology will make a written determination that the plan is disapproved, approved, or conditionally approved. The written determination will be provided in the form of an order and subject to appeal as specified in chapter 43.21B RCW. (a) If the plan is approved, the plan holder receives a certificate of plan	

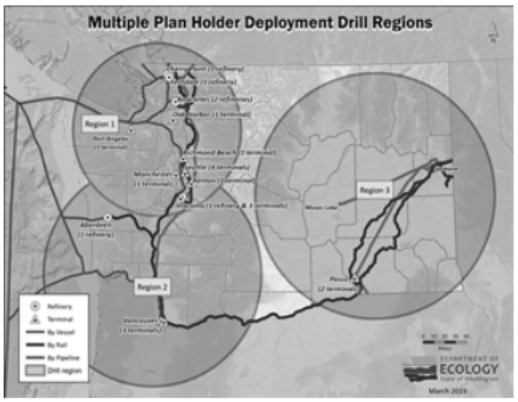
ECOLOGY REQUIREMENTS (WAC 173-182-630)	LOCATION
approval and plan expiration dates. Approved plans shall be valid for five years. (b) If a plan is conditionally approved, ecology may require a plan holder to operate under specific restrictions until unacceptable components of the plan are revised, resubmitted and approved. In the conditional approval ecology will describe: (i) Each specific restriction and the duration for which they apply; (ii) Each required item to bring the plan into compliance; and (iii) The schedule for plan holders to submit required updates, including a reference to the regulatory standard in question. (iv) Restrictions may include, but are not limited to, additional information for the plan, reducing oil transfer rates, increasing personnel levels, or restricting operations to daylight hours. Restrictions may also include additional requirements to ensure availability of response equipment. (v) Conditional approval expires no later than eighteen months from date of issue before the plan holder must request an extension which is subject to public review. (vi) Ecology shall revoke its conditional approval prior to the expiration date of a plan holder who fails to meet the terms of the conditional approval. The revocation will be in the form of an appealable order. (c) If plan approval is disapproved, the plan holder shall receive an explanation of the factors.	Ecology Responsibility
(3) The owner or operator or plan holder shall not engage in oil storage, transport, transfer, or other operations without an approved or conditionally approved plan. Plan holders shall not enroll any persons in a plan that has not been approved or conditionally approved, by ecology.	
(4) Ecology may review a plan following an actual spill or drill of a plan and may require revisions as appropriate.	
(5) Public notice will be given of any plan approval, conditional approval, or disapproval of a plan.	

ECOLOGY REQUIREMENTS (WAC 173-182-640)	LOCATION
(1) The purpose of this section is to specify the procedures for notifying the public which includes interested local and tribal governments about contingency plan status and decisions in order to provide opportunities for the public to review and comment.	Ecology Responsibility
(2) In order to receive notification of the public review and comment period, interested public, local, and tribal governments must sign up on the ecology email list (listserv) for posting notice about plan review and comment periods. Ecology's website will also be used to post notice of public review and comment periods.	
(3) Public comment periods must extend at least thirty days. Public notice, review, and comment periods are required in the following circumstances: (a) Plan submittals for facilities or vessels that have never submitted a plan in Washington;	

ECOLOGY REQUIREMENTS (WAC 173-182-640)	LOCATION
(b) Plan updates required by WAC 173-182-130; (c) The submittal of plans for five-year review as required by WAC 173-182-120; (d) Requests for an alternative planning standard in accordance with WAC 173-182-620; (e) Plan holder requests for drill requirement waivers in accordance with WAC 173-182-740; (f) PRC applications submitted under WAC 173-182-810; (g) SMT and WRSP applications submitted under WAC 173-182-840; and (h) Plan updates for permanent significant changes to approved plans as required in WAC 173-182-142.	
(4) Public notice, review, and comment period are not required in the following circumstances: (a) Routine updates to names, phone numbers, formatting, or forms that do not change the approved content of the plan; (b) Plan updates to resubmit the binding agreement based on changes to the binding agreement signer; and (c) Annual plan reviews that result in a letter to ecology confirming that the existing plan is still accurate.	Ecology Responsibility

ECOLOGY REQUIREMENTS (WAC 173-182-700)	LOCATION
(1) Plan holders, spill management teams (SMTs), wildlife response service providers (WRSPs), and primary response contractors (PRCs) shall participate in a drill and equipment verification program for the purpose of ensuring that all contingency plan components function to provide, to the maximum extent practicable, prompt and proper removal of oil and minimization of damage from a variety of spill sizes. In Washington, a modified triennial cycle for drills, as found in the National Preparedness for Response Exercise Program (NPREP), is relied on to test each component of the plan.	Appendix A
(2) Plan holders and PRCs shall ensure ecology is provided an opportunity to help design and evaluate all tabletop and deployment drills for which the plan holder desires drill credit. To ensure this, plan holders shall schedule drills on the NWACP area exercise calendar. Scheduling requirements are noted in the table in WAC 173-182-710.	Appendix A.2
(3) Ecology shall mail a written drill evaluation report for drills to the plan holder following each deployment and tabletop drill. Credit will be granted for drill objectives that are successfully met.	Appendix A
(4) Objectives that are not successfully met shall be tested again and must be successfully demonstrated within the triennial cycle, except that significant failures will be retested within thirty days.	
(5) Where plan deficiencies have been identified in the written evaluation, plan holders may be required to make specific amendments to the plan or conduct additional trainings to address the deficiencies.	
(6) A plan holder may request an informal review with ecology of the ecology drill evaluation within thirty days of receipt of the report.	Appendix A.1

ECOLOGY REQUIREMENTS (WAC 173-182-710)	LOCATION
The following drills shall be conducted within each triennial cycle.	Appendix A
(1) Tabletop drills: Tabletop drills are intended to demonstrate a plan holder's capability to manage a spill using the incident command system (ICS) and the spill management team described in the plan. Role playing shall be required in this drill. During all required tabletop drills plan holders must provide a master list of equipment and personnel identified to fill both command post and field operations roles. The master resources list must include: (a) Worldwide Response Resource List identification numbers for response resources; and (b) Personnel names, affiliation, home base and command post or field role.	
(2) Once during each three year cycle, the plan holder shall ensure that key members of the regional/national "away" team as identified in the plan shall be mobilized in state for a drill. However, at ecology's discretion, team members that are out-of-state may be evaluated in out-of-state tabletop drills if ecology has sufficient notice, an opportunity to participate in the drill planning process, and provided that the out-of-state drills are of similar scope and scale to what would have occurred in state. In this case, key away team members shall be mobilized in this state at least once every six years.	
(3) Plan holders covering multiple vessels and ecology shall together design a systematic approach to, over time, involve all spill management teams identified in WAC 173-182-230 (6)(a) in tabletop and deployment drills as a best practice to demonstrate the preparedness of enrolled vessel members. These drills will be scheduled by the plan holder or unannounced to be conducted by ecology, at the discretion of ecology. These drills may test any plan components but at a minimum will include notification to the enrolled vessel qualified individual, coordination of supplemental resources under WAC 173-182-232 and the transition from the plan holder spill management team to the enrolled vessel company spill management team.	N/A
(4) Equipment deployment drills: Plan holders shall use deployment drills to demonstrate the actions they would take in a spill, including: Notifications, safety actions, environmental assessment, and response equipment deployment.	Appendix A
(a) During the triennial cycle, deployment drills shall include a combination of plan holder owned assets, contracted PRC assets, nondedicated assets, and vessels of opportunity.	
(b) Plan holders should ensure that each type of dedicated equipment listed in the plan and personnel responsible for operating the equipment are tested during each triennial cycle. Plan holders must design drills that will demonstrate the ability to meet the planning standards, including recovery systems and system compatibility and the suitability of the system for the operating environment. Drills shall be conducted in all operating environments that the plan holder could impact from spills.	
(c) At least twice during a triennial cycle, plan holders shall deploy a geographic response plan (GRP) strategy identified within the plan. If no GRPs exist for the operating area, plan holders will consult with ecology to determine alternative sensitive areas to protect.	

ECOLOGY REQUIREMENTS (WAC 173-182-710)	LOCATION
(5) Plan holders may receive credit for deployment drills conducted by PRCs if:	Appendix A
(a) The PRC is listed in the plan; and	
(b) The plan holder operates in the area, schedules on the drill calendar, and participates in or observes the drill.	
(6) Additional large-scale multiple plan holder equipment deployment drill requirement. At least once every three years all plan holders must participate in a multiple plan holder large scale equipment deployment exercise. This drill is a test of the functional ability for multiple contingency plans to be simultaneously activated in response to a spill. This drill may be incorporated into other drill requirements to avoid increasing the number of drills and equipment deployments otherwise required. The exercise location will be selected by ecology to ensure all plan holders have the opportunity to get credit based on the areas they operate or transit. (a) The exercise will be called once in each of the three regions over the triennial cycle. All plan holders that operate or transit the region will receive credit.  (b) At least one plan holder may be the drill planning lead, participate in all the planning meetings, and observe the drill. (c) This deployment may include the following objectives as applicable to the operating environment: (i) Demonstration of dedicated and nondedicated equipment and trained contracted personnel; (ii) Demonstration of contracted vessel of opportunity response systems and crew performing operations appropriate to the vessel capabilities; (iii) Demonstration of multiple simultaneous tactics including: (A) On-water recovery task forces made up of complete systems which demonstrate storage, recovery, and enhanced skimming; (B) Protection task forces which deploy multiple GRPs; (C) Vessel and personnel decontamination and disposal; (D) Deployment of contracted aerial assessment assets and aerial observers to direct skimming operations; (E) Personnel and equipment identified for night operations; (F) Equipment necessary to address situations where oils, depending on their qualities, weathering, environmental factors, and methods of discharge, may submerge and sink;	Appendix E

ECOLOGY REQUIREMENTS (WAC 173-182-710)	LOCATION
(G) Equipment and personnel to conduct monitoring and deterrence operations to prevent whales, which may include southern resident killer whales, from encountering spilled oil; and (H) Verification of the operational readiness during both the first six hours of a spill and over multiple operational periods.	
(7) Additional deployment requirement for vessel plan holders with contracted access to the ERTV. Once every three years plan holders with contracted access to the ERTV must cosponsor a drill that includes deployment of the ERTV, unless ERTV drill credit has already been received under WAC 173-182-242(2). This drill must be scheduled on the area exercise calendar. The drill shall include at a minimum: (a) Notifications and tug call out; (b) Safety and environmental assessment; (c) Demonstration of making up to, stopping, holding, and towing a drifting or disabled vessel; (d) Demonstration of the capability to hold position within one hundred feet of another vessel; and (e) Communications.	N/A
(8) Additional deployment requirement for all plan holders. Once every three years, plan holders must deploy wildlife response equipment and personnel. This is an additional deployment drill.	Appendix E
(9) For all plan holders, ecology may initiate scheduled inspections and unannounced deployment and tabletop drills.	Ecology Responsibility
(a) In addition to the drills listed above, ecology will implement a systematic scheduled inspection and unannounced drill program to survey, assess, verify, inspect or deploy response equipment listed in the plan. This program will be conducted in a way so that no less than fifty percent of the resources will be confirmed during the first triennial cycle, and the remaining fifty percent during the subsequent triennial cycle.	Appendix A
(b) Unannounced drills may be initiated by ecology when specific problems are noted with individual plan holders, or randomly, to strategically ensure that all operating environments, personnel and equipment readiness have been adequately tested.	Ecology Responsibility
(c) Unannounced notification drills are designed to test the ability to follow the notification and call-out process in the plan.	
(d) Immediately prior to the start of an unannounced deployment or tabletop drill, plan holders will be notified in writing of the drill objectives, expectations and scenario.	
(e) Plan holders may request to be excused if conducting the drill poses an unreasonable safety or environmental risk, or significant economic hardship. If the plan holder is excused, ecology will conduct an unannounced drill at a future time.	

ECOLOGY REQUIREMENTS (WAC 173-182-720)	LOCATION
The ecology drill evaluation process is based on the National Preparedness for	

ECOLOGY REQUIREMENTS (WAC 173-182-720)	LOCATION
Response Exercise Program (NPREP) 2016 guidance document. The NPREP guidance document lists fifteen core components that shall be demonstrated by the plan holder during the triennial cycle. Ecology adopts the fifteen core components as the criteria used to evaluate plan holder tabletop and deployment drills. The core components are as follows:	
(1) Notifications: Test the notifications procedures identified in the plan.	Appendix A
(2) Staff mobilization: Demonstrate the ability to assemble the spill response organization identified in the plan.	
(3) Ability to operate within the response management system described in the plan: This includes demonstration of the ICS staffing and process identified in the plan.	
(4) Source control: Demonstrate the ability of the spill response organization to control and stop the discharge at the source.	
(5) Assessment: Demonstrate the ability of the spill response organization to provide an initial assessment of the discharge, or potential discharge and provide continuing assessments of the effectiveness of the tactical planning and operations.	
(6) Containment: Demonstrate the ability of the spill response organization to contain the discharge at the source or in various locations for recovery operations.	
(7) Mitigation: Demonstrate the ability of the spill response organization to recover, mitigate, and remove the discharged product through the use of oil spill countermeasures including, but not limited to, mechanical oil recovery, dispersants, in situ burning, and bioremediation.	
(8) Protection: Demonstrate the ability of the spill response organization to protect the environmentally, culturally, and economically sensitive areas identified in the NWACP and the plan.	
(9) Disposal: Demonstrate the ability of the spill response organization to dispose of the recovered material and contaminated debris in compliance with guidance found in the NWACP.	
(10) Communications: Demonstrate the ability to establish an effective communications system throughout the scope of the plan for the spill response organization.	
(11) Transportation: Demonstrate the ability to provide effective multimode transportation, for all areas of the response.	
(12) Personnel support: Demonstrate the ability to provide the necessary logistical support of all personnel associated with the response.	
(13) Equipment maintenance and support: Demonstrate the ability to maintain and support all equipment associated with the response.	
(14) Procurement: Demonstrate the ability to establish an effective procurement system.	
(15) Documentation: Demonstrate the ability of the plan holder's spill management organization to document all operational and support aspects of the response and provide detailed records of decisions and actions taken.	

Figure H.2: United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration Cross-Reference

OIL POLLUTION ACT OF 1990 (OPA 90) REQUIREMENTS (49 CODE OF FEDERAL REGULATIONS [CFR] 194)	LOCATION
1.0 Information Summary	Figure 1.3A, 1.3B, 1.3C
(a) For the core plan:	
(1) Name and address of operator;	
(2) For each Response Zone which contains one or more line sections that meet the criteria for determining significant and substantial harm (§194.103), listing and description of Response Zones, including county(s) and state(s)	
(b) For each Response Zone appendix:	
(1) Information summary for core plan;	Section 1
(2) QI names and telephone numbers, available on 24-hr basis;	Figure 1.3, Figure 3.4
(3) Description of Response Zone, including county(s) and state(s) in which a worst case discharge could cause substantial harm to the environment.	Figure 1.3A, 1.3B, 1.3C
(4) List of line sections contained in Response Zone, identified by milepost or survey station or other operator designation.	
(5) Basis for operator's determination of significant and substantial harm; and	
(6) The type of oil and volume of the worst case discharge.	Appendix E, Figure 1.3A, 1.3B
(c) Certification that the operator has obtained, through contract or other approved means, the necessary private personnel and equipment to respond, to the maximum extent practicable, to a worst case discharge or threat of such discharge.	Appendix B
2.0 Notification Procedures	
(a) Notification requirements that apply in each area of operation of pipelines covered by the plan, including applicable state of local requirements;	Section 3
(b) Checklist of notifications the operator or Qualified Individual is required to make under the response plan, listed in the order of priority;	Figure 3.2
(c) Name of persons (individuals or organizations) to be notified of discharge, indicating whether notification is to be performed by operating personnel or other personnel;	Figure 3.2, 3.4, Appendix D
(f) Procedures for notifying Qualified Individuals;	Figure 3.2
(g) Primary and secondary communication methods by which notifications can be made;	Figure 3.2

OIL POLLUTION ACT OF 1990 (OPA 90) REQUIREMENTS (49 CODE OF FEDERAL REGULATIONS [CFR] 194)	LOCATION
(h) Information to be provided in the initial and each follow-up notification, including the following: (1) Name of pipeline (2) Time of discharge; (3) Location of discharge (4) Name of oil recovered; (5) Reason for discharge (e.g. material failure, excavation damage, corrosion) (6) Estimated volume of oil discharged; (7) Weather conditions on scene; and (8) Actions taken or planned by persons on scene.	Figure 3.2
3.0 Spill Detection and On-Scene Spill Mitigation Procedures	Section 2
(a) Methods of initial discharge detection;	Section 2.1 Appendix E
(b) Procedures, listed in order of priority, that personnel are required to follow in responding to a pipeline emergency to mitigate or prevent any discharge from the pipeline;	Section 2
(c) List of equipment that may be needed in response activities based on land and navigable waters including: (1) Transfer hoses and pumps; (2) Portable pumps and ancillary equipment; and (3) Facilities available to transport and receive oil from a leaking pipeline;	Appendix E
(d) Identification of the availability, location, and contact phone numbers to obtain equipment for response activities on a 24-hour basis;	Figure 3.6
(e) Identification of personnel and their location, telephone numbers, and responsibilities for use of equipment in response activities on a 24-hour basis;	
4.0 Response Activities	
(a) Responsibilities of, and actions to be taken by, operating personnel to initiate and supervise response actions pending the arrival of the Qualified Individual or other response resources identified in the response plan;	Section 2
(b) Qualified individual's responsibilities and authority, including notification of the response resources identified in the response plan;	Figure 4.5
(c) Procedures for coordinating the actions of the operator or Qualified Individual with the action of the OSC [On-Scene Coordinator] responsible for monitoring or directing those actions;	
(d) Oil spill response organizations (OSRO) available through contract or other approved means, to respond to a worst case discharge to the maximum extent practicable; and	Figure 3.6, Appendix B
(e) For each organization identified under paragraph (d), a listing of:	Appendix B

OIL POLLUTION ACT OF 1990 (OPA 90) REQUIREMENTS (49 CODE OF FEDERAL REGULATIONS [CFR] 194)	LOCATION
(1) Equipment and supplies available (2) Trained personnel necessary to continue operation of the equipment and staff the oil spill removal organization for the first 7 days of the response.	
5.0 List of Contacts (Names and addresses of the following individuals or organizations, with telephone numbers at which they can be contacted on a 24-hr basis)	
(a) List of persons the plan requires the operator to contact;	Figure 3.4
(b) Qualified individuals for the operator's areas of operation;	Figure 1.3, Figure 3.4
(c) Applicable insurance representatives or surveyors for the operator's areas of operation; and	Figure 3.4
(d) Persons or organizations to notify for activation of response resources;	Figure 3.6. Appendix B
6.0 Training Procedures (Description of training procedures and programs of the operator)	Appendix A
7.0 Drill Procedures (Description of drill procedures and programs the operator uses to assess whether its response plan will function as planned. It would include:)	
(a) Announced and unannounced drills;	
(b) Types of drills and their frequencies. For example: (1) Manned pipeline emergency procedures and qualified individual notification drills conducted quarterly. (2) Drills involving emergency actions by assigned operating or maintenance personnel and notification of qualified individual on pipeline facilities which are normally unmanned, conducted quarterly; (3) Shore-based spill management team tabletop drills conducted yearly;	
(4) Oil spill removal organization field equipment deployment drills conducted yearly; (5) A drill that exercises entire response plan for each Response Zone, would be conducted at least once every three years.	
8.0 Response Plan Review and Update Procedures	Section 1.2
(a) Procedures to meet §194.121; and	
(b) Procedures to review plan after a worst case discharge and to evaluate and record the plan's effectiveness.	
9.0 Response Zone Appendices	Figure 3.4
Each Response Zone appendix would provide the following information:	
(a) Name and telephone number of the qualified individual;	

OIL POLLUTION ACT OF 1990 (OPA 90) REQUIREMENTS (49 CODE OF FEDERAL REGULATIONS [CFR] 194)	LOCATION
(b) Notification procedures;	Section 3, Appendix D
(c) Spill detection and mitigation procedures;	Section 2
(d) Name, address, and telephone number of oil spill response organization;	Figure 3.6
(e) Response activities and response resources including: (1) Equipment and supplies necessary to meet §194.115, and (2) Trained personnel necessary to sustain operation of the equipment and to staff the oil spill response organization and spill management team for the first 7 days of the response;	Appendix A, Appendix E
(f) Names and telephone numbers of Federal, State, and local agencies which the operator expects to assume pollution response responsibilities;	Figure 3.4, 3.5
(g) Worst Case Discharge Volume;	Appendix E
(h) Method used to determine the worst case discharge volume, with calculations;	
(i) A map that clearly shows: (1) Location of worst case discharge, and (2) Distance between each line section in the Response Zone and, (i) Each potentially affected public drinking water intake, lake, river, and stream within a radius of five miles of the line section; (ii) Each potentially affected environmentally sensitive area within a radius of one mile of the line section;	
(j) Piping diagram and plan-profile drawing of each line section, which may be kept separate from the response plan if the location is identified; and	Figure 1.4
(k) For every oil transported by each pipeline in the Response Zone, emergency response data that: (1) Include name, description, physical and chemical characteristics, health and safety hazards, and initial spill-handling and firefighting methods; and (2) Meet 29 CFR 1910.1200 or 49 CFR 172.602	Figure C.8

Figure H.3: State of Oregon Department of Environmental Quality Cross-Reference Index

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS (OREGON ADMINISTRATIVE RULE [OAR] 340-141-0140)	LOCATION
(1) Each plan shall contain a submittal agreement which:	
(a) Includes the name, address, and phone number of the submitting party;	Section 1
(b) Verifies acceptance of the plan…either signature of the owner or operator or signature by a person with authority to bind the corporation which owns such facility;	
(c) Commits execution of the plan;	
(d) Includes name, location, and address of the facility, type of facility, starting date of operations, types of oil(s) handled, and oil volume capacity;	Figure 1.3
(2) Each plan shall include a log sheet to record amendments to the plan.	Figure 1.1
(3) Each plan shall include a detailed table of contents.	Preface
(4) Each plan shall describe the purpose and scope of that plan, including:	Section 1
(a) Region of operation;	
(b) Operations covered by the plan;	
(c) The size and type of maximum probable spill and worst case spill;	Appendix E
(5) Each plan shall describe the procedures and time periods corresponding to updates of the plan and distribution of the plan and updates to affected and interested parties.	Section 1.2
(6) Each plan shall present a strategy to ensure use of the plan for spill response and cleanup operations pursuant to requirements in OAR 340-047-0210;	Section 1.1
(7) Each plan shall describe the organization of the spill response system.	Section 4
(8) (a) For each primary response contractor…the plan shall state that contractors' name, address, phone number, or other means of contact at any time of the day, and response capability (e.g. land spills only). For each primary response contractor, the plan shall include a letter of intent signed by the primary response contractor which indicates the contractor's willingness to respond.	Appendix B, Figure 3.6
(b) If a plan holder is a member of an oil spill response cooperative…the plan shall state the cooperative's name, address, phone number, and response capability. The plan shall also include proof of cooperative membership.	Appendix B, Figure 3.6
(c) Plans which rely on primary response contractors shall rely only on primary response contractors who have conformed to the Department's Response Contractor Guidelines.	Appendix B
(9) Each plan shall briefly describe its relation to all applicable local, state,	Section 1.1

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS (OREGON ADMINISTRATIVE RULE [OAR] 340-141-0140)	LOCATION
regional, and federal government spill response plans.	
(10) Each plan shall list procedures which will be used to detect and document the presence and size of a spill.	Section 2
(11) Each plan shall describe procedures which will be taken to immediately notify appropriate parties that a spill has occurred.	Section 3
(a) Plan holder shall maintain a notification call out list,	Figure 3.4 and 3.5
(A) Provides a contact at any time of the day for all spill response personnel identified under section (7) of this rule, including the contact's name, position title, phone number or other means of contact for any time of the day, and an alternate contact in the event the individual is unavailable;	Figure 3.6
(B) Lists the name and phone number of all government agencies which must be notified in the event of an oil spill;	Figure 3.5
(C) Establishes a clear order of priority for immediate notification;	Figure 3.1 , Figure 3.2
(b) The plan shall identify a central reporting office or individual who is responsible for implementing the call out process;	Section 3
(c) The plan shall utilize a system of categorizing incident type and severity.	Section 2.7
(12) Each plan shall describe the personnel (including contract personnel) available to respond to an oil spill, including:	See below
(a) A job description for each type of spill response position,	Section 4
(b) The number of personnel available to perform each type of spill response position;	Figure 3.4 Figure 4.4
(c) Arrangements for pre-positioning personnel at strategic locations which will meet criteria pursuant to OAR 340-047-0190(3)(d).	Section 3
(d) The type and frequency of spill response operations and safety training that each individual in a spill response position receives to attain the level of qualification demanded by their job description; and	Appendix A
(e) The procedures, if any, to train and use volunteers willing to assist in spill response operations. Volunteer procedures for wildlife rescue shall comply with the Oregon Oil Wildlife Rehabilitation Plan.	Appendix A
(13) (a) Each plan shall list the type, quantity, age, location, maintenance schedule, and availability of equipment used during spill response, including equipment used for oil containment, recovery, storage, and removal, shoreline and adjacent lands cleanup, wildlife rescue and rehabilitation, and communication.	Section 7
(b) For equipment listed under subsection (a) of this section that is not owned by or available exclusively to the plan holder, the plan shall also estimate the extent to which other contingency plans rely on that same	Section 7, Appendix B

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS (OREGON ADMINISTRATIVE RULE [OAR] 340-141-0140)	LOCATION
equipment.	
(c) For oil containment and recovery equipment, the plan also shall include equipment make and model, the manufacturer's nameplate capacity of the response equipment (in gallons per minute), and applicable design limits (e.g., maximum wave height capacity; inland waters vs. open ocean).	Section 7, Appendix B
(d) Based on information described in subsection (c) of this section, the plan shall state the maximum amount of oil which could be recovered per twenty-four hour period.	Appendix E
(e) For purpose of determining plan adequacy under OAR 340-141-0190 and to assess realistic capabilities based on potential limitations by weather, sea state, and other variables, the data presented in subsections (c) and (d) of this subsection will be multiplied by an average efficiency factor of twenty percent. The department will apply a higher efficiency for equipment listed in a plan if that plan holder provides adequate evidence that the higher efficiency factor is warranted for particular equipment. The department may assign a lower efficiency factor to particular equipment listed in a plan if it determines that the performance of that …	
(f) The plan shall provide arrangements for prepositioning of oil spill response equipment at strategic locations which will meet criteria pursuant to OAR 340-141-0190(3)(d) and provide an estimate of the actual execution time.	
(14) Each plan shall describe the communication system used for spill notification and response operations, including:	Section 7.1.4
(a) Communication procedures;	
(b) The communication function (e.g., ground-to-air) assigned to each channel or frequency used; and	
(c) The maximum geographic range for each channel or frequency used.	
(15) Each plan shall describe the process to establish sites needed for spill response operations, including location or location criteria for:	See below
(a) A central command post;	Section 7.1.5
(b) A central communication post if located away from the command post; and	Section 4.4
(c) Equipment and personnel staging areas.	Section 4.4, GRPs
(16) (a) Each plan shall present a flowchart or decision tree describing the procession of each major stage of spill response operations from spill discovery to completion of cleanup. The flowchart or decision tree shall describe the general order and priority in which key spill response activities are performed.	Preface
(b) Each plan shall describe all key spill response operations in checklist	Figure 3.2, Field

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS (OREGON ADMINISTRATIVE RULE [OAR] 340-141-0140)	LOCATION
form, to be used by spill response managers in the event of an oil spill.	Document
(17) (a) Each plan shall list the local, state, and other government authorities responsible for the emergency procedures peripheral to spill containment and cleanup, including:	Section 2
(A) Procedures to control fires and explosions, and to rescue people or property threatened by fire or explosion;	
(B) Procedures to control ground and air traffic which may interfere with spill response operations;	
(C) Procedures to manage access to the spill response site; and	
(D) Procedures to protect sensitive areas during emergency operations.	GRPs
(b) Each plan shall describe the plan holder's role in these emergency operations procedures prior to the arrival of proper authorities.	Section 2
(18) Each plan shall describe equipment and procedures to be used by the facility personnel to minimize the magnitude of the spill and minimize structural damage which may increase the quantity of oil spilled. Damage control procedures shall include methods to slow or stop pipeline, storage tank, and other leaks, and methods to achieve immediate emergency shutdown.	
(19) Each plan shall describe, in detail methods to contain spilled oil and remove it from the environment. Methods shall describe deployment of equipment and personnel, using diagrams or other visual aids when possible. Response methods covered must include:	Section 2, Appendix F, GRPs
(a) Surveillance methods used to detect and track the extent and movement of the spill;	Section 2, Appendix F
(b) Methods to contain and remove oil in offshore waters;	
(c) Methods to contain and remove oil in near-shore waters, including shoreline protection procedures and oil diversion/pooling procedures; and	
(d) Methods to contain and remove oil, including surface oil, subsurface oil, and oiled debris and vegetation, from a variety of shoreline, adjacent land, and beach types.	
(20) Each plan shall briefly describe initial equipment and personnel deployment activities which will accomplish the response standard listed in OAR 340-141-0190(e)(d) and provide an estimate of the actual execution time.	Section 2; Figures E.2
(21) If the plan holder proposes dispersants, coagulants, bioremediants, or other chemical agents for response operations, conditions permitting, the plan shall describe:	Section 5
(a) Type and toxicity of chemicals;	
(b) Under what conditions they will be applied in conformance with all applicable local, state, and federal requirements, including Volume II of	

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS (OREGON ADMINISTRATIVE RULE [OAR] 340-141-0140)	LOCATION
the Oil and hazardous Material spill contingency plan and OAR 340-141-0020;	
(c) Methods of deployment; and	Sections 5 and 7
(d) Location and accessibility of supplies and deployment equipment.	
(22) If the plan holder will use in-situ burning for response operations, conditions permitting, the plan shall describe:	
(a) Type of burning operations;	
(b) Conditions under which burning will be applied in conformance with all applicable local, state and federal requirements, including the Northwest Area Contingency plan and OAR 340-264-0030 to 0040;	
(c) Methods of application; and	
(d) Location and accessibility of supplies and deployment equipment.	
(23) Each plan shall describe how environmental protection will be achieved, including:	See below
(a) Protection of sensitive shoreline and island habitat by diverting or blocking oil movement;	Section 6, GRPs
(b) Priorities for sensitive area protection in the region of operation covered by the plan as designated by the department in environmentally sensitive area maps referenced in Volume I of the Oil and hazardous Materials spill contingency plan;	Section 6, GRPs
(c) Rescue and rehabilitation of birds, marine mammals, and other wildlife contaminated or otherwise affected by the oil spill in compliance with the Oregon Oil Wildlife Rehabilitation Plan; and	Section 6
(d) Measures take to reduce damages to the environment caused by shoreline and adjacent land cleanup operations.	Section 6, GRPs
(24) (a) Each plan shall describe site criteria and methods used for interim storage of oil recovered and oily wastes generated during response and cleanup operations, including sites available within the facility. Interim storage methods and sites shall be designed to prevent contamination by recovered oil and oily wastes;	Section 5
(b) If use of interim storage sites will require approval by local, state, or federal officials, the plan shall include information which could expedite the approval process, including a list of appropriate contacts and a brief description of procedures to follow for each applicable approval process;	
(c) Each plan shall describe methods and sites used for permanent disposal of oil recovered and oily wastes generated during response and cleanup operations;	
(d) Interim storage and permanent disposal methods and sites shall be sufficient to keep up with oil recovery operations and handle the entire volume of oil recovered and oily wastes generated;	

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS (OREGON ADMINISTRATIVE RULE [OAR] 340-141-0140)	LOCATION
(e) Interim storage and permanent disposal methods and sites shall comply with all applicable local, state, and federal requirements.	Section 5
(25) Each plan shall describe procedures to protect the health and safety of oil spill response workers, volunteers, and other individuals on-site. Provisions for training, decontamination facilities, safety gear, and a safety officer position shall be addressed.	
(26) Each plan shall explain post-spill review procedures, including methods to review both the effectiveness of the plan and the need for plan amendments.	Section 8
(27) All approved plans must be verified by drills and exercises. Each plan must describe the schedule and type of drills and other exercises that will be practiced to ensure readiness of the plan elements, including drills that satisfy OAR 340-141-0200 (3).	Appendix A
(a) The plan holder must test and document internal call out procedures at least once every 90 calendar days. The plan holder must retain records of these drills for at least three years and make them available for Department review upon request.	
(b) The plan holder must notify the Department of drills and exercises, at least 60 days before full deployment and tabletop drills, and 10 days prior to equipment exercises. Prior notice to the Department is not required before notification drills and internal phone number verification exercises.	
(c) The plan holder must send post drill reports for all tabletop exercises or deployment drills to the Department no later than 60 days after the completion of the drill or exercise. The executive summary from a National Preparedness for Response Exercise Program (N-PREP) report may be submitted to meet this requirement when the exercise has been designed by the N-PREP staff.	
(28) Each plan must list the spill risk variables within the region of operation covered by the plan, including:	Section 6, Appendix E
(a) Types, physical properties, and amounts of oil handled;	Figure C.8, Appendix E
(b) A written description and map indicating site topography, storm water and other drainage system, mooring areas, pipelines, tanks, and other processing, storage, and transfer sites and operations;	Section 6
(c) A written description of sites or operations with a history of or high potential for oil spills; and	Appendix E
(d) Methods to reduce spills during transfer operations, including overfill protection.	Section 2
(29) List the environmental variables within the region of operation covered …..	See below
(a) Natural resources.	Section 6, GRPs
(b) Public resources.	Section 6
(c) Seasonal hydrographic and climatic conditions; and	Section 6, GRPs

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS (OREGON ADMINISTRATIVE RULE [OAR] 340-141-0140)	LOCATION
(d) Physical geographic features.	Section 6, GRPs
(30) List the logistical resources within the region of operation covered by the plan, including:	Figure 3.6, Appendix B
(a) Facilities for fire services, medical services, and accommodations; and	Figure 3.4
(b) Shoreline access areas, including boat launches	Section 6, GRPs
(31) Each plan must include a statement of the intended response activities. This statement must describe how the plan resources must be applied to adequately respond during the initial phase of the response to an average most probable and worst case spill, release or discharge. The Response Strategy Outline must begin with a description of the situation to be managed, and must describe:	Appendix E
(a) Deployment of resources and estimates of response times;	
(b) The intended result of the activity for each person listed in section (7) and (12) of this section;	
(c) Command and control arrangements;	
(d) Required coordination; and	
(e) Probable obstacles and an estimate of oil movement during the first 72 hours.	
(32) Each plan must provide evidence that the facility or vessel is in compliance with federal financial responsibility requirements pursuant to ORS 468B.390.	-
(33) Each plan shall include a glossary of technical terms and abbreviations used in the plan	Appendix I

APPENDIX I ACRONYMS AND DEFINITIONS

Table of Contents

I.1 Acronyms

Acronym	Definition
AAR	After Action Report
ACGIH	American Conference of Governmental Industrial Hygienists
API	American Petroleum Institute
B/P	blood pressure
BAP	best achievable protection
bbls	barrels
bph	barrels per hour
bpm	beats per minute
BST	Business Support Team
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CGI	combustible gas indicator
CHRIS	Chemical Hazard Response Information System
CNS	central nervous system
CO	carbon monoxide
CO2	carbon dioxide
COTP	Captain of the Ports
CP	Cherry Point
CPP	Claims Process Plan
DEM	Department of Emergency Management
DF	Distribution Facility
DHHS	Department of Health and Human Services
EEZ	exclusive economic zone
EMS	Emergency Medical Services
EMT	emergency medical technician
EOC	Emergency Operations Center
ERP	Emergency Response Plan
ESI	Environmental Sensitivity Index
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FOSC	Federal On-Scene Coordinator
FRP	Facility Response Plan
GRPs	Geographic Response Plans
H2S	hydrogen sulfide
HELP	Heat Escape Lessening Posture
hp	horsepower
HPA	Hydraulic Project Approval
HSSE	Health, Safety, Security, and Environment
IBR	International Bird Rescue
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
IDLH	Immediately Dangerous to Life and Health

Acronym	Definition
IMT	Incident Management Team
IPW	Incident Potential Worksheet
LEL	Lower Explosive Limit
LEPC	Local Emergency Planning Committee
LOSC	Local On-Scene Coordinator
MMPD	Maximum Most Probable Discharge
MPA	Marine Preservation Association
MRT	Mutual Response Team
MSDS	Material Safety Data Sheet
MSRC	Marine Spill Response Corporation
MSU	Marine Safety Unit
MTR	Marine Transportation-Related
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPREP	National Preparedness for Response Exercise Program
NRC	National Response Center
NRCES	National Response Corporation Environmental Services Inc.
NRD	Natural Resource Damage
NWACP	Northwest Area Contingency Plan
O&M	Operations and Maintenance
o/b	on board
O2	Oxygen
OAR	Oregon Administrative Rule
ODEQ	Oregon Department of Environmental Quality
OERS	Oregon Emergency Response System
OMER	Operations Maintenance and Emergency Response
OPA 90	Oil Pollution Act of 1990
ORS	Oregon Revised Statutes
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
OSRO	Oil Spill Removal Organization
PAHs	poly aromatic hydrocarbons
PEL	Permissible Exposure Limit
PFDs	Personal Flotation Devices
PHMSA	Pipeline and Hazardous Materials Safety Administration
PPE	personal protective equipment
PRC	Primary Response Contractor
PSE	Puget Sound Energy
PVC	polyvinyl chloride
QI	Qualified Individual
RCC	Renton Control Center
RCRA	Resource Conservation and Recovery Act

Acronym	Definition
RCW	Revised Code of Washington
REL	Recommended Exposure Limit
ROW	right-of-way
RP	Recommended Practice
RRT	Regional Response Team
SARA	Superfund Amendments and Reauthorization Act of 1986
SCADA	Supervisory Control and Data Acquisition
SCBA	Self-Contained Breathing Apparatus
SERC	State Emergency Response Commission
SLID	Spill/Leak Information Data Sheet
SMT	spill management teams; also referred to as Incident Management Team (IMT)
SOP	Standard Operating Procedure
SOSC	State On-Scene Coordinator
STEL	Short Term Exposure Limit
TCP	Tactical Command Post(s)
TLV	Threshold Limit Value
TOSC	Tribal On-Scene Coordinator
TRG	The Response Group
TSCA	Toxic Substances Control Act
TWA	total weight average
U.S.C.	United States Code
UC	Unified Command
UEL	Upper Explosive Limit
USCG	United States Coast Guard
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USPL	US Pipelines & Logistics
VOO	vessels of opportunity
VTA	Virtual Training Assistant
WAC	Washington Administrative Code
WCD	worst case discharge
WDFW	Washington Department of Fish and Wildlife
WDOE	Washington Department of Ecology
WEMD	Washington Emergency Management Division
WRRL	Worldwide Response Recourse List
WRS	Western Refinery Services
WUTC	Washington Utilities and Transportation Commission

I.2 Definitions

Access/Staging Areas

Designated areas offering access to spill sites for the gathering and deployment of spill response equipment and personnel.

Absorbent Material

Any of the several materials designed to absorb oil, both hydrocarbon and non-hydrocarbon.

Adverse Weather

The weather conditions that will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height, ice, temperature, weather-related visibility, and currents with the Captain of the Port (COTP) zone in which the systems or equipment are intended to function.

Average Most Probable Discharge

A discharge of the lesser of 50 barrels (2100 gallons) or 1 percent of the volume of the worst-case discharge.

Barrel

A quantity of liquid equal to 42 U. S. gallons.

Boom

Any number of specially designed devices that float on water and are used to contain or redirect the flow of oil on the water=s surface.

Captain of the Port Zone (COTP)

A zone specified in 33 Code of Federal Regulations (CFR) Part 3 and the seaward extension of that zone to the outer boundary of the exclusive economic zone (EEZ).

Clean-Up Contractor

Persons contracted to undertake a response action to contain and clean up a spill.

Coastal Waters

All tidally influenced waters extending from the head of tide seaward to the three marine league limit of state jurisdiction; and non-tidally influenced waters extending from the head of tide in the arms inland to the point at which navigation by regulated vessels is naturally or artificially obstructed.

Command Post

A site located at a safe distance from the spill site where response decisions are made, equipment and manpower deployed, and communications handled. The Incident Commander and the On-Scene Coordinators may direct the response operations from this location.

Communication Equipment

Equipment used to maintain communication between employees, contractors, Federal/State/Local agencies during response operations. (Radio/telephone equipment and links).

Containment Boom

Boom designed to entrap and contain the product for recovery.

Contingency Plan

A document used by (1) Federal, State, and Local agencies to guide planning and response procedures regarding spill of oil, hazardous substances, or other emergencies; (2) a document used by industry as a response plan to spills of oil, hazardous substances, or other emergencies occurring upon their vessels or

at their facilities.

Contract or Other Approved Means

Includes:

- A written contractual agreement with a response contractor. The agreement should identify and ensure the availability of the specified personnel and equipment described under the United States Coast Guard (USCG). Regulations within stipulated response times in the specified geographic areas;
- Certification by the facility owner or operator that the specified personnel and equipment described under USCG. Regulations are owned, operated, or under the direct control of the facility owner or operator, and are available within stipulated times in the specified geographic areas;
- Active membership in a local or regional oil spill removal organization that has identified specified personnel and equipment described under USCG. Regulations that are available to respond to a discharge within stipulated times in the specified geographic areas;
- A document which:
  - Identifies the personnel, equipment, services, capable of being provided by the response contractor within stipulated response times in specified geographic areas;
  - Sets out the parties' acknowledgment that the response contractor intends to commit the resources in the event of a response;
  - Permits the Coast Guard to verify the availability of the response resources identified through tests, inspections, drills; and
  - Is incorporated by reference in the response plan; or
  - For a facility that could reasonably be expected to cause substantial harm to the environment, with the consent of the response contractor or oil spill removal organization, the identification of a response contractor or oil spill removal organization with specified equipment and personnel which are available within stipulated response times in specific geographic areas.

Critical Areas

Areas which, if impacted by a spill, may result in threats to public health and/or safety.

Cultural Resources

Current, historic, prehistoric, and archaeological resources which include deposits, structures, sites, ruins, buildings, graves, artifacts, fossils, or other objects of antiquity which provide information pertaining to historical or prehistoric culture of people as well as the natural history of the state.

Damage Assessment

The process of determining and measuring damages and injury to the human environment and natural resources, including cultural resources. Damages include differences between the conditions and use of natural resources and the human environment that would have occurred without the incident, and the conditions and use that ensued following the incident. Damage assessment includes planning for restoration and determining the costs of restoration.

Decontamination

The removal of hazardous substances from personnel and equipment necessary to prevent adverse health effects.

Discharge

Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

Dispersants

Chemical agents that emulsify, disperse, or solubilize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

Diversion Boom

Boom designed to deflect or divert the product towards a pick up point, or away from certain areas.

Emulsification

The formation of a water-in-oil mixture. Different oils exhibit different tendencies to emulsify, and emulsification is more likely to occur under high-energy conditions (strong winds and waves). An emulsified mixture of water in oil is commonly called “mousse;” its presence indicates a spill that has been on the water for some time.

Entrainment

The loss of oil from containment when it is pulled under a boom by a strong current. Entrainment typically occurs from booms deployed perpendicular to currents greater than 1 knot (0.5 meter per second).

Environmentally Sensitive Areas

Streams and water bodies, aquifer recharge zones, springs, wetlands, agricultural areas, bird rookeries, endangered or threatened species (flora and fauna) habitat, wildlife preserves or conservation areas, parks, beaches, dunes, or any other area protected or managed for its natural resource value.

Estuary

Unique environment at the mouth of coastal rivers where fresh water and sea water meet, providing important habitat for marine life, birds, and other wildlife.

Exclusion Zone

The area where contamination does or may occur.

Exclusive Economic Zone

The zone contiguous to the territorial sea of the United States extending to a distance up to 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.

Facility

Any pipeline, structure, equipment, or device used for handling oil including, but not limited to, underground and aboveground storage tanks, impoundments, mobile or portable drilling or workover rigs, barge mounted drilling or workover rigs, and portable fueling facilities located offshore or on or adjacent to coastal waters or any place where a discharge of oil from the facility could enter coastal waters or threaten to enter the coastal waters.

Facility that could be reasonably expected to cause significant and substantial harm

Any fixed MTR onshore facility (including piping and bay structures that are used for the transfer of oil between a vessel and a facility) that is capable of transferring oil, in bulk, to or from a vessel of 250 barrels or more, and a deepwater port. This also includes any facility especially identified by the COTP.

Facility that could reasonably be expected to cause substantial harm

Any mobile MTR facility that is capable of transferring oil to or from a vessel with a capacity of 250 barrels or more.

Federal Fund

The oil spill liability trust fund established under OPA.

First Responders, First Response Agency

A public health or safety agency (i.e., fire service or police department) charged with responding to a spill during the emergency phase and alleviating immediate danger to human life, health, safety, or property.

Harmful Quantity of Oil

The presence of oil from an unauthorized discharge in a quantity sufficient either to create a visible film or sheen or discoloration upon water, shoreline, tidal flat, beach, or marsh, or to cause a sludge or emulsion

to be deposited beneath the surface of the water or on a shoreline, tidal flat, beach, or marsh.

Hazardous Material

Any nonradioactive solid, liquid, or gaseous substance which, when uncontrolled, may be harmful to humans, animals, or the environment. Including but not limited to substances otherwise defined as hazardous wastes, dangerous wastes, extremely hazardous wastes, oil, or pollutants.

Hazardous Substance

Any substance designed as such by the Administrator of EPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act; regulated pursuant to Section 311 of the Federal Water Pollution Control Act.

Hazardous Waste

Any solid waste identified or listed as a hazardous waste by the Administrator of the EPA pursuant to the federal Solid Waste Disposal Act, as amended by the Resources Conservation and Recovery Act (RCRA), 42 United States Code (U.S.C.), Section 6901, et seq as amended. The EPA Administrator has identified the characteristics of hazardous wastes and listed certain wastes as hazardous in Title 40 of the CFR, Part 261, Subparts C and D respectively.

Higher Volume Port Area

Ports of:

- Boston, MA
- New York, NY
- Delaware Bay and River to Philadelphia, PA
- St. Croix, VI
- Pascagoula, MS
- Mississippi River from Southwest Pass, LA to Baton Rouge, LA
- Louisiana Offshore Oil Port (LOOP), LA
- Lake Charles, LA
- Sabine-Nachez River, TX
- Galveston Bay and Houston Ship Channel, TX
- Corpus Christi, TX
- Los Angeles/Long Beach Harbor, CA
- San Francisco Bay, San Pablo Bay, Carquinez Strait, Suisun Bay to Antioch, CA
- Straits of Juan de Fuca and Puget Sound, WA
- Prince William Sound, AK

Incident

Any event that results in the spill or release of oil or hazardous materials.

Incident Commander (IC)

The individual in charge of an incident at any given time. The Incident Commander is responsible for establishing a unified command with all on-scene coordinators.

Incident Command System (ICS)

A method by which the response to an extraordinary event, including a spill, is categorized into functional components and responsibility for each component assigned to the appropriate individual or agency.

Initial Notification

The process of notifying necessary company personnel and Federal/State/Local agencies that a spill has occurred, including all pertinent available information surrounding the incident.

Inland Area

The area shoreward of the boundary lines defined on 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcations (COLREG lines) defined in §80.740 - 80.850 of Title 33 of the CFR. The inland area does not include the Great Lakes.

Interim Storage Site

A site used to temporarily store recovered oil or oily waste until the recovered oil or oily waste is disposed of at a permanent disposal site. Interim storage sites include trucks, barges, and other vehicles, used to store waste until the transport begins.

Lead Agency

The government agency that assumes the lead for directing the spill response.

Lead Federal Agency

The agency which coordinates the federal response to incidents on navigable waters. The lead Federal agencies are:

- USCG: Oil and chemically hazardous materials incidents on navigable waters.
- U. S. Environmental Protection Agency (EPA): Oil and chemically hazardous materials incidents on inland waters.

Lead State Agency

The agency which coordinates state support to Federal and/or Local governments or assumes the lead in the absence of a Federal spill response.

Lower Explosive Limit

Air measurement to determine the lowest concentration of vapors that support combustion. This measurement must be made prior to entry into a spill area.

Marine Transportation-Related Facility (MTR Facility)

An onshore facility, including piping and any structure used to transfer oil to or from a vessel, subject to regulation under 33 CFR Part 154 and any deepwater port subject to regulation under 33 CFR Part 150.

Maximum Extent Practicable

The planning values derived from the planning criteria used to evaluate the response resources described in the response plan to provide the on-water recovery capability and the shoreline protection and clean-up capability to conduct response activities for a worst-case discharge from a facility in adverse weather.

Maximum Most Probable Discharge (MMPD)

A discharge of the lesser of 2,500 barrels or 10 percent of the volume of a worst-case discharge.

National Contingency Plan

The plan prepared under the Federal Water Pollution Control Act (33U.S.C. §1321 et seq) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. §9601 et seq), as revised from time to time.

Natural Resource

Land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to or otherwise controlled by the State, Federal government, private parties, or a municipality.

Nearshore Area

The area extending seaward 12 miles from the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending seaward 12 miles from the line of demarcation (COLREG) lines) defined in §80.740 - 80.850 of Title 33 of the CFR.

Non-Persistent or Group I Oil

A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:

- At least 50% of which by volume, distill at a temperature of 340°C (645°F); and
- At least 95% of which by volume, distill at a temperature of 370°C (700°F).

Non-Petroleum Oil

Oil of any kind that is not petroleum-based. It includes, but is not limited to, animal and vegetable oils.

Offshore Area

The area beyond 12 nautical miles measured from the boundary lines defined in 46 CFR Part 7 extending seaward to 50 nautical miles, except in the Gulf of Mexico. In the Gulf of Mexico it is the area beyond 12 nautical miles of the line of demarcation (COLREG lines) defined in §80-740 - 80.850 of Title 33 of the CFR extending seaward to 50 nautical miles.

Oil or Oils

Naturally occurring liquid hydrocarbons at atmospheric temperature and pressure coming from the earth, including condensate and natural gasoline, and any fractionation thereof, including, but not limited to, crude oil, petroleum gasoline, fuel oil, diesel oil, oil sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil does not include any substance listed in Table 302.4 of 40 CFR Part 302 adopted August 14, 1989, under Section 101(14) of the Federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by P.L. 99-499.

Oil Spill Cooperative

Multi-company cooperative organization developed by industry to assist with oil spill response and clean up. Typically, manpower and equipment are identified by a company on a voluntary basis.

Oil Spill Removal Organization (OSRO)

An entity that provides oil spill response resources, and includes any for profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources.

Oil Spill Response Contractors

Persons/Companies contracted to undertake a response action to contain and/or clean up a spill.

Oily Waste

Oil contaminated waste resulting from an oil spill or oil spill response operations.

Operating Area

The rivers and canals, inland, nearshore, Great Lakes, or offshore geographic location(s) in which a facility is handling, storing, or transporting oil.

Operating Environment

Rivers and canals, inland, Great Lakes, or ocean. These terms are used to define the conditions in which response equipment is designed to function.

Owner or Operator

Any person, individual, partnership, corporation, association, governmental unit, or public or private organization of any character.

Persistent Oil

A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. For the purposes of this Appendix, persistent oils are further classified based on specific gravity as follows:

- Group II - specific gravity less than .85.
- Group III - specific gravity between .85 and less than .95.
- Group IV - specific gravity .95 to and including 1.0.
- Group V - specific gravity greater than 1.0.

Primary Response Contractor

An individual, company, or cooperative that has contracted directly with the plan holder to provide equipment and/or personnel for the containment or clean up of spilled oil.

Qualified Individual

An English-speaking representative of the facility identified in the plan, located in the United States, available on a 24-hour basis, familiar with implementation of the facility response plan, and trained in his or her responsibilities under the plan. This person must have full written authority to implement the facility's response plan. This includes:

- Activating and engaging in contracting with identified oil spill removal organization(s);
- Acting as a liaison with the predesignated of Federal On-Scene Coordinator (FOSC); and
- Obligating, either directly or through prearranged contracts, funds required to carry out all necessary or directed response activities.

Regional Response Team

The Federal Response Organization (consisting of representatives from selected Federal and State agencies) which acts as a regional body responsible for planning and preparedness before an oil spill occurs and providing advice to the FOSC in the event of a major or substantial spill.

Response Plan

A practical plan used by industry for responding to a spill. Its features include (1) identifying the notification sequence, responsibilities, response techniques, etc. in an easy to use format; (2) using decision trees, flowcharts, and checklists to ensure the proper response for spills with varying characteristics; and (3) segregating information needed during the response from that required by regulatory agencies to prevent confusion during a spill incident.

Responsible Party

Any person, owner/operator, or facility that has control over an oil or hazardous substance immediately before entry of the oil or hazardous substance into the atmosphere or in or upon the water, surface, or subsurface land of the state.

Rivers and Canals

A body of water confined within the inland area that has a projected depth of 12 feet or less, including the Intracoastal Waterway and other waterways artificially created for navigation.

Sheen

A very thin layer of oil (less than 0.0001 inches or 0.003 millimeters in thickness) floating on the water surface. Sheen is the most commonly observed form of oil during the later stages of a spill. Depending on thickness, sheens range in color from dull brown for the thickest sheens to rainbows, grays, silvers, and near-transparency in the case of the thinnest sheens.

Skimmers

Mechanical devices used to skim the surface of the water and recover floating oil. Skimmers fall into four

basic categories (suction heads, floating weirs, oleophilic surface units, and hydrodynamic devices) which vary in efficiency depending on the type of oil and size of spill.

Slick

Oil spilled on the water, which absorbs energy and dampens out surface waves, making the oil appear smoother or slicker than the surrounding water.

Sorbents

Materials ranging from natural products to synthetic polymeric foams placed in confined areas to soak up small quantities of oil. Sorbents are very effective in protecting walkways, boat decks, working areas, and previously uncontaminated or cleaned areas.

Spill Management Team

Personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation.

Staging Areas

Designated areas near the spill site accessible for gathering and deploying equipment and/or personnel.

State Emergency Response Commission (SERC)

A group of officials appointed by the Governor to implement the provisions of Title III of the Federal Superfund Amendments and Reauthorization Act of 1986 (SARA). The SERC approves the State Oil and Hazardous Substance Discharge Prevention and Contingency Plan and Local Emergency Response Plans.

Substantial Threat of a Discharge

Any incident or condition involving a facility that may create a risk of discharge of fuel or cargo oil. Such incidents include, but are not limited to, storage tank or piping failures aboveground or underground leaks, fire explosions, flooding, spills contained within the facility or other similar occurrences.

Tidal Current Charts

Comprehensive charts which contain the predicted tidal current for each day of the year for designated areas. These charts specify the direction and speed of the current in the specific areas.

Tide Tables

Tables which contain the predicted times and heights of high and low waters for each day of the year for designated areas.

Unified Command

The method by which Local, State, and Federal agencies and the responsible party will work with the Incident Commander to:

- Determine their roles and responsibilities for a given incident.
- Determine their overall objectives for management of an incident.
- Select a strategy to achieve agreed upon objectives.
- Deploy resources to achieve agreed-upon objectives.

Waste

Oil or contaminated soil, debris, and other substances removed from coastal waters and adjacent waters, shorelines, estuaries, tidal flats, beaches, or marshes in response to an unauthorized discharge. Waste means any solid, liquid, or other material intended to be disposed of or discarded and generated as a result of an unauthorized discharge of oil. Waste does not include substances intended to be recycled if they are in fact recycled within 90 days of their generation or if they are brought to a recycling facility within that time.

Wildlife Rescue

Efforts made in conjunction with Federal and State agencies to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill.

April 2021
Revision

Incident Location: _____

Date: _____

Name: _____

Northwest Pipelines District

Facility Response Plan Field Document

This Document Must Be Completed and Returned to The HSSE Department Following Any Emergency Requiring Field Documentation.

Table of Contents

RECORD OF CHANGES

CHANGE NUMBER	DATE OF CHANGE	NAME OF PERSON AUTHORIZING THE CHANGE	ELEMENTS OF THE PLAN THAT WERE CHANGED
1	01/2013	Kelli Gustaf	Updated the following: • Job titles • IMT Org. Chart • Added "notes" section in the Spill Notification Checklist • Added new mile posts and driving directions • Updated block valve drawing • Added OPLC small trailers
2	05/2013	Kelli Gustaf	• WUTC notification phone number • Removed Mike Abendhoff from the IMT
3	10/2013	Kelli Gustaf	• Include USPL DOT Advisor in Notification Procedures • Remove "How" column in the initial notifications section • Updated formatting of IMT Organization Chart • Updated Olympia Station address
4	05/2014	Kelli Gustaf	• Administrative updates to Incident Reporting Guide • Updated Facility Location addresses
5	03/2015	Kelli Gustaf	• Updated Spill Response Contractor List • Updated Field Document with groundwater spill information • Changed cover page to reflect district change
6	02/2016	Kelli Gustaf	• Updated Incident Reporting Guide • Updated Spill Checklist & Report • NW Pipelines Incident Management Team • Added Cherry Point/Butane Field Document
7	03/2016	Kelli Gustaf	• Changed Government & Public Affairs to Communications & External Affairs • Changed HSSE Manager to Environmental Team Lead

CHANGE NUMBER	DATE OF CHANGE	NAME OF PERSON AUTHORIZING THE CHANGE	ELEMENTS OF THE PLAN THAT WERE CHANGED
8	10/2016	Justin Ivy	• Updated Organization Chart • Removed OPLC owned and maintained equipment • Updated phone numbers in the Crude/Butane Line Section • Added Incident Reporting Guide to Crude/Butane Line Section
9	07/2017	Justin Ivy	• Updated Organization Chart • Updated phone numbers in the Crude/Butane Line Section • Updated Safety Coordinator–Field to contact EC in Interim
10	02/2019	Alexandria Crooks	• Combined the Ferndale Pipeline System Emergency Response Field Document with the Northwest Pipelines District Field Document • Updated Job titles • Updated Organization Chart • Updated Phone numbers • Added Safety Coordinator and Environmental Coordinator • Changed HSSE Manager to Environmental Team Lead • Removed duplicate MP 238.9 block valve 14” and added MP 196 block valve 14”
11	06/2020	Alexandria Crooks	• Updated the new District Operations manager. • Updated NRCES to U.S. Ecology • Updated Olympic Pipe Line Company Spill Response Equipment • Updated Organization Chart • Updated Phone numbers • Added Interim USPL Crisis Management Advisor. • Added notification requirements to the Regulatory Contact List • Added Site Security Plan • Removed Mile Post 155 Block valve
12	04/2021	Alexandria Crooks	• Updated Organization Chart • Updated Phone numbers • Added Department of Ecology’s Regional Offices List

OLYMPIC PIPELINE INCIDENT REPORTING GUIDE

Use this guide to find your role and follow the steps which are listed in order of priority

Field Operations Personnel:

- ☐ Assess your personal safety and move to a safe location if necessary.
- ☐ If this is an emergency and you need immediate assistance call 911.
- ☐ Call the Control Center – be prepared to give the Pipeline Controller the information needed to complete the Notification Checklist (i.e. your name, location, incident description, weather conditions, call-back number) as well as any support you may need. The Notification Checklist is on the following page.
- ☐ Your notifications are complete.
- ☐ Complete the Notification Checklist in this Document and turn it in to HSSE.

Control Center Personnel:

- ☐ If the call is from a third party get their name, location and call back number and as much information as you can about the type of concern that is being reported. Decide if the pipeline must be shut down immediately. Dispatch an O&M field employee to confirm the report.
- ☐ If the call is from BP personnel, obtain their name, location and call back information of the person. Get the all information necessary to complete the Notification Checklist (i.e. location, incident description, weather conditions).
- ☐ Notify the Control Center Team Leader or their delegate. (a voice mail message does not count, keep calling until you speak to the person – if you cannot reach the Team Leader move on to making the notifications listed below).
- ☐ Notify the Area O&M Team Leader (a voice mail message does not count, keep calling until you speak to the person)
- ☐ Your notifications are complete.
- ☐ Complete the Notification Checklist and the Spill Assessment Form in this Document and turn it in to HSSE.

Control Center Team Leader:

- ☐ When notified of an incident request all of the information detailed in the Notification Checklist. This information will be used by the O&M Team Leader to assess the need for Incident Management Team response and Agency notifications.
- ☐ Notify the District Operations Manager or his delegate (a voice mail message does not count, keep calling until you speak to the person).
- ☐ Notify the Environmental Coordinator or backup HSSE person (a voice mail message does not count, keep calling until you speak to the person).
- ☐ Your notifications are complete.
- ☐ Complete the Notification Checklist in this Document and turn it in to HSSE.

Environmental Coordinator:

- ☐ Notify USPL DOT Advisor (if reported to the National Response Center and WUTC).
- ☐ Make agency notifications as appropriate.
- ☐ Notify Environmental Team Lead.
- ☐ Notify Communications and External Affairs.
- ☐ Notify USPL Crisis Management Advisor.
- ☐ Complete the Immediate Regulatory Agency Notifications and Northwest Pipelines District Contacts tables in this Document.

SPILL ASSESSMENT FORM

Date: _____ **Time:** _____

Name of person(s) completing report (list all controllers on-duty):

_____

_____

☐ Discoverer / Responder ☐ Controller* ☐ Other*

*If Controller or Other, information / complaint received from:

☐ Employee/contractor ☐ Public ☐ Other (i.e. agency) _____

Name, address, and phone number of persons making report:

_____

_____

( ) _____

☐ **Spill** ☐ **Odor Complaint** ☐ **Other** _____

Location: _____

County: _____ **City:** _____ **MP:** _____

If Spill: onto ☐ Land ☐ Water ☐ Containment ☐ Other _____

Nearest Watercourse (name and distance, if known)**:** _____

Source: ☐ Pipe ☐ Tank ☐ Valve ☐ Pump ☐ Fitting ☐ Other _____

Product: ☐ Gasoline ☐ Diesel ☐ Jet ☐ Transmix ☐ Other

Estimated Qty: _____ ☐ gallons ☐ barrels

☐ **Fire** ☐ **Explosion** ☐ **Evacuations** ☐ **Damage** ☐ **N/A**

Number of Injured: _____ **Fatalities:** _____ **Number Evacuated:**

Damage in Dollars: _____ ☐ **N/A**

Cause: ☐ Equipment Failure ☐ Operator Error ☐ Natural Phenomenon ☐ Unknown

Weather Conditions: ☐ Clear ☐ Cloudy ☐ Raining ☐ Snowing ☐ Other _____

Temperature: _____ º F Wind Direction/Velocity _____

Brief Incident Description: _____

_____

_____

INITIAL NOTIFICATIONS				
Upon Discovery of a product discharge, the **Spill Observer/First Responder** shall immediately notify Control Center for any loss of primary containment:				
NOTIFY			**TIME**	**CONTACT**
Control Center (888) 271-8880				
If this is believed an emergency, immediately notify 911.				
NOTIFY	**NO**	**YES**	**TIME**	**CONTACT**
Has 911 been notified?				
Immediately upon notification, verification or suspicion of a release, the **Controller Center Personnel** shall complete the Spill Assessment Form.				
NOTIFY			**TIME**	**REMARKS**
Control Center Team Leader				
The **Control Center Team Leader** shall notify the following Olympic personnel:				
NOTIFY			**TIME**	**REMARKS**
Environmental Coordinator and/or Safety Coordinator				
District Operations Manager				
The **Area O&M Team Leader** will begin obtaining resources necessary for operations to respond to the spill. Must determine if a Spill Response Contractors should be deployed and assess the need to activate an Incident Management Team. Spill Response Contractors Contact list provided on page 27.				
The **Environmental Coordinator** will notify the applicable Regulatory Agencies, the USPL DOT Team (if reported to NRC or WUTC), the USPL Crisis Management Advisor, Environmental Team Lead, HSSE manager, and Communications & External Affairs. Immediate Regulatory Agency Notifications provided on page 9.				
The **District Operations Manager** will make additional BP internal notifications as necessary. (i.e. Head of Operations and HSSE and BP Notification Center).				
Note: Additional contacts and notifications can be logged on ICS Form 214a located in last section of Field Document				

NOTIFICATIONS CONTACT LIST

IMMEDIATE REGULATORY AGENCY NOTIFICATIONS				
Agency	**Phone Number**	**Time**	**Contact**	**Notification Requirements ***
National Response Center **Incident #**	(800) 424-8802			A volume of ≥5 gallons is released (5 bbl. if result of maintenance work). Verbal notification required within **one hour**.
WASHINGTON STATE				
Department of Emergency Management **Incident #**	(800) 258-5990			Any size oil spill threatening or in Washington state waters. **Immediate verbal notification required.**
Washington Utilities & Transportation Commission (WUTC)	(888) 321-9144			Verbal notification is required within **two hours** of the discovery of an incident involving company's pipeline, such as a release of a hazardous liquid.
Department of Ecology – NW	(425) 649-7000			All spills to waters of the state, ground and to permeable secondary containment that threaten to impact waters of the state. **Immediate verbal notification required**.
Department of Ecology – SW	(360) 407-6300			
OREGON STATE				
Oregon Emergency Response System (OERS) **Incident #**	(800) 452-0311			Any size oil spill threatening or in Oregon state waters. **Immediate verbal notification required.**

* Refer to Section 3 FIGURE 3.5 – Required Agency Notifications for additional reporting standards.

NORTHWEST PIPELINES DISTRICT CONTACTS			
Personnel	**Phone Number**	**Time**	**Comments**
Sandra Conlan Control Center Team Leader	(206) 786-1532		
Terry Zimmerman District Operations Manager	(219) 973-5985		
Dustin Lambert Central O&M Team Leader	(425) 351-9938		
Jeff Berry South O&M Team Leader	(206) 510-0562		
Joseph Paquette North O&M Team Leader	(331) 229-6057		
Alexandria Crooks Environmental Coordinator	(425) 591-3599		
Michaela Decker Safety Coordinator	(312) 434-2764		
Jennifer Dively Health, Safety, Security, and	(219) 293-6333		
Pam Brady Communications & External Affairs	(360) 920-1171		
James Fraley USPL DOT Advisor	(360) 957-0203		
BP Notification Center	(800) 321-8642		
Kristen Hancock Interim USPL Crisis Management Advisor.	(331) 702-4480		

Comments:

INITIAL WORK SITE SAFETY PLAN & ANALYSIS
POST AT WORK SITE
(Attach completed ATW to this document)

Incident Location: _____

Date Prepared: _____ Time Prepared: _____

Initial OPL Safety Leader: _____

Contractor Safety Leader: _____

EMERGENCY NUMBERS

Hospital: _____ Location/Address _____

Fire: _____ Ambulance: _____ Other: _____

EVALUATION OF SITE PRIOR TO ENTRY

Before entry into a potentially hazardous site, the site must be evaluated to establish safe work practices, the potential hazards, and necessary personal protective equipment

Product Released: ☐ Diesel ☐ Gasoline ☐ Jet Fuel ☐ Transmix ☐ Other _____

Primary Health Hazard: ☐ Benzene ☐ Hydrogen Sulfide (H_2S) ☐ Fire
☐ Total Petroleum Hydrocarbons (TPH)

AIR MONITORING

Air Monitoring Log is provided on Page 18.

Oxygen Level: _____ (between 19.5 - 23.5% required)

LEL: _____ (Less than 10% required)

H2S: _____ (Less than 10 parts per million (ppm))

TPH: _____ (Less than 300 ppm)

Benzene Level: _____

Test only if Gasoline or unknown product spill. Max. 5 ppm 15min. STEL; max 1ppm TWA; action level 0.5ppm. If Benzene Level is at or expected to equal 0.5ppm, the areas must be posted with the following warning:

DANGER. BENZENE CANCER HAZARD. FLAMMABLE - NO SMOKING. AUTHORIZED PERSONNEL ONLY. RESPIRATOR REQUIRED.

Potential Hazards Identify and discuss with site workers:

☐ Respiratory ☐ Skin ☐ Electrical ☐ Mechanical ☐ Temperature

☐ Water ☐ Noise ☐ Vehicle traffic ☐ Slips, Trips, Falls ☐ Confined Space

☐ Electrical lines down or overhead ☐ Fire, Sparks or sources of ignition nearby

Personal Protective Equipment Identify all equipment needed to conduct work safely and discuss with Site Workers:

☐ Hard Hat (required) ☐ Safety Glasses ☐ Gloves (Neoprene or Nitrile) ☐ Rain Suit

☐ Steel Toed Boots ☐ Life Vest ☐ Reflective Vest

☐ Nomex, flame resistant coveralls ☐ Half-Mask Respirator, Organic Vapor Cartridges

First Aid -Discuss with Site Workers:

☐ Location of First Aid Station ☐ Identify CPR/1st Aid trained personnel on site

Other Safety Procedures & Equipment: _____

_____

IN THE EVENT OF A PERSONAL INJURY EMERGENCY, DO THE FOLLOWING:

☐ Call for help and give the following information:

- Location of emergency, include street name, landmarks, etc.
- The phone number where you can be reached
- Description of what happened, extent of injuries
- Number of people injured
- What is being done for the injured

☐ If injured can be moved, and injuries are not serious, accompany injured to the hospital

☐ Notify the Control Center, Incident Commander, and OPL Safety Officer

REVIEW OF INITIAL SITE SAFETY PLAN

All personnel on site must review this initial site safety plan and sign below before beginning work.

Print Name	**Signature**

Prepared By: Approved By:

INCIDENT BRIEFING

1. Incident Name	2. Prepared by: (name) Date Time:	INCIDENT BRIEFING ICS 201-OS (pg 1 of 4)

3. Map/Sketch (include maps drawn here or attached, showing the total area of operations, the incident site/area, overflight results, trajectories, Impacted shorelines, or other graphics depicting situational and response status)

1. Incident Name	2. Prepared by: (name) Date Time:	INCIDENT BRIEFING ICS 201-OS (pg 2 of 4)

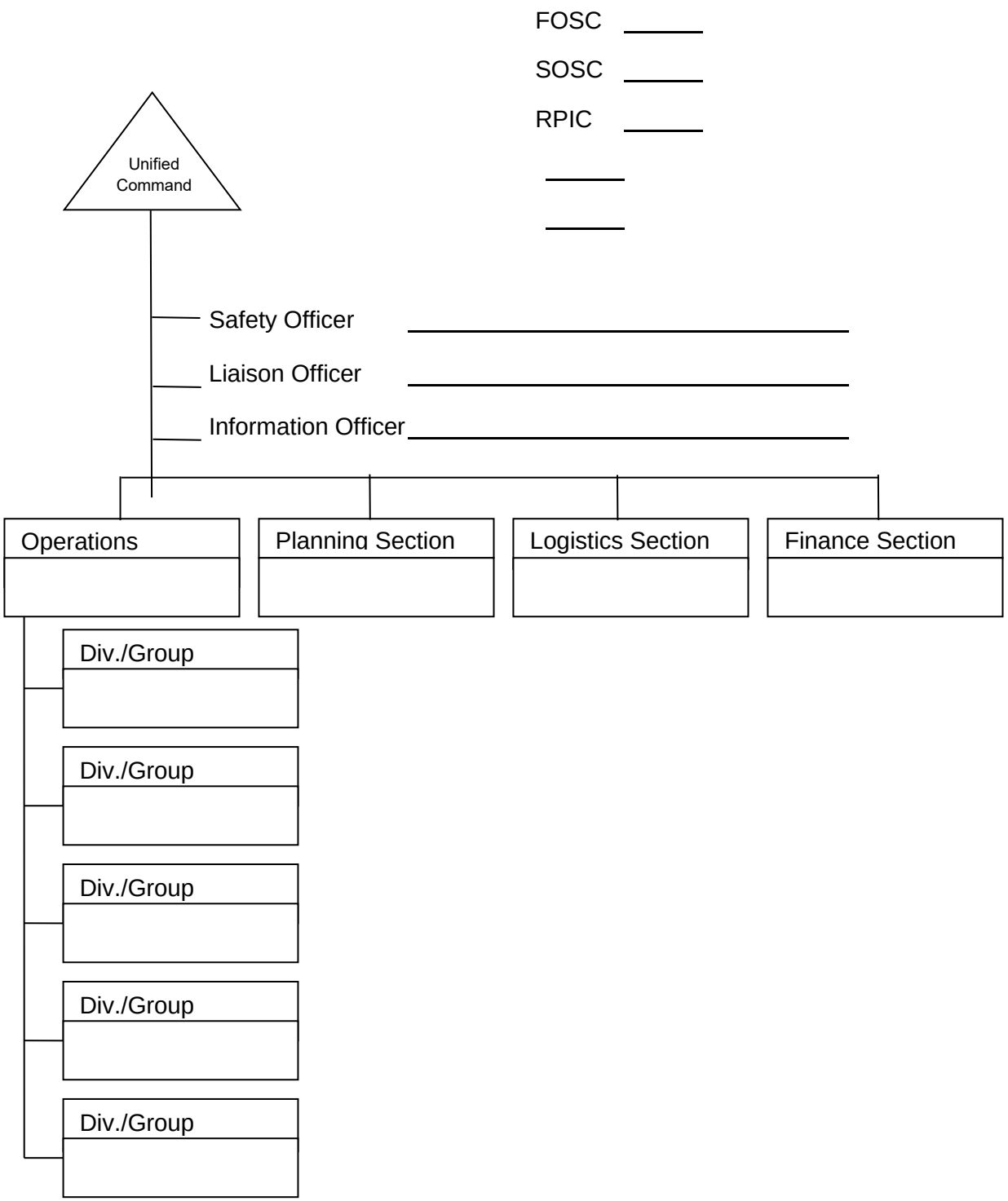
4. Initial Incident Objectives

5. Summary of Current Actions

Time	Action/Note

1. Incident Name	2. Prepared by: (name) Date Time:	INCIDENT BRIEFING ICS 201-OS (pg 3 of 4)

3. Current Organization



1. Incident Name	2. Prepared by: (name) Date Time:	INCIDENT BRIEFING ICS 201-OS (pg 4 of 4)

7. Resources Summary

Resources Needed	Time Ordered	Resources Identifier	ETA	On-Scene? (X)	NOTES: (Location/Assignment/Status)

1. Incident Name	2. Operational Period (Date / Time) From: To:	3. Check-in Location Command Post Other Staging Area _____ _____	**CHECK-IN LIST (Personnel)** **ICS 211P**

Personnel Check-in Information				**8. Initial Incident Check-In?**	**9. Time**	
4. Name	**5. Company/Agency**	**6. ICS Section / Assignment / Quals**	**7. Contact Information**	(X)	In	Out
				☐		
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10. Prepared by: **Date / Time**	**11. Date / Time Sent to Resources Unit**

CHECK-IN LIST (Personnel) ICS 211P

1. Incident Name:	2. Operational Period: Date From : Date To: Time From : Time To:

3. Individual Name	4. ICS Section	5. Assignment/Location

6. Activity Log	Page of

Time	Major Events

7. Prepared by:	Date/Time

INDIVIDUAL LOG June 2000 ICS 214a-OS

AIR MONITORING LOG

Site Name: _____ Date: _____

Instrument Calibration Record:

Instrument/Type	Date/Time Calibrated	Person Conducting Calibration	Comments

Location of Reading	Time of Reading	O_2 Reading	LEL Reading	H_2S Reading	CO Reading	Other	Other	Other

BOMB THREAT CHECKLIST

Remain calm - Keep the caller talking - Signal another person to listen in on the call.

Date: _____ **Time:** _____

Exact (words) message received: _____

_____

Questions:

What time is the bomb due to explode?

_____

Exactly where is it located?

_____

What does it look like? How big is it? Describe the container.

_____

What type of bomb is it? What is it made of?

_____

Why are you doing this?

_____

How did you get the bomb into the building/facility?

_____

Information Regarding Caller:

Name or Organization (If stated): _____

Gender: Male _____ Female _____ Approximate Age _____

Speech: Fast _____ Slow _____ Distorted _____

Manner: Calm _____ Angry _____Rational _____ Irrational _____

Coherent _____ Incoherent _____ Deliberate _____ Emotional _____

Background Noises:

Office Machines _____Voices _____ Street Traffic _____ Factory Machines _____ Music _____

Party/bar sounds _____Other _____

Phone number call received on: _____Extension No. _____

Call received by: _____

Location: _____ Date: _____

Report Call <u>Immediately</u> To: 911, Police or Local Authorities, Team Leader, and Safety Coordinator

NOTE: DO NOT use cellular phones or two-way radios to make notifications due to the possibility of accidental detonation.

STRUCTURAL / MECHANICAL INSPECTION

Facility / Location / Block Valve: _____

Date and Time: _____

Inspector: _____

Special features to look for in detail during the visual inspection of the Facility / Location / Block Valve to identify potential geotechnical activity that may affect the integrity of the facility.

Please document all findings and note additional comments in the comment section.

Criteria	**Checked**
Ground disruption	
Open fissures	
Separation of soil and pipes	
Separation of soil and concrete structures / pedestals	
Concrete / asphalt cracks	
Gaps between pedestals and pipes	
Things out of place (i.e. posts on top of chain link fences)	
Linear offset	
Chipped paint with adjacent new residuals	
Differential inclination	
Settlement or uplifting of structures	
Cracked grout at the pipe penetration to the wall	
Link seal at the concrete/pipe contact out of place or deformed	
Other	

Comments:

Signature:

PIPELINE GEOTECHNICAL INSPECTION

Line: _____

Milepost: _____

River / Road / Location: _____

Date and Time: _____

Inspector: _____

Special features to look for in detail during the visual inspection of the Pipeline Right-of-way to identify potential geotechnical activity that may affect the integrity of the line.

Please document all findings and note additional comments in the comment section.

Criteria	**Checked**
Ground disruption	
Open fissures	
Separation of soil and pipes at the riser	
Exposed pipeline	
Concrete / asphalt cracks in the vicinity	
Fallen or leaning trees	
Things out of place (i.e. posts on top of chain link fences)	
Other local disturbances (i.e. buildings or structures affected)	
Other	

Sketch:

Comments:

Signature:

OMER Form F-195.402(e)

SITE SECURITY PLAN

Incident Name:_____ **Location:**_____

Effective Date:_____ **Effective Time Period:**_____

Spill Location:_____ **Prepared By:**_____

1. Perimeter (safety zone) around the spill is as follows: (Describe geographic boundaries)

_____

_____

_____

2. Locations requiring security: (streets, EOC entrances, waterfronts, air space, etc.)

_____

_____

_____

3. System for controlling access to spill site is as follows: (pass system, barricades, etc.)

_____

_____

_____

4. System to safeguard equipment is as follows:

_____

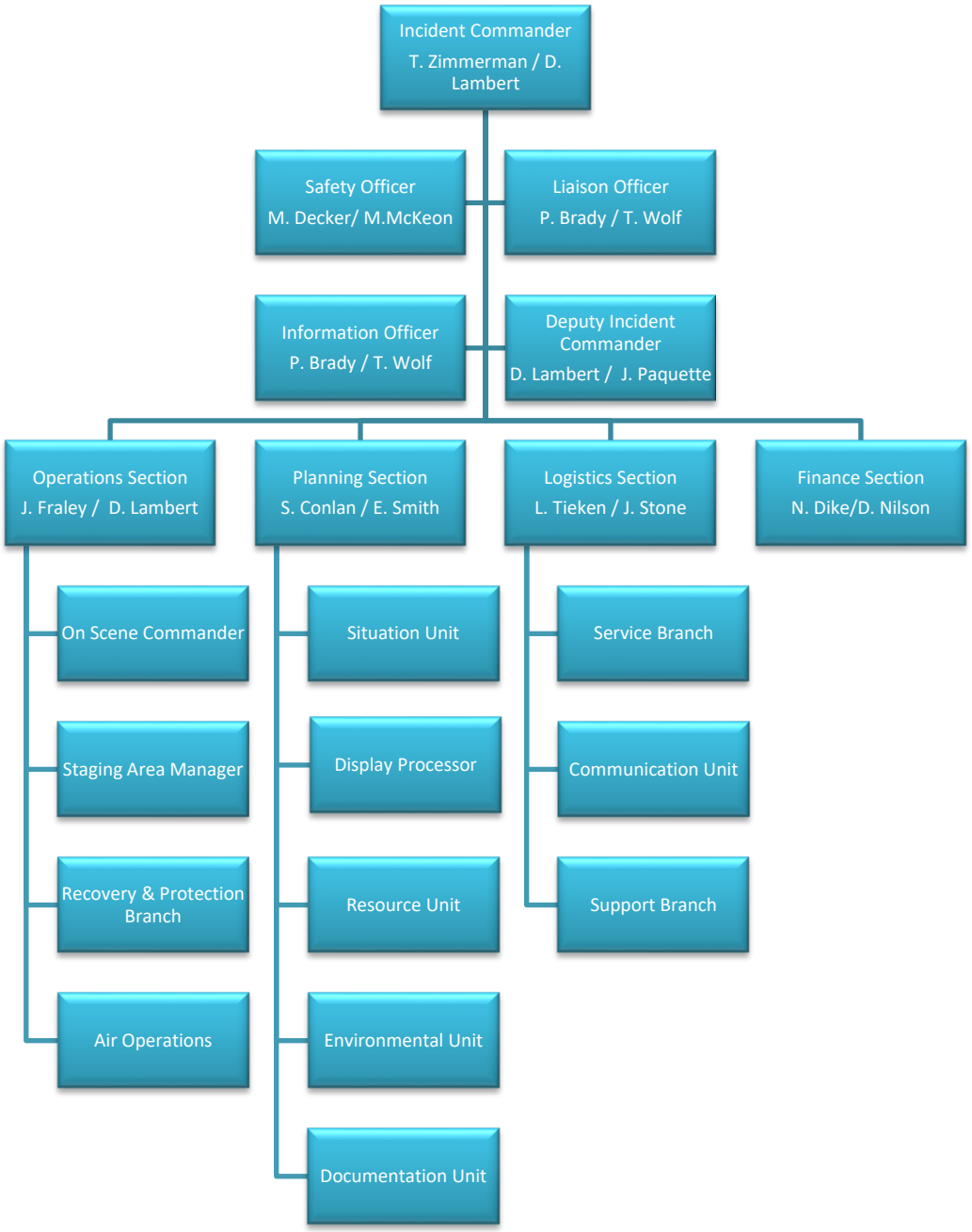
_____

_____

5. Personnel required on-scene to maintain site security:

Organization/Agency	Number of Personnel	Assignment

NORTHWEST PIPELINES REGION LOCAL INCIDENT MANAGEMENT TEAM



OLYMPIC PIPE LINE COMPANY SPILL RESPONSE EQUIPMENT
(Operated by U.S. Ecology)

LOCATION	WRRL #	CLOSEST MP	TRAILER/TRUCK (AGE)	BOATS (AGE)	PUMPS / SKIMMERS	BOOM	OTHER
Bayview Products Terminal 14879 Ovenell Road Mt. Vernon, WA 98273	30123	37	20' white Response Trailer (2008) Ford F250 4x4 Crew Cab (2008)	12' V bottom skiff with 15hp o/b (2008) (mounted on response truck)	2" diesel pump skimpac skimmer (26 gpm derated capacity)	200' - 5" sorbent 200' - sorbent sweep 1600' - 12" river 400' - 6" pond	8" PVC pipe (2) 3 x 8', open top drums
BNSF Tacoma Yard **1231 E 21st Street** Tacoma, WA 98421	30124	130	20' white Response Trailer (2008) Ford F250 4x4 Crew Cab (2008)	12' V bottom skiff with 15hp o/b (2008) (mounted on response truck)	2" diesel pump skimpac skimmer (26 gpm derated capacity)	200' - 5" sorbent 200' - sorbent sweep 1600' - 12" river 400' - 6" pond	8" PVC pipe (2) 3 x 8', open top drums
Castle Rock Station 185 Kalmbach Quarry Rd Castle Rock, WA 98611	30125	209	20' white Response Trailer (2008) Ford F250 4x4 Crew Cab (2008)	12' V bottom skiff with 15hp o/b (2008) (mounted on response truck)	2" diesel pump skimpac skimmer (26 gpm derated capacity)	200' - 5" sorbent 200' - sorbent sweep 1600' - 12" river 400' - 6" pond	8" PVC pipe (2) 3 x 8', open top drums

Notes:

" – inches
' – feet
- number
GPM – gallon per minute
hp – horse power
o/b – on board
MP – mile post
WRRL – Worldwide Response Recourse List

SPILL RESPONSE CONTRACTORS

COMPANY	LOCATION	PHONE NUMBER	HAZ MAT	VAC TRUCK	VESSEL/ WATER	PIPELINE/ CONSTRUCT	TANKS	DISPOSAL	GEOTECH/ ENVIRO	SAFETY/IH	AIR
Antea Group	Bellevue, WA	(800) 477-7411							X		
Arctic Air Service	Warrenton, OR	(503) 861-3700									X
Baker Tanks	Everett, WA	(425) 347-8811					X				
Barr Air Patrol	Vancouver, WA	(972) 222-0229									X
Bureau Veritas	Seattle, WA	(206) 763-7364							X	X	
Classic Helicopter	Seattle, WA	(206) 767-0515									X
Cowlitz Clean Sweep Inc.	Longview, WA	(888) 423-6316	X	X	X						
CTEH	Edmonds, WA	(866) 869-2834								X	
FOCUS Wildlife	Anacortes, WA	(800) 578-3048 24 hr dispatch									X
GeoEngineers	Redmond, WA	(425) 861-6056	X						X		
Heritage Environmental	Several US Locations	(877) 436-8778						X			
IBRRC (International Bird Rescue Research Center)	Fairfield, CA	(888) 447-1743							X		
Innovac	Edmonds, WA	(206) 686-0252		X							
Marine Spill Response Corp (MSRC)	Everett, WA	(800) 259-6772 24 hr dispatch	X		X		X	X	X		X
Matrix Service Inc.	Bellingham, WA	(360) 676-4905	X	X		X					
Michels	Brownsville, WI	(920) 583-3132				X					
NRCES	Seattle/Astoria/Portland	(800) 337-7455 24 hr dispatch	X	X	X	X	X	X	X	X	X
Olson Bros Pro Vac Clean Service	Puyallup, WA	(425) 432-8005	X	X	X						
Snelson Company	Mount Vernon, WA	(360) 856-6511	X			X					
URS	Seattle, WA	(206) 438-2700	X						X		
Western Refinery Service	Bellingham, WA	(360) 366-3303	X	X							

ISOLATION AND CONTAINMENT

Isolation

Potential emergency situations dictate the immediate isolation of affected area(s) and evacuation of directly or potentially affected employees and the general public. Since each emergency situation is unique, the size of the area requiring isolation and the method of isolation will vary on a case-by-case basis. Personal and public safety is the first priority of responding employees.

Following initial shutdown, the Operations Controller shall dispatch all necessary field personnel within the affected response zone(s) to accomplish isolation, utilizing the closest available personnel to the suspected release location to close hand-operated block valves and complete isolation. (Refer to the block valve drawing included in this document.)

Containment

Containment of a spilled product is crucial to limit downstream and/or down gradient migration and spread of spilled product. A rapid and effective response effort should be initiated immediately.

For releases to soil with potential impacts to groundwater, the Environmental Coordinator will notify BP Remediation Management. Remediation Management will immediately begin site assessment to determine the extent of the impact. Groundwater assessment will be performed utilizing existing wells, if present, obtaining grab samples and installing wells.

The *Olympic Pipe Line Company Geographic Response Plans* and the *Washington State Geographic Response Plans* are designed to provide the spill responder with rapid access to the following information:

- Identification and description of spill response worksites facilitating:
  - Boom deployment,
  - Earthen berm and/or dam construction,
  - Personnel and equipment staging,
  - Spilled product recovery via vacuum truck units, skimming systems, manual labor, etc.
  - Boat launching, and
  - Field command post establishment,
- Location of socioeconomic resources, inclusive of:
  - Municipal and industrial surface water intakes
  - Parks and recreational areas,
  - Marinas and yacht anchorages, and
  - Populous locales within the immediate vicinity, and
- Identification of wildlife habitats and native/migratory/game species.

FACILITY LOCATIONS	
Anacortes Station 8830 North Texas Rd. Anacortes, WA 98221	Main: (360) 293-3551 Fax: (360) 293-8855
Allen Station 16292 Ovenell Rd Mt. Vernon, WA 98273	Main: (360) 428-4214 x6007 Fax: (360) 757-1972
Bayview Terminal 14879 Ovenell Road Mt. Vernon, WA 98273	Main: (360) 428-4214 Fax: (360) 848-1484
Cherry Point Station 4476 Aldergrove Rd. Ferndale, WA 98248	Main: (360) 371-7411 Fax: (360) 371-5614
Castle Rock Station 185 Kalmbach Quarry Rd. Castle Rock, WA 98611	Main: (360) 274-4361 Fax: (360) 274-8172 Alt: (360) 274-8385
"E" Booster (Shell) 8505 South Texas Rd. ("A" Street) Anacortes, WA 98221	Main: (360) 293-5858
Ferndale Station 3901 Unick Rd (6th and "L" Street) Ferndale, WA 98248	Main: (360) 384-4231 Fax: (360) 384-4200
Linnton Delivery Facility 10225 N.W. 112th Portland, OR 97231	Main: (503) 286-3272 Alt: (503) 285-8396
Olympia Station/Junction 11711 Vail Cut-off Rd SE Rainier, WA 98576	Main: (360) 446-2300 Fax: (360) 446-7842
Portland Delivery Facility 9420 N.W. St. Helens Road Portland, OR 97231-1135	Main: (503) 286-3997 Alt: (503) 285-8395 Fax: (503) 289-7427
Portland Junction Station 6160 N.W Front Portland, OR 97213	Main: (503) 222-1528
Renton Control Center 2319 Lind Ave SW Renton, WA 98055	Main: (425) 235-7726 Alt: (888) 271-8880 Fax: (206) 235-7717

FACILITY LOCATIONS	
Renton Station 2319 Lind Ave SW Renton, WA 98057	Main: (425) 235-7736 Fax: (425) 271-5320
Renton Admin Office 600 SW 39th Street Renton, WA 98057	Main: (425) 981-2510 Fax: (425) 981-2525
Sea-Tac Delivery Facility (Swissport) 2350 S. 190 St. Seattle, WA Sea-Tac, WA 98158	Main: (206) 499-8687 (Duty Phone)
Seattle Delivery Facility 2444-52 13th Ave. S.W. Seattle, WA 98134	Main: (206) 682-1211 Fax: (206) 343-7488
Tacoma Station 4420 180th St. E Tacoma, WA 98446	Main: (253) 271-0341 X 8002 Fax: (253) 271-7946
Tacoma Delivery Facility 706 East "F" St. Tacoma, WA 98421	Main: (253) 627-2505 Fax: (253) 627-1447
Tacoma Junction Station 2660 Frank Albert Rd. Fife, WA 98424	Main: (253) 271-0341 x2529 Fax: (253) 271-7946
"K" Booster (Tesoro) 10200 W March Point Rd. (7th & "G" Street) Anacortes, WA 98221	Main: (360) 293-5555
Vancouver Junction Station 8815 N.W. Lower River Rd. Vancouver, WA 98660	Main: (360) 695-8723
Vancouver Delivery Facility 2251 Saint Francis Lane Vancouver, WA 98660	Main: (360) 693-1364 Fax: (360) 693-8255
Woodinville Station 21909 45th Ave S.E. Bothell, WA 98021	Main: (425) 981-2580 Fax: (425) 949-7162

BLOCK VALVE DRAWING

STATION AND VALVE DRIVING DIRECTIONS

CHERRY POINT TO ALLEN STATION	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
Cherry Point Station	48.878034	-122.725797	From I-5, take Slater Rd / Lummi Island exit #260, go west on Slater Road, then north on Lake Terrell Road and then west on Mountain View and north on Rainbow Road, which will turn to the west, then go north on Kickerville and west on Aldergrove approximately 1 mile. Cherry Point Station is on the north side of Aldergrove Road. (Distances are approximately 1 mile on country roads where one road crosses another.)
MP 2.5 Check Valve 16'' Cherry Point Lateral	48.855462	-122.70416	From Cherry Point refinery, head south on Kickerville Rd. Continue straight on Kickerville at Henry (do not bear left onto Rainbow Rd.) Continue 0.5 miles on Kickerville to dead end - Check Valve will be on left.
Ferndale Station	48.826527	-122.701272	From I-5, take Slater Rd./ Lummi Island exit #260. Turn left onto Slater Rd. and continue west for seven miles. Turn right on Lake Terrell Rd. and go north approximately 1 mile to Unick Rd. Turn left on Unick Rd and go 1/2 mile to the Phillips Refinery Main Gate. (There are two security check pts at this time.) When you pass the main security check pt. turn right, go 1 block to H street and turn left. Go to the end of H street and turn right onto L street. Continue 1/2 mile on L street to the intersection of 6th. OPL is at 6th and L Street intersection, south end of 6th
MP 7 Block Valve (MOV) 16''	48.818358	-122.554424	From I-5, take Slater Rd. / Lummi Island exit #260. Turn left and go 0.3 mile and turn right on Rural Ave. Go 150' on right hand side.
MP 8 Check Valve 16''	48.81789807	-122.5292975	From I-5, take Slater Rd./ Lummi Island exit #260. Turn right on Slater rd and go 0.8 of a mile to Northwest Ave and turn left. Check valve is 150' on left side of roadway.
MP 12 Block Valve (MOV) 16''	48.804086	-122.451669	Going north on I-5, take Sunset / Mt Baker exit #255 and turn right. Go 0.8 mile to third traffic light, at Hannigan Rd, and follow it for 1.9 miles and turn left on Van Wyck rd. Block Valve is 0.3 mile at intersection in board fenced area.
MP 16 Block Valve/Check Valve (MOV) 16''	48.747696	-122.433648	Going North on I-5, take Exit #253, Lakeway Drive. Turn right on King St. and go one block to Lakeway Drive. Turn Left and follow Lakeway Drive 1.4 miles to traffic light at Kenoyer Dr./ Silver Beach Rd. intersection. Turn left onto Silver Beach Rd and look for dirt driveway 100' on right from the intersection.
MP 16.7 Check Valve 16''	48.738843	-122.433511	Going North on I-5 take Exit #253, Lakeway Drive. Turn right on King St. and go one block to Lakeway Drive. Turn Left and follow Lakeway Drive 1.4 miles to traffic light at Kenoyer Dr./ Silver Beach Rd. intersection. Turn right on Kenoyer Dr. and follow it 0.3 miles and turn left on Alvarado Dr. Follow it to the end of the pavement. Check Valve is 100 yards down the dirt road in the pipe fenced area.
MP 22 Check Valve 16''	48.668083	-122.410512	Going North on I-5, take North Lake Samish exit #246. Turn right on Samish Way, it will turn into North Lake Samish Rd. Follow this over the bridge to Roy Rd. Take the

CHERRY POINT TO ALLEN STATION	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
			first logging rd. to the left and park at the logging gate (Gate combo 4567). The check valve is 150 yards up the dirt rd at the crest of the hill in vault.
MP 20.8 Check Valve 16''	48.685122	-122.427055	Going North on I-5 take North Lake Samish exit #246. Turn right on Samish Way and go 0.2 miles to Old Samish Rd. and turn right. Go 1.3 miles and turn left into mobile home park. Keep to the right and follow dirt road past the barn too logging gate on Chuckanut Creek (Gate Combo 5050). ML Check is 150' up the road, then turn right and follow path to the clearing where Check Valve is located.
MP 25 Check Valve 16''	48.62905	-122.375846	Going North on I-5, take Alger Exit #240. Turn left and go West 0.4 miles and turn left on Barrel Springs Rd. Follow this 0.2 miles and turn right on Shaw Rd. Go 0.3 mile to 1116 and 1120 and turn left into the driveway. You must stay to the left on this road and it will come out on the ROW at the Check Valve.
MP 28 Block Valve (MOV) 16''	48.592657	-122.37518	From I-5 North, take Exit #240 then east on Lake Samish Rd 0.2 miles, then South on Colony Road for 1.8 miles, then west on Wood Road for 1.7 miles. Block valve is just north of road.

ANACORTES LATERAL	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
MP 34 Block Valve (MOV) 16''	48.508532	-122.38914	From I-5, take Exit #232 and go west on Cook Road for 2.8 miles, which is then called Bradley Road. Our block valve is 0.6 miles just south of the Bradley Road.
Bayview Products Terminal	48.459188	-122.427075	From I-5 take Exit #230, go west on Highway 20 for 3.0 miles and turn right on Higgins Airport way. Go 0.3 miles and turn left on Ovenell Rd. Go .25 miles and BPT is on the right side of the road.
Anacortes Station	48.477501	-122.548904	From I-5, take exit #230. Go west on Highway 20 for 7.1 miles, turn right on Padilla Heights road, go 2 miles and turn right on E. March Pt Rd. Go 1 mile, turn left on North Texas road, the road will bend right, the station is on the left side of the road.
MP 2.3 Block Valve (HOV) 16''	48.455119	-122.527682	From I-5, take exit #230 and go west on Hwy 20 for 7.1 miles then north (right) on Padilla Heights road for 0.1 miles then right on Casino Dr, right at stop sign and stay to your right. Left on Padilla Heights Rd. Access road is on your left 150'.
MP 5 Block Valve (HOV) 16''	48.447483	-122.466027	From I-5, take exit #230 and go west on Highway 20 for about 6.4 miles to the Bay View Edison road, turn right. Go north for 0.1 miles, turn right on dirt road, go 150' - block valve is on the right.

ALLEN STATION TO RENTON STATION	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
Allen Station	48.455649	-122.390824	From I-5, take exit 230, go west on Highway 20 for 2.2 miles and turn north onto Avon-Allen Rd, left on Ovenell Rd for .6 miles gate is on the left.
MP 41 Block Valve 16" & 20" (HOV)	48.398711	-122.370963	North on I-5, take exit #226, to west on Kincaid Street 0.3 mile, turn (right) north on South 3rd Street, go 0.3 miles and road will turn (left) west and become Division. Go 0.4 miles and turn (left) south on South Wall, go one block (300 feet) turn (right) west on McLean Road. Go 0.9 mile and turn (left) south on Penn Road go 1.6 miles road turn (right) west and becomes Calhoun Road, go .2 mile. Valves on (left) south side of road.
MP 42 Block Valve 16" & 20" (HOV)	48.391993	-122.357726	From I-5, take exit #221, go west take quick turn north (right) on Conway, go 2.1 miles, turn west (left) on Stackpole Road go 0.9 miles, turn north (right) on Dike Road go 1.5 miles. Valves on left side of road.
MP 46 Block Valve 16" & 20" (MOV)	48.34113	-122.321785	From I-5, take exit #221, go east on McMurray 0.5 mile. Valves on left side of road.
MP 48.8 Check Valve 16'' & 20''	48.303992	-122.295823	From I-5, take exit #218, go east on Starbird Road 1 mile to Bulson Road. Turn south (right) go 0.3 miles, turn right into driveway #23502 - up driveway almost to house, check valve is 100' south (left) of driveway.
MP 56 Block Valve 16'' & 20'' (MOV)	48.227736	-122.225904	From I-5, exit #212, go east on 268th Street NE 0.2 mile, turn south (right) on 4th Ave. NW go 1 mile to valves at end of road
MP 57 Block Valve 16'' & 20" (HOV)	48.209606	-122.210827	From I-5, take exit #210 go east on 236th NE.0.3 miles. Valves on right side of road.
MP 59 Block Valve 16" & 20" (MOV)	48.181387	-122.193079	From I-5, take exit #208, go east on Arlington cut-off road 0.3 miles, turn south (right) on Smokey Point Blvd go 0.3 mile turn east (left) on 204th street NE. Valves on right side of road.
MP 63 Block Valve 16" & 20" (MOV)	48.134122	-122.160688	From I-5, take exit #206 go east 1 mile turn south (right) on 51st Ave NE. I mile turn east (left) on 152nd St NE, block valve is on the left.
MP 64 Check Valve 16"	48.111555	-122.140999	From I-5, take exit #206 go east 2 miles to 67th Ave NE, go south (right) 2.9 miles just past 132nd St. NE, block valve is on the right
MP 66 Block Valve 16" & 20" (MOV)	48.09562106	-122.1282666	From I-5, take exit #206, go east on 172nd Street NE. 2 miles, turn south (right) on 67th Ave. NE go 3.7 miles, turn east (left) on 112th Street NE., go to end of road through locked gate (Company locked) at Concrete NorWest Sand and Gravel straight 500 yards. Valves on right side of road.
MP 72 Block Valve	48.005229	-122.128624	From I-5, take Hwy 2, exit #194 go east 2.2 miles, turn north (left) on Lake Stevens Highway 204, go 0.2 miles, turn

ALLEN STATION TO RENTON STATION	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
16" & 20" (MOV)			northwest (left) on 69th Ave. SE – Sunnyside Blvd. Go 2.1 miles. Valves on left side of road.
MP 76.5 Block Valve 20" (HOV)	47.939933	-122.160336	From I-5, take Hwy 2, exit #194 go east 1.8 miles turn off of the 20th st exit take a right at stop sign. Left on 43rd Ave Se. Follow to 52nd St Se which turns into Home Acres Rd for 1.25 miles. Block valve will be on south side of road.
MP 78 Block Valve 20" (HOV)	47.92551	-122.167457	From I-405, take exit #23 and head north on Hwy 522 to Hwy 9 exit. Turn left (north) on Hwy 9, go 8.4 miles to light at Marsh Rd. Turn east (right) on Marsh Rd ½ a block to "T", bear left (north) at "T", to Airport Way. Follow north approximately 1.1 miles, cross railroad tracks, turn left on Lowell-Snohomish River Rd. Head west on the road for approximately 3.4 miles. Locate the pipeline vent markers on both sides of the road, the block valve is just south of the railroad tracks 200' east from the underpass entrance.
MP 79 Block Valve 16'' (MOV) & 20'' Check Valve	47.903305	-122.169114	From I-405, take exit #23 and head north on Hwy 522 to Hwy 9 exit. Turn left (north) on Hwy 9, go approximately 6.9 miles to Lowell-Larimer Rd. and turn west (left) at this light. Go approximately 2 miles to intersection of Marsh/Lowell-Larimer and Seattle Hill Rds. Bear right then turn left back onto Lowell-Larimer Rd. and continue on for approximately 1.4 miles. Watch for the pipeline markers and gated area of the road, the Block Valve site is 200' north of the road down the gravel driveway behind fencing.
MP 80 Block Valve 20" (HOV)	47.895546	-122.169323	From I-5, take exit #186, head east on 128th St/Hwy 96 to 35th Ave. SE. Turn left at light; go north approximately 1 mile to 116th St SE, turn right. Go approximately 0.7 miles to Pinehurst housing development; turn left on 45th Dr SE, then immediately east (right) on 115th PL SE, which eventually turns into 47th Ave SE heading north. Follow 47th Ave till you get to 113th St SE turn west (left) total trip from 116th is 0.3 miles. The Block Valve site will be on your right hand side gated and clearly visible from the road approx. 25'. From I-405, take exit # 26, Bothell-Everett Hwy north (right) on 180th. Left on 35th Ave Se travel north approx. 3.5 miles to 116th St SE, turn right. Follow directions as above.
Woodinville Station	47.798892	-122.171062	From I-405, take exit # 23 and head north on Hwy 522 to Hwy 9 exit. Turn left (north) at light, head north for 0.7 miles, then turn west (left) at 228th St SE for Approx. 1.4 miles till you reach 45th Ave SE, then turn north (right). Follow 45th Ave 0.5 miles till you come to address 21909 45th Ave SE and turn right at driveway.
MP 89 Block Valve 16" & 20" (MOV)	47.762627	-122.173828	From I-405, take exit # 24 (Beardslee Blvd exit) and head east on NE 195th St. Follow for approx. 0.4 miles to 120th Ave NE, turn south (right). After about 0.5 miles turn left at first driveway of the Archstone apartment complex across from Home Depot and between the Starbucks coffee house and Seattle times parking lot end. Go down new Apartment

ALLEN STATION TO RENTON STATION	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
			complex road till you come to pipeline markers (approx. 4 blocks). The Block Valves are north of that location gated and visible from the road (follow dirt road north (left) for access). MP marker 89 is clearly visible from the road.
MP 89.5 16'' Check Valve & 20" Block Valve (HOV)	47.75547162	-122.1738939	From I-405, to exit # 23 (Hwy 522), go approx. 1 mile to the Woodinville exit and head south (right) on Hwy 202 for 0.2 miles to NE 175th St/Hwy 202 and turn west (right) at the light. Travel 0.3 miles across bridge and railroad tracks and turn west (right) on NE 173rd PL. Follow to the first driveway on right, approx. 0.3 miles - you'll cross over the pipeline at this time before you get to the driveway. Go over the railroad tracks again and turn east (right) and follow to the pipeline crossing approx. 2 blocks, with the Block Valve on the North side within the small island in the parking lot.
MP 95.5 Block Valve 16'' & 20" (MOV)	47.67776	-122.158556	From I-405, take exit # 18 (NE 85th St) and head east approx. 1.4 miles, look for the pipeline markers around the 13600 block of NE 85th St. The Block Valve's will be on the south side of the road gated and clearly visible from the road.
MP 98.5 Block Valve 16" & 20" (MOV)	47.63138	-122.159494	From I-405, take exit # 14, Hwy 520, heading east towards Redmond. Take the very first exit on 520 which is Northrup Way and turn east (left) at the light stay in the left hand lane, go about 6 blocks then turn north (left) on 130th Ave NE and go approx. 4 blocks to NE 24th St. Turn east (right) on 24th and go approx. 5 ½ blocks until you come to the pipeline crossing. The Block Valve's will be on the south side of road at the 13500 block clearly gated and visible from the road, approx. 100'.
MP 100.1 Block Valve 20'' (HOV)	47.603459	-122.158769	From I-405, take exit # 12 (SE 8th St) and go east approx. 0.4 miles to Lake Hills Connector, take this road east (right) and go approx. 1.5 miles to 140th Ave SE. Turn north (left) on 140th and go 1 block north to SE 7th St and turn west (left), go all the way to the end of the road where it dead ends at a trail. Follow the gravel trail downhill till you come to the pipeline Right of Way which is 1 or 2 blocks of walking, the pipeline Block Valve site is on the south (left) hand side at the bottom of the trail approx. 25'.
MP 101.8 Block Valve 20'' (MOV)	47.588158	-122.158339	From I-405, take exit # 10 (Coal Creek Pkwy) and head east for approx. 0.5 miles to Factoria Blvd/128th Ave SE, turn north (left) at the light. Follow this road for approx. 1.6 miles and stay in your right hand lane when approaching SE 26th St. (you will go underneath I-90). Turn east (right) on SE 26th St (Kamber Rd.) and go approx. 0.3 miles to the pipeline crossing at 13615 SE 26th St. The 16" Block Valve site will be on the south side of the road gated and clearly visible within 50' of the road. The 20" Block Valve site will be on the north side of the road.
MP 102 Block Valve 16'' (MOV)	47.587143	-122.158356	From I-405, take exit # 10 (Coal Creek Pkwy) and head east for approx. 0.5 miles to Factoria Blvd/128th Ave SE, turn north (left) at the light. Follow this road for approx. 1.6

ALLEN STATION TO RENTON STATION	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
			miles and stay in your right hand lane when approaching SE 26th St. (you will go underneath I-90). Turn east (right) on SE 26th St (Kamber Rd.) and go approx. 0.3 miles to the pipeline crossing at 13615 SE 26th St. The 16" Block Valve site will be on the south side of the road gated and clearly visible within 50' of the road. The 20" Block Valve site will be on the north side of the road.
MP 103 Check Valve 20"	47.56302	-122.169659	From I-405, take exit 10 and head east on Coal Creek Parkway for .6 miles. Check valve is in a vault in north edge of parking lot.
MP 103 Check Valve 16''	47.571255	-122.157082	From I-405, take exit #10 (Coal Creek Pkwy) and head east and take a left at Factoria Blvd. Right on SE Newport way for .7 miles and turn right at Somerset Blvd Se, left on Somerset Blvd valve is on your left at chain link fence.
MP 105 Block Valve 16'' & 20" (MOV)	47.537778	-122.169522	From I-405, take exit # 10 (Coal Creek Pkwy) and head east, continue on Coal Creek Pkwy in a Southeast direction for approx. 2.5 miles. Turn west (right) on SE 69th Way and go .2 miles to the pipeline crossing at the 12800 block, open the Right of Way gate and head south (left) down gravel road for 2 blocks. The Block Valve is approx. 250' south of the gravel road.
MP 106 Block Valve 16" & 20" (MOV)	47.513218	-122.171135	From I-405, take exit # 5 (NE Park Dr/Sunset Blvd) and head east off the freeway, stay on Sunset for approx. 1.8 miles and turn north (left) at Union Ave NE for approx. 0.6 miles then turn west (left) on SE 101st St which eventually becomes SE 100th St. Follow down 101st for 0.3 miles to the pipeline crossing at the 12500-12600 block, then turn left on the gravel road to the clearly visible gated area 100' south of 100th St.
MP 106 Block Valve 16" & 20" (MOV)	47.513218	-122.171135	From I-405, take exit # 5 (NE Park Dr/Sunset Blvd) and head east off the freeway, stay on Sunset for approx. 1.8 miles and turn north (left) at Union Ave NE for approx. 0.6 miles then turn west (left) on SE 101st St which eventually becomes SE 100th St. Follow down 101st for 0.3 miles to the pipeline crossing at the 12500-12600 block, then turn left on the gravel road to the clearly visible gated area 100' south of 100th St.
MP 110 Block Valve 16" & 20" (MOV)	47.476309	-122.171624	From I-405, take exit # 4 (Maple Valley Hwy) and head east for approx. 0.1 mile, turn northeast (left) on SE 5th St 0.4 miles to the pipeline crossing. The Block Valves are gated and clearly visible on the north side of the road approx. 50' from road.
MP 110.5 Check Valve 16" & 20"	47.473652	-122.176681	From I-405, take exit #2 (Rainier Ave/Hwy 167) north to S Grady Way. Turn right (east) follow for 0.4 miles to Talbot Rd. turn south (right). Take Talbot Rd. for 0.5 miles to S. Puget Dr. and turn southwest (left) and take this for approx. 1.4 miles until you get to the intersection of Royal Hills Dr/Edmonds Dr. SE. Turn northeast (left) onto Royal Hills Dr. for 0.4 miles to new road called Harrington Pl. SE, this is a new development called the Shadow Hawk Town homes

ALLEN STATION TO RENTON STATION	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
			(Code Key-Key 0415). Once on Harrington Pl. continue on 0.2 miles to the pipeline crossing, from here the MP marker 110 should be clearly visible. From MP 110 marker go ¼ mile north to the valve sites, which are in concrete vaults.
MP 111 Block Valve 20" (HOV)	47.469956	-122.191586	From I-405, take exit #2 (Rainier Ave/Hwy 167) north for one block and turn west (right) on SW Grady Way and follow for 0.4 miles to Talbot Rd. turn south (right). Take Talbot Rd. for 0.5 miles to S. Puget Dr., turn southwest (left) and follow for approx. 1.4 miles to a PSE service road, which is approx. ½ block from the intersection of Royal Hills/S Puget Dr./Edmonds Dr. SE. Take this service road west (left) for 0.3 miles and look for the pipeline crossing - the Block Valve site is on the south side of the service road approx. 100' in a concrete vault.
MP 112 Block Valve 20" (HOV)	47.459059	-122.218799	From I-405, take exit # 2 (Rainier Ave/Hwy 167) north one block to SW Grady Way then turn west (left) and go 0.3 miles to Lind Ave SW. Turn south (left) on Lind Ave over the 405 over pass to the first light which is SW 16th St. Turn east (left) and follow approx. 0.7 miles (becomes East Valley Rd.) to the pipeline crossing around the 2300 block of East Valley, turn west (right) on driveway to clearly visible and gated area approx. 100' west of the road.
Renton Station	47.458068	-122.224366	From I-405, take exit # 2 (Rainier Ave/Hwy 167) north one block to SW Grady Way, turn west (left), go 0.3 miles to Lind Ave SW and turn south (left). Go 0.9 miles on Lind to the driveway address of 2319 Lind Ave SW on the west side of the road.

SEA-TAC LATERAL	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
MP 1.5 Block Valve 12'' (HOV)	47.476437	-122.227465	From I-405, take exit # 2 (Rainier Ave/Hwy 167) north, proceed 0.3 miles to SW 7th St. Turn west (left) on 7th 0.1 miles to Hardie Ave SW and turn north (right), follow Hardie Ave for 0.2 miles then turn west (left) on SW 5th PL. Go approx. 0.3 miles and turn west (left) on SW 5th Ct., go 0.1 miles and follow to the left of apartment building "H" driveway of the Avalon Greenbriar Apts. The Block Valve site is on the right side of apartment building "K" slightly downhill and approx. 100' from the driveway.
MP 2 Check Valve 12''	47.481663	-122.226964	From SR 167, heading north take the SR 900/SW Sunset Blvd headed west. Go .5 miles and turn (right) north on Earlington Ave SW left on SW Langston Rd. Valve site is 450' up the road on your right.
MP 6 Block Valve 12'' (MOV)	47.523506	-122.278396	Take I-5, north to exit # 157 (Martin Luther King Jr. Way). Stay in the right hand lane for approx. 1.1 miles and turn east (right) on S Henderson St. proceed on Henderson for 100' and look for pipeline crossing markers, the Block Valve site is on the north (left) side of Henderson St. gated

SEA-TAC LATERAL	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
			and clearly visible from the road within 50'.
MP 10 Block Valve 12'' (MOV)	47.569684	-122.326049	Take I-5, south to exit # 163 (Safeco Field/Spokane St. exit). Once off the exit at the bottom of the ramp at the first light, which is 6th Ave S go 0.1 miles heading west on Spokane St. to the first left hand "U" turn heading east on Spokane St. Go 0.1 miles back to 6th Ave S then turn south (right) on 6th and follow for 0.1 miles, the Block Valve site on the SE corner of 6th and Charlestown approx. 50' from 6th Ave S.
MP 1.5 Block Valve	47.476356	-122.227467	From SR 167 and I 405 intersections take Rainer Ave S North for .18 miles and turn left and go straight onto Stevens Ave Sw. Turn left on SW 5th St. Valve is located down the hill in yard.
MP 2 Check Valve	47.48767	-122.22697	From SR 167 and I 405 intersections take Rainer Ave S North for .66 miles and turn left on SR 900/Sunset Blvd. Go .11 miles and turn right on Hardie Ave SW and keep left onto Langston. CV will be on your right at .38 miles.
MP 6 Block Valve (MOV)	47.523506	-122.278397	From I-5 south bound take exit 158 and turn left on Boeing Access rd. Turn left onto Martin Luther King Jr Way South. Go for .95 miles and turn then right onto South Henderson St. Valve site will be on your left. From I-5 North bound take exit 157 and go straight onto Martin Luther King Jr Way South for 1.72 miles and turn then right onto South Henderson St. Valve site will be on your left.
MP 10 Block Valve (MOV)	47.56966	-122.32604	From I-5 South bound take exit 163A and go straight on West Seattle Freeway ramp. Take the South Spokane St ramp and head east on South Spokane St and turn right onto 6th Ave South and then turn left onto South Charlestown St. Valve will be on your right. From I-5 North bound take exit 163 and keep left on South Spokane St ramp. Turn left onto 6th Ave South and then turn left onto South Charlestown St. Valve will be on your right.
Seattle DF	47.582619	-122.351571	From I-5, north take exit # 163 the West Seattle Freeway exit, on the West Seattle Freeway go for approx. 0.9 miles to the Harbor Island/11th Ave SW exit. Once the exit is made go 0.6 miles staying in the middle lane to Klickitat Ave SW. Turn north (right) on Klickitat Ave SW and continue on for 0.6 miles until you reach SW Lander St. and turn east (right). Follow Lander for 0.1 mile and turn north (left) on 13th Ave SW, follow 13th for 0.2 miles to the address of 2444 13th Ave SW on the east (right) side of the road.
MP 1 Block Valve 12" (HOV)	47.456288	-122.242866	From I-405, take exit #1 (West Valley/Tukwila) and head south on West Valley for 0.5 miles to Strander Blvd. Turn east (left) on Strander to the dead end barrier gate between Jack in the Box and Wendy's. This will put you next to the interurban trail. Follow the trail approx. 220' south to the Block Valve site which is on the west side 25' from the trail in a concrete vault.
MP 1.5 Block Valve 12" (HOV)	47.455748	-122.245229	From I-405, take exit #1 (West Valley/Tukwila) and head south on West Valley for 0.5 miles to Strander Blvd. Turn west (right) on Strander for 0.2 miles and turn south (left)

SEA-TAC LATERAL	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
			into the Pacific Gulf Business Park. Stay to the left of the driveway heading back towards the river crossing barrier gate and walking trail. The Block Valve site is within 20' west (look for pipeline markers) of the walking trail slightly downhill and in a concrete vault.
Sea-Tac Terminal	47.433975	-122.302266	From I-5, take exit # 152 (Orillia Rd./S 188th St.) west to S 188th St. Follow 188th St. for 1.2 miles (past International Blvd) and turn left (south) on 28th Ave S for 0.2 miles. Turn right (west) at the first intersection, go 0.1 miles, turn north (right) again – turns to gravel road - follow to the Seatac facility. Tanks should be visible at this point.

RENTON TO PORTLAND	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
MP 119.5 Block Valve 14'' (MOV)	47.37037573	122.2406607	From I-405, take exit # 2 (Hwy 167) south for approx. 6.7 miles to the Des Moines/Willis St. exit (Hwy 516). Turn east for 0.2 miles to 74th Ave S, then turn south (right) on 74th for 0.6 miles until you come to S. 259th St. and turn with the road west (left) for 0.1 miles to the pipeline Right of Way. Turn left into driveway and the Block Valve site is 200' north of S. 259th St. and clearly visible from the road.
MP 119.6 Block Valve 14'' (HOV)	47.367428	-122.2402654	From I-405, take exit # 2 (Hwy 167) south for approx. 6.7 miles to the Des Moines/Willis St. exit (Hwy 516) Turn east for 0.2 miles to 74th Ave S, then turn south (right) on 74th for 0.6 miles until you come to S. 259th St. and turn with the road west (left) for 0.3 miles to 78th Ave S. Turn south (right) over bridge and go 0.3 miles to S 262nd St. then turn west (right) for 0.2 miles to the pipeline crossing. The Block Valve site is 100' north of S 262nd St. on the south west side of building.
MP 121.5 Check Valve 14'' (HOV)	47.333925	-122.248938	From I-405, take exit #2 (Hwy 167) south for ~ 8.4 miles to S 277th St. exit. Turn west (right) off of Hwy 167 0.1 miles to West Valley Hwy and turn south (left) for ~ 1.5 miles to the pipeline crossing, look for the Block Valve site on the east side of West Valley Hwy 50' from the rd.
MP 127 Block Valve 14" (MOV)	47.282683	-122.307708	From I-5, take exit #142B (Hwy 18) west toward South 348th Street. Turn right onto Hwy 18 west. Take first left onto Kits Corner Rd S. Turn left onto S 360th St. Go 381 feet and turn left. Go 141 feet and turn right. Go .02 miles and turn left onto an unknown road.
MP 130 Block Valve 14" (MOV)	47.255965	-122.330152	From I-5, take exit #142B (Hwy 18) west toward South 348th Street. Turn right onto Hwy 18 west. Take first left onto Kits Corner Rd S. Turn right onto Milton Rd S. Continue onto 5th Avenue. Turn right onto Birch Street. Go 0.1 miles to block valve site.
Tacoma Junction	47.232699	-122.368382	From I-5, take exit # 137 South onto 54th Ave E. Go approx. 0.2 miles, over I-5, then turn west (right) onto 20th St. E. On 20th St. go for approx. 0.4 miles to Frank Albert Rd. and turn left (south). Follow Frank Albert for

RENTON TO PORTLAND	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
			0.6 miles to the first gravel driveway on your right (west) side after the bridge and turn right. Go 0.1 miles through facility gates to address 2660 Frank Albert Rd.
Tacoma DF	47.25793284	-122.4308917	From I-5, take exit # 135 (Portland Ave). Head north on Portland Ave. 0.8 miles to Saint Paul Ave and turn west (left) onto St. Paul Ave. Go for approx. 0.6 miles to "E" St. and make the first turn under the overpass and turn northwest (right). On "E" St. go 0.3 miles to E 7th St. and go north (right) for 2 blocks. The facility will be on the left (west) side of the road at 706 East "F" St.
MP 133 Block Valve 14'' (MOV)	47.216094	-122.368237	From north take Hwy 167 south approx. 20 miles to the Hwy 512 exit (Puyallup/Olympia exit) and head west (Veer left). Follow Hwy 512 for approx. 6.4 miles to the Canyon Road exit. From south take I-5 exit #127 (Hwy 512) east to Canyon Road exit. Go north off the exit onto Canyon Rd., continue on for approx. 3.2 miles and that will bring you to Pioneer Way East, turn northwest (left). Follow Pioneer Way for 1 mile and look for the road markers, the Block Valve Site is approx. 25' form Pioneer on the north side of the road.
MP 140 Block Valve 14" (MOV)	47.114964	-122.369067	From south take I-5 exit #127 (Hwy 512) east to Canyon Road exit. Go south off exit onto Canyon Rd. for approx. 1.5 miles. Turn right onto Brookdale Rd E. Follow Brookdale Rd for about 0.6 miles. The Block Valve Site is on the south side of the road.
Tacoma Station	47.089598	-122.370383	From north take Hwy 167 south approx. 20 miles to the Hwy 512 exit (Puyallup/Olympia exit) and head west (Veer left). Follow Hwy 512 for approx. 6.4 miles to the Canyon Road exit. From south take I-5 exit #127 (Hwy 512) east to Canyon Road exit. Go south off exit onto Canyon Rd. for approx. 4.3 miles to 176th St. E, turn west (right) on 176th for 0.2 miles to 51st Ave E. Turn south (left) on 51st and follow 0.7 miles; this will become 52nd Ave E then eventually head right (west) onto 180th St. E. which will put you at the 1st facility gate address 4420 180th St. E. Go through gate and follow access road for another 0.3 miles to the main facility.
MP 152 Block Valve 14'' (MOV)	47.00246575	-122.532755	From SR 507 in Yelm, head east on 280th St at bend in road valve will be on your right.
MP 157 Block Valve 14'' (MOV)	46.95519066	-122.5851659	From SR 510/SR507 intersection head north on 1st N. Left on Rhoton Rd and a quick right onto Northern Pacific Se. Take a left on Wilkenson Rd Se for .3 miles and take a right onto Paradise View St. Valve is on the north end of the street at road tee.
MP 159 Check Valve 14''	46.93033074	-122.6287435	From SR 507 in Yelm, head west onto George Rd for .35 miles valve will be on your right.
Olympia Junction	46.872838	-122.694392	From I-5, take Exit 88A, go North-Easterly on Tenino-Rochester Road 14.1 miles, then South on Vail Loop Road 0.7 mile. Station is on right side of road.
MP 170 Block	46.794702	-122.755221	From highway SR 507 turn east on 184th Ave for 1 mile

RENTON TO PORTLAND	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
Valve 14'' (MOV)			until it turns into Skookumchuck Rd. Follow Skookumchuck road east for 5.4 miles. Valve site is will be on your right.
MP 175 Block Valve 14'' (HOV)	46.74521	-122.81318	Contact South Area Team Leader for access, you must be escorted on to Coal mine property or go through their safety
MP 186 Block Valve 14'' (MOV)	46.592677	-122.859169	From I-5, take exit # 71, go east on Hwy 508. Take first left off Hwy 508 this is Forest Napavine Rd. Go about 2 miles until you come to our pipeline crossing clearly marked by milepost 186 on the left shoulder of the road. The block valve is on the right shoulder of the road.
MP 196 Block Valve 14'' (MOV)	46.448791	-122.865327	From I-5, take exit # 60 and go east about 2 miles until you come to our pipeline crossing clearly marked by milepost 196 on the left shoulder of the road. The block valve is on the right shoulder of the road.
MP 199 Block Valve 14'' (MOV)	46.402055	-122.869788	From I-5, take exit # 57 and go east to the end of the road. At the end of the road turn left on to Jackson Hwy. Go approx. one mile and turn right on to Smokey Valley Rd. Go about 1.5 miles to pipeline crossing, the block valve is on the left shoulder of the road.
Castle Rock Station	46.265538	-122.883116	From I-5, take exit #48 on Huntington Ave. Head east up hill (Kalmbach Quarry Road) to OPL Castle Rock Station.
MP 217 Block Valve 14'' (MOV)	46.147905	-122.877195	From I-5, take the Allen Street Kelso-Longview exit (#39). Proceed easterly on Allen Street for about 0.8 miles to Corduroy Road. Turn left, follow for 0.3 miles to Harris street, turn right, follow 0.1 miles to OPL crossing - valve is off the right shoulder of the road
MP 225 Block Valve 14'' (MOV)	46.046095	-122.84533	From I-5, take Exit 32 (Kalama River Rd.) and go east ~ 1 mile before heading north on an s-curve. Enter BPA substation parking lot. Valve Site is on a private road behind a locked gate
MP 226 Check Valve 14''	46.034291	-122.839715	From I-5, take Exit 32 (Kalama River Rd.) east to frontage road, turn rt (south) for ~0.5 mi to second dirt road past river., turn left. Follow, bearing left at fork up hill. Will come to locked Forest Service gate (contact Castle Rock for combo) Proceed through gate, following rd – stay right at forks. After crossing p/l ROW once, look for fork to left to check valve (if you cross ROW again, you've gone too far)
MP 234 Block Valve 14'' (MOV)	45.926607	-122.758397	From I-5, take exit 22 and head west on Dike Access Rd .1 of a mile and valve is on south side of road.
MP 238.9 Block Valve 14'' (MOV)	45.872514	-122.747499	From I-5, heading south take Exit # 21 proceed straight on Pacific St. to Goerig St. Then 1st left on Lakeshore Dr. From I-5 heading north take exit #21 to light turn left (west) to Lakeshore Dr. (2nd left). Follow Lakeshore for 1.0 mi., road turns right and is named Pinkerton Dr. Continue for 0.3 miles to " Y ", stay left heading south on So. Pekin Rd. for 1.5 mi. to Dike (north side of the Lewis River) head right (west) for 0.6 miles to OPL ROW. Block valve in field on north side, we have access through

RENTON TO PORTLAND	LATITUDE	LONGITUDE	DRIVING DIRECTIONS
			farmers dairy.
MP 239 Block Valve 14'' (MOV)	45.855611	-122.742749	From I-5, take Exit #14 (Battleground). Follow westerly on NW 269th St for about 0.6 mile to NW 31st Ave., then turn right. Follow for about 0.9 miles to NW 289th, turn left go 2 miles to NW 71st Ave., then turn right. Go 1.5 miles, block valve is on the rt side of the road.
MP 248 Block Valve 14'' (MOV)	45.748216	-122.733628	From I-5, take exit 9 and head west on NE 179th St for 3.16 miles turn left on NW 61st Ave and valve site will be on your left.
Vancouver Jct	45.676192	-122.757582	From I-5, take 4th Plain Blvd exit. Proceed westerly for about 5.8 miles to cyclone fence gate entrance to OPL Vancouver Jct. (Site in field easily visible from gate and road.)
Vancouver DF	45.63808778	-122.6958087	I-5 So. exit Mill Plain Blvd. veer right or I-5 No. bound same exit except turn left at light at bottom of ramp. Follow Mill Plain for aprox.1.7 miles turn left on St. Francis Lane follow for 0.2 miles, turn left before RR crossing into the Tesoro gate. Proceed straight to DF.
MP 254 Block Valve 14'' (MOV)	45.660348	-122.779199	I-5 southbound to Hwy 30 westbound, from the first light (Nicolai) continue westbound Approx. 9.3 miles to Sauvie Island Bridge. Right over bridge continue around to NW Gillihan. From here travel approx. 2.7 miles to the 19300 block of NW Gillihan. Turn right down long unnamed gravel road for approx. 0.1 miles. Block valve with cattle guard on left side of road.
MP 257 Block Valve 14'' (HOV)	45.629877	-122.799991	I-5 southbound to Hwy 30 westbound, from the first light (Nicolai) continue westbound Approx. 9.3 miles to Sauvie Island Bridge. Right over bridge continue around to NW Gillihan from here travel approx. 0.9 miles to NW Lily. Right on NW Lily approx. 0.1 miles to block valve with cattle guard on the right.
MP 258 Block Valve 14'' (HOV)	45.614316	-122.79976	I-5 southbound to Hwy 30 westbound, from the first light (Nicolai) continue westbound approx. 7.0 miles to Marina way. Right on Marina for 0.3 miles. Block valve with cattle guard on knoll on the right.
Linnton DF	45.602339	-122.787323	I-5 southbound to Hwy 30 westbound, from the first light (Nicolai) continue westbound approx. 6.2 miles to 112th street. Right on 112th across RR tracks to OPL Linnton Facility on the left.
Portland DF	45.59030233	-122.7766226	I-5 southbound to Hwy 30 westbound, from the first light (Nicolai) west approx. 5.2 miles to the ST Services sign (formerly Mobil Lube Plant sign). Head down driveway and then at the stop sign make a 340□ turn to the Portland Delivery facility.
Portland Jct	45.590433	-122.776929	I-5 southbound to Hwy 30 westbound, from the first light (Nicolai) approx. 1.9 miles to Kittridge. Right over bridge. Left at Front/Kittridge light approx. 0.8 miles to OPL Portland Jct. Facility on the right.

HOSPITAL LISTING BY MAINLINE MILE POST

NEAREST MILE POST	NAME OF HOSPITAL	DRIVING DIRECTIONS
14	St. Joseph's Hospital 2901 Squalicum Parkway Bellingham 98225 360.734.5400	Directions from I-5 North 1. Take exit 255 – WA-542 E/Sunset Dr toward Mt. Baker 2. Turn LEFT onto WA-542/Sunset Dr. continue to follow E. Sunset Dr. 3. Turn RIGHT onto Ellis St. 4. Turn LEFT onto Squalicum Parkway Directions from I-5 South 1. Take exit 255 – WA-542 E/Sunset Dr toward Mt. Baker 2. Turn RIGHT onto E. Sunset Dr. 3. Turn RIGHT onto Ellis St. 4. Turn LEFT onto Squalicum Parkway
34	United General Hospital 2000 Hospital Dr. Sedro Woolley 98284 360.856.6021	Directions from I-5 North 1. Take exit 230 – WA-20 toward Burlington/Anacortes 2. Turn RIGHT onto WA-20/Rio Vista Ave./Avon Cut Off. Continue to follow WA-20/W. Rio Vista Ave. 3. Turn LEFT onto Hospital Dr. Directions from I-5 South 1. Take exit 232 – take ramp right for Cook Rd. / Sedro Woolley 2. Turn LEFT onto Cook Rd. 3. Turn RIGHT onto Collins Rd. 4. Turn LEFT onto Hospital Dr.
34	St. Joseph Hospital 813 Murdock St. Sedro Woolley 98284 360.856.6490	Directions from the East 1. Depart WA-20/ North Cascades Hwy towards Polte Rd. 2. Keep straight into WA-9/ WA-20/ Moore St. 3. Turn LEFT onto Murdock St. Directions from the West 1. Depart WA-20/ North Cascades Hwy towards Rhodes Rd. 2. Keep straight into WA-9/ WA-20/ North Cascades Hwy 3. Bear RIGHT onto W Ferry St. 4. Turn RIGHT onto Murdock St.
40	Skagit Valley Hospital 1415 E. Kincaid St. Mount Vernon 98274 360.424.4111	Directions from I-5 North 1. Take exit 226 2. Take ramp right and follow signs for Kincaid St./ WA-536 West 3. Turn RIGHT onto E Broad St. 4. Turn LEFT onto S 15th St. Directions from I-5 South 1. Take exit 226 2. Take ramp right and follow signs for Kincaid St./ WA-536 West 3. Turn LEFT onto WA-536/ E. Kincaid St. 4. Bear RIGHT onto E Broad St. 5. Turn LEFT onto S. 15th St.
59	Cascade Valley Hospital 330 S. Stillaguamish Ave. Arlington 98223 360.435.2133	Directions from I-5 North 1. Take exit 208 – WA-530 toward Arlington/Darrington 2. Turn RIGHT onto WA-530 3. Turn RIGHT onto Hazel St./WA-9 4. Turn LEFT onto E. Highland Dr. 5. Turn LEFT onto S. Stillaguamish Ave. Directions from I-5 South 1. Take exit 208 – WA-530 toward Silvana/Darrington 2. Turn LEFT onto WA-530 3. Turn RIGHT onto WA-9/ Hazel St. 4. Turn LEFT onto E. Highland Dr. 5. Turn LEFT onto S. Stillaguamish Ave.

NEAREST MILE POST	NAME OF HOSPITAL	DRIVING DIRECTIONS
73	Providence Regional Med Center 1321 Colby Ave. Everett 98201 425.261.2000	Directions from I-5 North 1. Take exit 193 – take ramp right for Pacific Ave/ WA-529 2. Turn LEFT onto WA-529/ Pacific Ave./ Yellow Ribbon Hwy 3. Keep straight onto Pacific Ave. 4. Turn RIGHT onto Broadway Ave. 5. Turn LEFT onto 14th St. 6. Turn RIGHT onto Colby Ave. Directions from I-5 South 1. Take exit 198 – take ramp right for WA-529 S/ Yellow Ribbon Hwy 2. Road name changes to N Broadway – keep straight on Broadway Ave. 3. Turn RIGHT onto 14th St. 4. Turn RIGHT onto Colby Ave.
74	Providence Regional Med Center 916 Pacific Ave. Everett 98201 425.261.2000	Direction from I-5 North 1. Take exit 193 – take ramp right for Pacific Ave./ Yellow Ribbon Hwy 2. Turn LEFT onto WA-529/ Pacific Ave./ Yellow Ribbon Hwy 3. Keep straight onto Pacific Ave.
93	Virginia Mason Medical Center 11800 NE 128th St. Suite 300 Kirkland 98034 425.814.5100	Directions from I-405 North 1. Take exit 26 - WA-527 N toward Mill Creek 2. Turn SLIGHT RIGHT onto Bothell-Everett Hwy/WA-527 3. Turn RIGHT onto Maltby Rd./WA-524 4. Turn RIGHT onto 29th Ave. SE 5. 29th Ave. SE becomes 208th Pl. SE 6. 208th Pl. SE becomes 33rd Dr. SE 7. Turn RIGHT onto 211th St. SE 8. Turn LEFT onto 31st Ave. SE 9. 31st Ave. SE becomes 215th St. SE 10. Turn LEFT onto 30th Ave. SE Directions from I-5 South 1. Take exit 186 – WA-96 E/128th St. SW 2. Turn Left onto 128th St. SW/WA-96 3. Continue to follow WA-96 4. Turn RIGHT onto 16th Ave. SE 5. Turn RIGHT onto Bothell-Everett Hwy/WA-527 6. Turn LEFT onto Maltby Rd./WA-524 7. Turn RIGHT onto 29th Ave. SE 8. 29th Ave. SE becomes 208th Pl. SE 9. 208th Pl. SE becomes 33rd Dr. SE 10. Turn RIGHT onto 211th St. SE 11. Turn LEFT onto 31st Ave. SE 12. 31st Ave. SE becomes 215th St. SE 13. Turn LEFT onto 30th Ave. SE
93	Evergreen Hospital Medical Center 12040 NE 128th St. Kirkland 98034 425.899.1000	Directions from I-405 North 1. Take exit 20B – NE 124th St. 2. Take the Totem Lake Blvd. ramp 3. Stay straight to go onto 120th Ave. NE 4. Turn RIGHT onto NE 128th St. Directions from I-405 South 1. Take exit 20 – NE 124th St. 2. Turn LEFT onto NE 124th St. 3. Turn LEFT onto Totem Lake Blvd. NE 4. Turn RIGHT onto 120th Ave. NE 5. Turn RIGHT onto NE 128th St.
98	Group Health Eastside Hospital 2700 152nd Ave. NE Redmond 98052 425.502.3000	Directions from 520 East 1. Take the 148th Ave. NE SOUTH exit 2. Turn RIGHT onto 148th Ave. NE 3. Turn LEFT onto NE 24th St. 4. Turn LEFT onto 152nd Ave. NE

NEAREST MILE POST	NAME OF HOSPITAL	DRIVING DIRECTIONS
99	Overlake Hospital 1035 116th Ave. NE Bellevue 98004 425.688.5000	Directions from I-405 North 1. Take exit 13B – NE 8th St. 2. Keep RIGHT at the fork in the ramp 3. Keep RIGHT at the fork in the ramp 4. Merge onto NE 8th St. 5. Turn LEFT onto 116th Ave. NE Directions from I-405 South 1. Take exit 13B – NE 8th St. East/West 2. Take the NE 8th ramp 3. Take the NE 8th ramp 4. Merge onto NE 8th St. 5. Turn LEFT onto 116th Ave. NE
Seattle Lateral	Harborview Medical Center 325 Ninth Ave Seattle, WA 98104 (206) 744-3300	Directions from I-5 North 1. Depart I-5 North towards I-5 Express Lane North 2. At exit 164A take ramp RIGHT for James St. towards Madison St. 3. Turn RIGHT onto James St 4. Turn RIGHT onto 9th Ave. Directions from I-5 South 1. Depart I-5 South towards I=5 Express Lane South 2. At exit 165A take ramp RIGHT for 6th Ave. towards James St. 3. Turn LEFT onto James St. 4. Turn RIGHT onto 9th Ave.
Seattle and Sea-Tac Laterals	Highline Community Hospital – Specialty Campus 12844 Military Rd. S Tukwila 98168 206.244.5476	Directions from I-5 North 1. Take exit 154 2. Take ramp right for WA-518 W towards Burien 3. Take ramp right for WA-99 S towards Sea-Tac Airport 4. Turn LEFT onto S 154th St. 5. Make immediate RIGHT onto 32nd Ave. S 6. Turn RIGHT onto S 152nd St. 7. Turn LEFT onto Military Rd. S Directions from I-5 South 1. Take exit 156 2. Take ramp right towards Interurban Ave. towards Tukwila 3. Turn RIGHT onto Interurban Ave. S 4. Turn LEFT onto 42nd Ave. S./ Macadam Rd. S 5. Bear RIGHT onto S 130th St. 6. Turn LEFT onto WA-99/ Pacific Hwy S/ Tukwila International Blvd 7. Turn RIGHT onto S 132nd St. 8. Road name changes to S 133rd St. 9. Turn RIGHT onto Military Rd. S
Seattle and Sea-Tac Laterals	Highline Community Hospital – Main Campus 16251 Sylvester Road SW Burien, WA 98166 (206) 248-4598	Directions from I-5 North 1. At exit 154 take ramp RIGHT for WA-518 W towards Burien 2. Road name changes to S 148th St. 3. Turn LEFT onto 1st Ave S 4. Turn RIGHT on SW 160th ST. 5. Bear LEFT onto Sylvester Rd. SW Directions from I-5 South 1. At exit 154B take ramp RIGHT for WA-518 W towards Sea-Tac Airport/ Burien 2. Road name changes to S 148th St. 3. Turn LEFT onto 1st Ave S 4. Turn RIGHT on SW 160th ST. 5. Bear LEFT onto Sylvester Rd. SW
113	Valley Medical Center 400 S. 43rd St. Renton 98055 425.228.3450	Directions from I-167 North 1. Take the SW 43rd St./S. 180th St. exit 2. Turn RIGHT onto S. 43rd St./SW 43rd St. Directions from I-167 South 1. Take the East Valley Rd./SW 41st St. exit toward S. 180th St. 2. Turn LEFT onto E. Valley Rd. 3. Turn LEFT onto S 180th St. 4. Stay straight to go onto S 43rd St/SW 43rd St.

NEAREST MILE POST	NAME OF HOSPITAL	DRIVING DIRECTIONS
124	Auburn Regional Medical Center 202 N. Division St. Auburn 98001 253.833.7711	Directions from WA-18 East 1. Take the C St. SW exit 2. Turn LEFT on to C St. SW 3. Take the 3rd St. SW ramp 4. Turn LEFT onto Division St.
126	St. Francis Hospital 34515 9th Ave. S Federal Way 98003 253.838.9700	Driving directions from I-5 North 1. Merge onto WA-18 W via exit 142B toward WA-99/Federal Way 2. WA-18 W becomes S 348th St. 3. Turn RIGHT onto 9th Ave. S Driving directions from I-5 South 1. Take exit 142B toward WA-161 S/Puyallup 2. Merge onto S 348th St. 3. Turn RIGHT onto 9th Ave. S
132	Tacoma General 315 MLK Jr. Way Tacoma 98405 253.403.1000	Directions from I-5 South 1. Take exit 133 – I-705 N toward City Center 2. Take the Stadium Way exit 3. Turn RIGHT onto Stadium Way S. 4. Turn LEFT onto Division Ave 5. Turn LEFT onto Martin Luther King Jr. Way Directions from I-5 North 1. Take exit 132 toward Gig Harbor/WA-16/Bremerton 2. Take the S. 38th St. W exit on the left toward Tacoma Mall/WA-16 W/Gig Harbor/Bremerton 3. Take the Sprague Ave Exit 4. Turn RIGHT onto Division Ave. 5. Turn RIGHT onto Martin Luther King Jr. Way
132	St. Joseph's Hospital 1717 S. J St. Tacoma 98405 253.426.4101	Directions from I-5 South 1. Take exit 133 – I-705 toward City Center 2. Take the WA-509 N/S 21st St, exit toward the Port of Tacoma 3. Turn SLIGHT LEFT onto S 21st St./WA-509. Continue to follow S 21st St. 4. Turn RIGHT onto Tacoma Ave S. 5. Turn LEFT onto S 19th St. 6. Turn RIGHT onto S J St. Directions from I-5 North 1. Take exit 132 – S 38th St. toward Gig Harbor/WA-16/Bremerton 2. Take the S. 38th St. West exit on the left toward Tacoma Mall/WA 16 W/Gig Harbor/Bremerton 3. Take the Sprague Ave. exit 4. Turn SLIGHT RIGHT onto S Sprague Ave. 5. Turn RIGHT onto S 19th St. 6. Turn LEFT onto S J St.
132	Allenmore Hospital 1901 S. Union Ave. Ste 1 Tacoma 98405 253.459.6633	Directions from I-5 North 1. Take exit 132 2. Take ramp right towards WA-16 W/ Gig Harbor 3. Take ramp right and follow signs for Union Ave. 4. Turn RIGHT onto S. Union Ave. Directions from I-5 South 1. Take exit 132 2. Take ramp right towards WA-16 W/ Sprague Ave./ Gig Harbor 3. Take ramp right and follow signs for Union Ave. 4. Turn RIGHT onto S. Union Ave.
136	Good Samaritan Hospital 407 14th Ave SE Puyallup 98372 253.848.6661	Directions from WA-512 West 1. Take the Meridian St. S exit 2. Turn LEFT onto S Meridian 3. Turn LEFT onto 14th Ave SE Directions from WA-512 East 1. Take the Meridian St. S exit toward Puyallup 2. Turn RIGHT onto S Meridian 3. Turn LEFT onto 14th Ave SE

NEAREST MILE POST	NAME OF HOSPITAL	DRIVING DIRECTIONS
138	St. Clare Hospital 11315 Bridgeport Way SW Lakewood 98499 253.985.1711	Directions from WA-512 East 1. Take the WA-7/Pacific Ave. exit toward Parkland/Spanaway 2. Turn RIGHT onto Pacific Ave. S/WA-7 S 3. Turn LEFT onto 131st St. S Directions from I-5 North 1. Merge onto WA-512 E via exit 127 toward Puyallup/Mt. Rainier 2. Take the WA-7/Pacific Ave. exit toward Parkland/Spanaway 3. Turn RIGHT onto Pacific Ave. S/WA-7 S 4. Turn LEFT onto 131st St. S
146	Madigan Army Medical Center Bldg. 9040 Fitzsimmons Drive Tacoma, WA 98431 253.968.1110	Directions from I-5 1. Take Exit 122 and travel west to the Fort Lewis gate. Note: A current vehicle sticker is required to access the gate. If you do not have a military vehicle sticker, you must go to the Fort Lewis Visitor's Booth, Main Gate, (exit 120 off I-5) to get a pass. A valid driver's license, proof of insurance and the registration for the vehicle are required to obtain a pass. With the pass, you may drive through the Madigan Gate (exit 122 from I-5).
159	Providence St. Peter Hospital 413 Lilly Rd. NE Olympia 98506 360.491.9480	Directions from I-5 South 1. Take exit 109 – Martin Way toward Sleater-Kinney Rd. N 2. Turn RIGHT onto Martin Way E 3. Turn RIGHT onto Lilly Rd. NE Directions from I-5 North 1. Take exit 107 – Pacific Ave. toward Lacey 2. Turn SLIGHT RIGHT onto Pacific Ave. SE 3. Turn LEFT onto Lilly Rd. SE
160	Capital Medical Center 3900 Capital Mall Dr. SW Olympia 98502 360.956.2574	Directions from I-5 North 1. Take exit 104 2. Take ramp right for US 101 North/ Pacific Coast Scenic Byway/ Port Angeles 3. Take ramp right 4. Turn RIGHT onto Black Lake Blvd SW 5. Turn LEFT onto Cooper Pont Rd. SW 6. Turn LEFT onto Capital Mall Dr. SW Directions from I-5 South 1. Take exit 104 2. Take ramp right for US 101 North/ Pacific Coast Scenic Byway/ Port Angeles 3. Take ramp right 4. Turn RIGHT onto Black Lake Blvd SW 5. Turn LEFT onto Cooper Pont Rd. SW 6. Turn LEFT onto Capital Mall Dr. SW
178	Providence Centralia Hospital 914 S. Scheuber Rd. Centralia 98531 360.736.2803	Directions from I-5 South 1. Take exit 81 – WA-507 N/Mellen St. 2. Turn RIGHT onto Mellen St. 3. Mellen St. becomes Cooks Hill Rd. 4. Turn LEFT onto S Scheuber Rd. Directions from I-5 North 1. Take exit 81 – WA-507 N toward Centralia/Bucoda 2. Turn LEFT onto Mellen St./WA-50 3. Continue to follow Mellen St. 4. Mellen St. becomes Cooks Hill Rd. 5. Turn LEFT onto S Scheuber Rd.
219	St. John Medical Center 1615 Delaware St. Longview 98632 360.414.2000	Directions from I-5 South 1. Take exit 40 toward WA-4 S/Kelso-Longview/Long Beach 2. Turn RIGHT onto Cowlitz Way/WA-4 3. Turn SLIGHT RIGHT onto Ocean beach Hwy/WA-4 4. Turn LEFT onto 15th Ave. 5. Turn RIGHT onto Delaware St. Directions from I-5 North 1. Merge onto WA-432 W/Tennant Way via Exit 36 toward WA-4/Longview/Long Beach 2. Turn RIGHT onto 15th Ave. 3. Turn LEFT onto Delaware St.

NEAREST MILE POST	NAME OF HOSPITAL	DRIVING DIRECTIONS
249	Legacy Salmon Creek Medical Center 2211 NE 139th St. Vancouver 98686 360.487.1000	Directions from I-5 North 1. Take exit 7 2. Take ramp right for NE 134th St. East/West towards WSU/ Vancouver 3. Turn RIGHT onto NE 134th St. 4. Turn LEFT onto NE 20th Ave. 5. Turn RIGHT onto NE 139th St. Directions from I-5 South 1. Take exit 7 2. Take ramp right for NE 134th St. East/West towards WSU/ Vancouver 3. Turn LEFT onto NE 134th St. 4. Turn LEFT onto NE 20th St. 5. Turn RIGHT onto NE 139th St
258	Legacy Emanuel Medical Center 2801 N. Gantenbein Ave Portland OR 97227 503.413.2200	Directions from I-5 North 1. Take exit 302A 2. Take ramp right towards Broadway-Weidler St./ Rose Quarter 3. Keep straight onto NE Victoria Ave 4. Turn LEFT onto NE Broadway 5. Turn RIGHT onto N Williams Ave. 6. Turn LEFT onto N Knott St. 7. Road name changes to N Gatenbein Ave

CHERRY POINT CRUDE AND BUTANE LINES INCIDENT REPORTING GUIDE

Use this guide to find your position and follow the steps which are listed in order of priority.

Field Operations Personnel:

- ☐ Assess your personal safety and move to a safe location if necessary.
- ☐ If this is an emergency and you need immediate assistance call 911.
- ☐ Call the Tulsa Control Center and the Controller Console – be prepared to give the Pipeline Controller the information needed to complete the Notification Checklist (i.e. your name, location, incident description, weather conditions, call-back number) as well as any support you feel you need. The Notification Checklist is on the following page.
- ☐ Notify the North Area O&M Team Leader (a voice mail message does not count, keep calling until you speak to the person).
- ☐ Your notifications are complete.
- ☐ Complete the Notification Checklist in the Field Document and turn it in to HSSE.

Control Center Personnel:

- ☐ If the call is from a third party get their name, location and call back number and as much information as you can about the type of concern that is being reported. Decide if the pipeline must be shutdown immediately. Dispatch an O&M Specialist to confirm the report.
- ☐ If the call is from BP personnel, obtain their name, location and call back information of the person. Get the all information necessary to complete the Notification Checklist (i.e. location, incident description, weather conditions).
- ☐ Notify the Control Center Team Leader or their delegate. (a voice mail message does not count, keep calling until you speak to the person – if you cannot reach the Team Leader move on to making the notifications listed below)
- ☐ Notify the North Area O&M Team Leader (a voice mail message does not count, keep calling until you speak to the person).
- ☐ Notify Cherry Point Refinery **(CRUDE AND BUTANE)**
- ☐ Notify Phillips 66 **(CRUDE ONLY)**
- ☐ Notify Trans Mountain Pipeline System **(CRUDE ONLY)**
- ☐ Notify Petrogas Ferndale Storage Terminal **(BUTANE ONLY)**
- ☐ Your notifications are complete.
- ☐ Complete the Notification Checklist in the Field Document and turn it in to HSSE.

North Area Team Leader:

- ☐ Notify District Operations Manager
- ☐ Notify the Environmental Coordinator

Environmental Coordinator:

- ☐ Make agency notifications as appropriate.
- ☐ Notify Environmental Team Lead
- ☐ Notify Communications and External Affairs
- ☐ Notify USPL DOT Advisor (if reported to the National Response Center or WUTC)
- ☐ Notify USPL Crisis Management Advisor

CHERRY POINT CRUDE LINE AND BUTANE LINE SPILL REPORT

Date: _____ **Time:** _____

Name of person(s) completing report (list all controllers on-duty):

_____

_____

☐ Discoverer / Responder ☐ Controller* ☐ Other*

*If Controller or Other, information / complaint received from:

☐ Employee/contractor ☐ Public ☐ Other (i.e. agency) _____

Name, address, and phone number of persons making report:

_____

_____

( ) _____

Assessment

☐ **Spill** ☐ **Odor Complaint** ☐ **Other** _____

Location: _____

County: _____ **City:** _____ **MP:** _____

If Spill: onto ☐ Land ☐ Water ☐ Containment ☐ Other _____

Nearest Watercourse (name and distance, if known)**:** _____

Source: ☐ Pipe ☐ Tank ☐ Valve ☐ Pump ☐ Fitting ☐ Other _____

Product: ☐ Gasoline ☐ Diesel ☐ Jet ☐ Transmix ☐ Crude ☐ Butane ☐ Other

Estimated Qty: _____ ☐ gallons ☐ barrels

☐ **Fire** ☐ **Explosion** ☐ **Evacuations** ☐ **Damage** ☐ **N/A**

Number of Injured: _____ **Fatalities:** _____ **Number Evacuated:** _____ **Damage in Dollars:**

☐ **N/A**

Cause: ☐ Equipment Failure ☐ Operator Error ☐ Natural Phenomenon ☐ Unknown

Weather Conditions: ☐ Clear ☐ Cloudy ☐ Raining ☐ Snowing ☐ Other _____

Temperature: _____ º F Wind Direction/Velocity _____

Brief Incident Description: _____

_____

_____

_____

_____

INITIAL NOTIFICATIONS				
Upon Discovery of a product discharge, the **Spill Observer/First Responder** shall immediately notify Control Center:				
NOTIFY	**TIME**	**CONTACT**		
Tulsa Control Center	(800) 548-6482			
Controller Console	(918) 660-4458			
If this is believed an emergency, immediately notify 911.				
NOTIFY	**NO**	**YES**	**TIME**	**CONTACT**
Has 911 been notified?				
Immediately upon notification, verification or suspicion of a release, the **Control Center Personnel** shall:				
CONFIRM: Has observer/responder notified 911? ☐ Yes ☐ No				
NOTIFY FOR BOTH CRUDE AND BUTANE RELEASES:				
NOTIFY	**PHONE NUMBER**	**TIME**	**REMARKS**	
O&M Field Specialist Adam Groves Kevin Washington	(360) 661-6416 (360) 815-6698			
Cherry Point Refinery Security (Main Gate) Shift Supervisor	(360) 371-1301 (360) 371-1271			
Control Center Team Leader	(206) 786-1532			
ADDITIONAL NOTIFICATIONS FOR BUTANE PIPELINE RELEASES:				
NOTIFY	**PHONE NUMBER**	**TIME**	**REMARKS**	
Petrogas Ferndale Storage Terminal	(360) 384-1701 ext 0			

INITIAL NOTIFICATIONS			
Immediately upon notification, verification or suspicion of a release, the **O&M Field Specialist** shall:			
NOTIFY	**PHONE NUMBER**	**TIME**	**REMARKS**
Joseph Paquette North Area O&M Team Leader	(331) 229-6057 (360) 428-4214 ext. 6003		
Immediately upon notification, verification or suspicion of a release, the **North Area O&M Team Leader** shall:			
NOTIFY	**PHONE NUMBER**	**TIME**	**REMARKS**
Primary: Alexandria Crooks Environmental Coordinator	(425) 591-3599		
Secondary: Michaela Decker Safety Coordinator	(312) 434-2764		
Terry Zimmerman District Operations Manager	(219) 973-5985		
Immediately upon notification, verification or suspicion of a release, the **O&M Field Specialist** shall:			
The **Environmental Coordinator** will notify the Environmental Team Lead, Communications & External Affairs, applicable Regulatory Agencies, and the USPL DOT Team (if reported to NRC or WUTC) and the USPL Crisis Management Advisor.			
The **District Operations Manager** will make additional internal notifications as necessary (i.e. Business Unit Leader, Operations Manager, and BP Notification Center) and determine scope of response team to be activated.			

Comments:

CHERRY POINT CONTACT LIST			
AFFILIATION	**PHONE NUMBER**	**NAME OF PERSON CONTACTED**	**TIME CONTACTED**
NORTHWEST PIPELINES DISTRICT CONTACTS			
Terry Zimmerman District Operations Manager	(219) 973-5985 (Cell)		
Joseph Paquette North Area Team Lead	(331) 229-6057 (Cell)		
Dustin Lambert Central Area Team Lead	(425) 351 9938 (Cell)		
Jeff Berry South Area Team Lead	(360) 274-5108 (Cell)		
Adam Groves Field Spec. Support	(360) 526-3975 (Office) (360) 420-5105 (Cell)		
Kevin Wittmer Field Spec. Support	(360) 371-7411 (Office) (360) 815-0356 (Cell)		
Kevin Washington Field Spec. Support	(360) 815-6698 (Cell) (360) 428-4214 (Pager)		
Gunter Wilder Field Spec. Support	(360) 389-7049 (Cell) (360) 384-4231 (Office)		
Alexandria Crooks Environmental Coordinator	(425) 981-2590 (Office) (425) 591-3599 (Cell)		
Michaela Decker Safety Coordinator	(312) 434-2764 (Cell)		
Pam Brady Communications & External Affairs	(360) 371-1519 (Office) (360) 920-1171 (Cell)		
Renton Control Center (Emergencies Communication help only)	(888) 271-8880 (Office) (425) 235-7726(Office)		
TULSA CONTROL CENTER CONTACTS			
Pipeline Controller / Console (24 hours)	(800) 548-6482 (Office) (918) 660-4450 (Office)		

COMPANY	**CONTACT**	**OFFICE NUMBER**	**ALTERNATE NUMBERS / NOTES**
CHERRY POINT REFINERY			
Cherry Point Refinery, Crude and Butane	For immediate needs and emergencies: Main Gate Security Shift Supervisor	(360) 371-1301 (360) 371-1271	Contact main gate if unable to reach shift supervisor
BP Terminal for Butane	Control Board	(360) 384-1701	
Kinder Morgan / TRANSMOUNTAIN PIPELINE, FOR 24" CRUDE			
Laurel Station USA		(360) 398-1541	
Edmonton Control Center, Canada Emergency		(780) 449-5732 (888) 876-6711	
PHILLIPS 66 REFINERY, FOR 24" CRUDE			
Security		(360) 384-8351	
Dock Control Board		(360) 384-8349	
Shift Supervisor		(360) 384-8323	

FERNDALE GAS PIPELINE SYSTEM EMERGENCY RESPONSE NOTIFICATION PROCEDURES

Purpose

The purpose of this procedure is to report and safely respond to an incident, including a leak, fire, explosion, or natural disaster along the Ferndale Gas Pipeline System. The Ferndale Gas Pipeline System originates in Sumas and supplies natural gas to the BP Cherry Point Refinery and the Alcoa-owned Intalco Works Plant. The system receives natural gas from the Spectra Energy pipeline originating out of Canada. In the event of an incident, this procedure is intended to minimize exposure to the outside community and the environment by notifying emergency services, various public agencies and alerting the BP Cherry Point Refinery and Alcoa-Intalco so that they may make any necessary process changes. The assessment, reporting, and notification guidance is found on the following pages

Incident Reporting Guide

To use this guide find your position and follow the steps, which are listed in order of priority

Field Personnel:

- ☐ Assess your personal safety and move to a safe location, if necessary.
- ☐ If this is an emergency and you need immediate assistance call 911.
- ☐ Call the Tulsa Control Center – be prepared to give the Pipeline Controller the information needed to complete the Emergency Information Report Form (i.e. your name, location, incident description, weather conditions, and call back number).
- ☐ Determine the Grade of the Leak and take appropriate actions
  - ☐ **Grade 1:** Existing or probable hazard to persons or property; requires prompt action
  - ☐ **Grade 2:** Not hazardous at the time of detection but justifies scheduled repair
  - ☐ **Grade 3:** Not hazardous at the time of detection and can be expected to remain not hazardous
- ☐ Complete the Emergency Notification Log/Checklist and turn it in to the Environmental Coordinator.

Tulsa Control Center Personnel:

- ☐ If the call is from a third party get their Name, Location and Call Back Number and as much information as you can about the type of concern that is being reported. Decide if the pipeline must be shut down immediately. **Notify Cherry Point, Embridge, and Intalco as soon as possible in the event of an immediate shutdown.** Make sure Dispatch Field Personnel to confirm the report.
- ☐ If the call is from BP personnel, be sure to get the Name, Location and Call Back information of the person.
- ☐ Call the Olympic North Area Team Lead and provide a briefing of the situation and request additional support, if necessary.
- ☐ Call Cherry Point Refinery, and Intalco and provide them with a briefing of the situation and/or potential or actual shut down.
- ☐ Complete the Emergency Information Report Form (F-195.605(e)) found in the OMER 1 Manual. Send a copy of the form to the Environmental Coordinator.

North Area Team Leader:

- ☐ Notify District Operations Manager
- ☐ Notify the Environmental Coordinator

Environmental Coordinator:

- ☐ Notify HSSE Manager
- ☐ Make agency notifications as appropriate
- ☐ Notify Communications & External Affairs

FERNDALE GAS PIPELINE SYSTEM EMERGENCY NOTIFICATION CHECKLIST

Assessment

☐ **Odor Complaint** ☐ **Leak** ☐ **Other** _____

Location: _____

City: _____ **MP:** _____

☐ **Fire** ☐ **Explosion** ☐ **Vapor Release** **Potential for Fire or Explosion?** ☐ Yes ☐ No

☐ **Evacuations** ☐ **Damage** _____

Dollars: $ _____ Number Injured: _____ Fatalities: ____

Number Evacuated: _____

If there is a confirmed release is it: ☐ Grade 1 ☐ Grade 2 ☐ Grade 3

*Leak Classification Grades are defined under "Regulations" tab

Perimeter of the release area: _____

Cause: ☐ Equipment Failure ☐ Operator Error ☐ Natural Phenomenon ☐ Unknown

Weather Conditions: ☐ Clear ☐ Cloudy ☐ Raining ☐ Snowing ☐ _____

Temperature: _____ ° F **Wind Direction/Velocity:** _____

Brief Incident Description:

_____

_____

_____

_____

_____

_____

_____

A follow up inspection must be performed within 30 days for all releases.

OMER Form F-192.605(e)

FERNDALE GAS PIPELINE SYSTEM OVERVIEW

The Ferndale Gas System is an intrastate natural gas transmission pipeline that is approximately 36.5 miles long. A 16" Natural Gas Pipeline runs 32 miles at 550 psig from Sumas to BP Cherry Point Refinery and then an 8" line runs 4.5 miles at 250 psig from the refinery to Alcoa-Intalco.

The system is owned by BP West Coast Products Company and Intalco Works and operated by BP Pipelines (North America). The Northwest Pipelines District maintains the system and the Tulsa Control Center out of Tulsa, Oklahoma monitors the system. The system is designed for automated operations. If a rupture occurs, the mainline valves will close automatically upon detection of a sustained pressure drop. There are five mainline valves located approximately five miles apart on the Sumas-BP Cherry Point Refinery run. There is one mainline valve on the BP Cherry Point Refinery-Intalco run. (See Figure 1)

The Ferndale Gas System is located entirely within Whatcom County, Washington State. The terrain is flat with several miles running through sparsely populated areas. Whatcom County consists of farm lands, dairy farms, raspberry farms, and a few small communities. The system crosses the Trans Mountain Pipeline, several creeks, two Burlington Northern Rail Road tracks, Interstate 5 (north of Ferndale), and is less than a mile from Lake Terrell, located North East of the Intalco Works Plant.

There is one 3200-gallon Odorant storage tank located at Sumas Meter Station. Odorant is delivered to the site by truck.

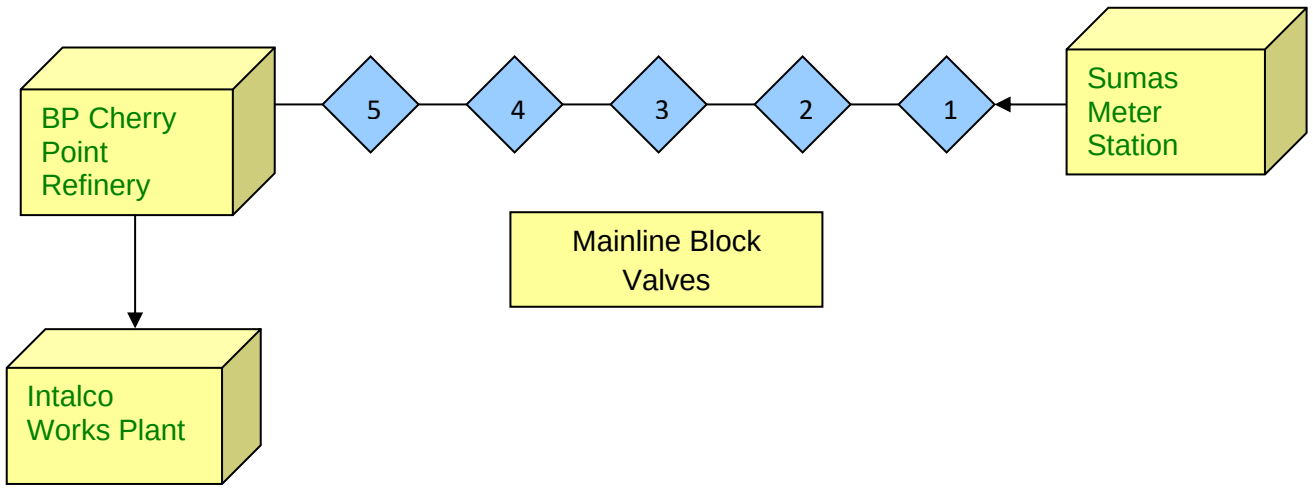


Figure 1: System Layout

FACILITY LOCATIONS

Facility Location	Coordinates
Sumas Regulating Facility 4928 Jones Road Sumas, WA 98295	Lat: N 49 00' 05" Long: W 122 13' 01"
Cherry Point Regulating Facility 4519 Grandview Road Blaine, WA 98230 Note: Facility is located on Blaine Rd inside BP Refinery	Lat: N 48 53' 19" Long: W 122 43' 34"
Intalco Regulating Facility 4050 Mountainview Road Ferndale, WA 98248 Note: Facility is located on Intalco Plant property	Lat: N 49 50' 37" Long: W 122 42' 40"
Mainline Valve #1 9088 Garrison Road (SR 9) Sumas, WA 98295 Note: Valve is located in farm field east of road	Lat: N 48 58' 17" Long: W 122 17' 12"
Mainline Valve #2 1695 Haveman Road Lynden, WA 98264 Note: Valve is located on the corner of Clay and Haveman Roads	Lat: N 48 58' 16" Long: W 122 23' 47"
Mainline Valve #3 9159 Jackman Road Lynden, WA 98264 Note: Valve is located in farm field west of road	Lat: N 48 58' 19" Long: W 122 30' 07"
Mainline Valve #4 8804 Sunrise Road Custer, WA 98240 Note: Valve is located in farm field east of road	Lat: N 48 57' 40" Long: W 122 35' 18"
Mainline Valve #5 3439 Birch Bay Lynden Road Custer, WA 98240 Note: Valve is located south of road	Lat: N 48 56' 08" Long: W 122 40' 08"

SPECIFIC RESPONSE ACTIONS FIRE/EXPLOSION CHECKLIST

Potential emergency situations dictate the immediate isolation of affected area(s) and evacuation of directly or potentially affected employees and the general public. Since each emergency situation is unique, the size of the area requiring isolation and the method of isolation will vary on a case-by-case basis. Personal and public safety is the first priority of responding employees.

Isolation

- As an immediate precautionary measure isolate the area around a suspected release to at least 330 feet in all directions. If there is a large release consider evacuation of area for ½ mile downwind.
- Keep unauthorized personnel away.
- Stay upwind.
- Stay away from confined spaces and low areas where gas may collect.
- Call for assistance when safe to do so.

Investigation

- Approach a possible release site with caution, park well away and upwind.
- Leave behind all sources of ignition including any electronic devices that is not intrinsically safe.
- Carry and O_2/LEL monitor.
- Sight, sound and smell are important tools for evaluating a release.
- Do not enter an area where gas is present.

Fire

- Do not extinguish a gas leak fire unless the source of the leak can be stopped.
- Use water fog to cool and protect structures and equipment, do not direct water stream at fire.
- Gas can asphyxiate, wear positive pressure self-containing breathing apparatus (SCBA)
- Structural firefighting protective clothing will only provide limited protection.

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION REQUIREMENTS

WAC 480-93-185

Gas leak investigation

(1) Each gas pipeline company must investigate any odor, leak, explosion, or fire, which may involve its gas pipelines, promptly after receiving notification. Where the investigation reveals a leak, the gas pipeline company must grade the leak in accordance with WAC 480-93-186, and take appropriate action. The gas pipeline company must retain the leak investigation record for the life of the pipeline.

(2) In the event of an explosion, fire, death, or injury, the gas pipeline company must not remove any suspected gas facility until the commission or the lead investigative authority has designated the release of the gas facility. Once the situation is made safe, the gas pipeline company must keep the facility intact until directed by the lead investigative authority.

(3) When leak indications are found to originate from a foreign source (for example, a gasoline tank, a sewer, a marsh or customer-owned piping), and the situation is ongoing and potentially hazardous, the gas pipeline company must:

(a) Take appropriate action regarding its own facilities to protect life and property; and

(b) Report the leak promptly to the source facility owner or operator and, where appropriate, to the police department, fire department, or other appropriate governmental agency. If the property owner or an adult person occupying the premises is not available, the gas pipeline company must, within twenty-four hours of the leak investigation, send by first-class mail, addressed to the person occupying the premises, a letter explaining the results of the investigation. The gas pipeline company must keep a record of each letter sent for five years.

WAC 480-93-186

Leak evaluation

(1) Based on an evaluation of the location and/or magnitude of a leak, the gas pipeline company must assign one of the leak grades defined in WAC 480-93-18601 to establish the leak repair priority. A gas pipeline company may use an alphabetical grade classification, i.e., Grade A for Grade 1, Grade B for Grade 2, and Grade C for Grade 3 if it has historically used such a grading designation. Each gas pipeline company must apply the same criteria used for initial leak grading when re-evaluating leaks.

(2) Each gas pipeline company must establish a procedure for evaluating the concentration and extent of gas leakage. When evaluating any leak, the gas pipeline company must determine and document the perimeter of the leak area. If the perimeter of the leak extends to a building wall,

the gas pipeline company must extend the investigation inside the building. Where the reading is in an unvented, enclosed space, the gas pipeline company must consider the rate of dissipation when the space is ventilated and the rate of accumulation when the space is resealed.

(3) The gas pipeline company must check the perimeter of the leak area with a combustible gas indicator. The gas pipeline company must perform a follow-up inspection on all leak repairs with residual gas remaining in the ground as soon as practical, but not later than thirty days following the repair.

(4) Grade 1 and 2 leaks can only be downgraded once to a Grade 3 leak without a physical repair. After a leak has been downgraded once, the maximum repair time for that leak is twenty-one months.

WAC 480-93-18601

Leak classification and action criteria — Grade — Definition — Priority of leak repair

(1) A "Grade 1 leak" is a leak that represents an existing or probable hazard to persons or property and requiring prompt action, immediate repair, or continuous action until the conditions are no longer hazardous.

(a) Prompt action in response to a Grade 1 leak may require one or more of the following:

(i) Implementation of the gas pipeline company's emergency plan pursuant 49 CFR § 192.615;

(ii) Evacuating the premises;

(iii) Blocking off an area;

(iv) Rerouting traffic;

(v) Eliminating sources of ignition;

(vi) Venting the area;

(vii) Stopping the flow of gas by closing valves or other means; or

(viii) Notifying police and fire departments.

(b) Examples. Grade 1 leaks requiring prompt action include, but are not limited to:

(i) Any leak, which in the judgment of gas pipeline company personnel at the scene, is regarded as an immediate hazard;

(ii) Escaping gas that has ignited unintentionally;

(iii) Any indication of gas that has migrated into or under a building or tunnel;

(iv) Any reading at the outside wall of a building or where the gas could potentially migrate to the outside wall of a building;

(v) Any reading of eighty percent LEL or greater in an enclosed space;

(vi) Any reading of eighty percent LEL, or greater in small substructures not associated with gas facilities where the gas could potentially migrate to the outside wall of a building; or

(vii) Any leak that can be seen, heard, or felt and which is in a location that may endanger the general public or property.

(2) A "Grade 2 leak" is a leak that is recognized as being not hazardous at the time of detection but justifies scheduled repair based on the potential for creating a future hazard.

(a) Each gas pipeline company must repair or clear Grade 2 leaks within fifteen months from the date the leak is reported. If a Grade 2 leak occurs in a segment of pipeline that is under consideration for replacement, an additional six months may be added to the fifteen months maximum time for repair provided above. In determining the repair priority, each gas pipeline company should consider the following criteria:

(i) Amount and migration of gas;

(ii) Proximity of gas to buildings and subsurface structures;

(iii) Extent of pavement; and

(iv) Soil type and conditions, such as frost cap, moisture and natural venting.

(b) Each gas pipeline company must re-evaluate Grade 2 leaks at least once every six months until cleared. The frequency of re-evaluation should be determined by the location and magnitude of the leakage condition.

(c) Grade 2 leaks vary greatly in degree of potential hazard. Some Grade 2 leaks, when evaluated by the criteria, will require prompt scheduled repair within the next five working days. Other Grade 2 leaks may require repair within thirty days. The gas pipeline company must bring these situations to the attention of the individual responsible for scheduling leakage repair at the end of the working day. Many Grade 2 leaks, because of their location and magnitude, can be scheduled for repair on a normal routine basis with periodic re-evaluation as necessary.

(d) When evaluating Grade 2 leaks, each gas pipeline company should consider leaks requiring action ahead of ground freezing or other adverse changes in venting conditions, and any leak that could potentially migrate to the outside wall of a building, under frozen or other adverse soil conditions.

(e) Examples. Grade 2 leaks requiring action within six months include, but are not limited to:

(i) Any reading of forty percent LEL or greater under a sidewalk in a wall-to-wall paved area that does not qualify as a Grade 1 leak and where gas could potentially migrate to the outside wall of a building;

(ii) Any reading of one hundred percent LEL or greater under a street in a wall-to-wall paved area that does not qualify as a Grade 1 leak and where gas could potentially migrate to the outside wall of a building;

(iii) Any reading less than eighty percent LEL in small substructures not associated with gas facilities and where gas could potentially migrate creating a probable future hazard;

(iv) Any reading between twenty percent LEL and eighty percent LEL in an enclosed space;

(v) Any reading on a pipeline operating at thirty percent of the specified minimum yield strength or greater in Class 3 or 4 locations that does not qualify as a Grade 1 leak; or

(vi) Any leak that in the judgment of gas pipeline company personnel at the scene is of sufficient magnitude to justify scheduled repair.

(3) A "Grade 3 leak" is a leak that is not hazardous at the time of detection and can reasonably be expected to remain not hazardous.

(a) Each gas pipeline company should re-evaluate Grade 3 leaks during the next scheduled survey, or within fifteen months of the reporting date, whichever occurs first, until the leak is regraded or no longer results in a reading.

(b) Examples. Grade 3 leaks requiring re-evaluation at periodic intervals include, but are not limited to:

(i) Any reading of less than eighty percent LEL in small gas associated substructures, such as small meter boxes or gas valve boxes; or

(ii) Any reading under a street in areas without wall-to-wall paving where it is unlikely the gas could migrate to the outside wall of a building.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

June 9, 2021

Terry Zimmerman
BP Pipelines North America
600 SW 39th Street, Suite 275
Renton, WA 98057

Dear Terry Zimmerman:

We have completed an evaluation of the BP Pipelines (North America) Northwest Pipelines District oil spill contingency plan using standards contained in Chapter 173-182 of the Washington Administrative Code. As part of my review of this plan, I received one comment letter from stakeholders. We have considered these comments in this review. At this time your plan will be granted **conditional approval**. Please insert the enclosed approval certificate to the front of your plan.

The final expiration date for conditional approval is December 9, 2022 (18 months from the date of letter). There are several immediate deadlines noted below that must be met. All boxes that have not been checked "YES" on the enclosed checklist must be successfully addressed before the plan can be fully approved.

By August 9, 2021, please correct the following deficiencies:

- *Contingency plan general content (WAC 173-182-230(3) and (4))*
- *Initial Response Actions (WAC 173-182 250)*
- *Planning standards for oils that may submerge or sink (WAC 173-182-324)*
- *Response and Protection Strategies (WAC 173-182-510)*
- *Geographic Information Planning Standards for Pipelines (WAC 173-182-515)*
- *Planning standards for shoreline cleanup (WAC 173-182-522)*
- *Planning standards for air monitoring (WAC 173-182-535)*
- *Alternative methods of evaluating planning standards (WAC 173-182-620)*
- *Drills (WAC 173-182 700 and 710)*

By regulation, conditional approval of a plan can last no longer than 18 months. If all deficiencies are not fully addressed by December 9, 2022, the plan will expire. If you are unable to meet the timeframes above, please let me know in writing that you need an extension. We are committed to working with you to strengthen your plan throughout this process.

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days after the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order to Ecology in paper form - by mail or in person. (See addresses below.) Email is not accepted.

Your appeal alone will not stay the effectiveness of this Order. Ecology in its discretion may stay the effectiveness of this Order, or you may submit a request in accordance with RCW 43.21B.320.

ADDRESS AND LOCATION INFORMATION

Street Addresses
Department of Ecology
Attn: Appeals Processing Desk
300 Desmond Drive SE
Lacey, WA 98503

Mailing Addresses
Department of Ecology
Attn: Appeals Processing Desk
PO Box 47608
Olympia, WA 98504-7608

ADDRESS AND LOCATION INFORMATION

Street Addresses
Pollution Control Hearings Board
1111 Israel Road SW, Ste 301
Tumwater, WA 98501

Mailing Addresses
Pollution Control Hearings Board
PO Box 40903
Olympia, WA 98504-0903

CONTACT INFORMATION

Please direct all questions about this Order to:

Matt Bissell
Department of Ecology
Spill Prevention, Preparedness, and Response Program
PO Box 47600
Olympia, WA 98504

(360) 280-7061
matt.bissell@ecy.wa.gov

MORE INFORMATION

- **Pollution Control Hearings Board**
  http://www.eluho.wa.gov/Board/PCHB
- **Chapter 43.21B RCW - Environmental Hearings Office – Pollution Control Hearings Board**
  http://app.leg.wa.gov/RCW/default.aspx?cite=43.21B
- **Chapter 371-08 WAC – Practice and Procedure**
  http://app.leg.wa.gov/WAC/default.aspx?cite=371-08
- **Chapter 34.05 RCW – Administrative Procedure Act**
  http://app.leg.wa.gov/RCW/default.aspx?cite=34.05

- **Chapter 88.40 RCW - Transport of Petroleum Products — Financial Responsibility**
  http://app.leg.wa.gov/RCW/default.aspx?cite=88.40
- **Chapter 88.46 RCW - Vessel Oil Spill Prevention and Response**
  http://app.leg.wa.gov/RCW/default.aspx?cite=88.46
- **Chapter 90.48 RCW - Water Pollution Control**
  http://app.leg.wa.gov/RCW/default.aspx?cite=90.48
- **Chapter 90.56 RCW - Oil and Hazardous Substance Spill Prevention and Response**
  http://app.leg.wa.gov/RCW/default.aspx?cite=90.56
- **Spill Prevention, Preparedness, and Response Rules**
  https://ecology.wa.gov/About-us/Get-to-know-us/Our-Programs/Spills-Prevention-Preparedness-Response/Rules-directing-our-work

If you have any questions on this matter please contact your Oil Spill Preparedness Planner Scott Zimmerman, (425) 941-7697 and scott.zimmerman@ecy.wa.gov.

Sincerely,

Linda Pilkey-Jarvis
Preparedness Section Manager
Spill Prevention, Preparedness, and Response Program

Enclosure: Plan Review Checklist
Conditional Approval Certificate

cc: Alex Crooks, BP Pipelines North America
UTC
Rick Raksnis, DOT/PHMSA
Stephen Ball, US EPA Region 10
Wally Moon, US EPA Region 10
Timothy S. Lupher, USCG Sector Puget Sound
USCG Columbia River
Scott Smith, Oregon DEQ
HQ Spills Central Files, Preparedness –BP Pipelines (North America) Northwest Pipelines District

WAC 173-182 CONTINGENCY PLAN REVIEW CHECKLIST

Plan Name: BP Pipelines (North America) Northwest Pipelines District

Name & Address: Terry Zimmerman
BP Pipelines North America
600 SW 39th Street, Suite 275
Renton, WA 98057

Date Submitted: April 6, 2021

Oil Spill Preparedness Planner: Scott Zimmerman

Date Review Completed: June 7, 2021

The purpose of this Plan Review Checklist is to guide Ecology in the review of a 5-year plan update to an oil spill contingency plan to ensure the plan meets the requirements established under Chapter 173-182 Washington Administrative Code (WAC).

In order to complete this review, Ecology will consider requirements established in state law, state regulation, and the Northwest Area Contingency Plan; information contained in approved Primary Response Contractor (PRC) applications, Spill Management Team (SMT) applications, Wildlife Response Service Provider (WRSP) applications, and equipment and resources listed on the Worldwide Response Resource List (WRRL). Ecology will also consider public comments solicited through a required 30-day public review period.

To be considered for approval, the oil spill contingency plan must demonstrate that, when implemented, the company/organization can, to the maximum extent practicable, provide for a rapid, aggressive and well-coordinated response to, and cleanup of, a variety of spills including small chronic spills and worst case spills. Each plan should also demonstrate the ability to promptly and properly protect the environment from damage resulting from an oil spill.

PUBLIC REVIEW: ***This is a 5-year update.*** *Comments may be provided on content of the entire plan. During this 30-day period, Ecology reviews the plan using this plan review checklist. At the close of the 30-day public comment period, Ecology considers any comments received and makes a decision to approve, deny, or conditionally approve the plan. Upon conditional approval, the completed checklist detailing which items are still required is made available to the public. When updates to the plan are received and Ecology determines that the items on the checklist have been satisfied, the plan may be made available for an additional 30-day public review before Ecology makes the final decision to approve the plan.*

Note: Several items on this checklist are comprehensive. For these items, the larger checkbox is not checked unless all of the smaller items are checked.

Instructions for Plan Review

- Checklist items that only apply to a specific plan holder type are highlighted in blue. For a final review, all credit items will be left in and the N/A box will be checked if it does not apply to the plan under review.

FORMAT: WAC 173-182-210

YES ☒ NO ☐ **Plan is formatted appropriately including:**

- ☒ Table of contents with numbered and tabbed chapters.
- ☒ WA-specific information or WA Annex.
- ☒ Replaceable pagination.

YES ☒ NO ☐ **The plan is functionally usable in responding to a spill.**

Comment: N/A

PLAN UPDATES & SIGNIFICANT CHANGES TO APPROVED PLANS: WAC 173-182-140 & 142

YES ☒ NO ☐ **Plan contains procedures for updates including commitments to:**

- ☒ Provide 24-hour notice to Ecology of temporary or permanent significant changes.
- ☒ Update the plan to reflect permanent changes to the plan within 30 days.
- ☒ Conduct an annual review of the plan. Update and submit the amended plan to Ecology for review and approval; or, send a letter confirming the existing plan is accurate.

Comment: N/A

POST-SPILL REVIEW AND DOCUMENTATION PROCEDURES: WAC 173-182-150

YES ☒ NO ☐ **Plan contains post-spill review and documentation procedures which include a commitment to conduct debriefs with Ecology and other participating agencies and organizations.**

Comment: N/A

BINDING AGREEMENT: WAC 173-182-220

YES ☒ NO ☐ **Plan contains a binding agreement signed by person(s) with the authority to bind the owners and operators to the plan.**

- ☒ **Plan is submitted by**
  - ☒ An authorized owner, or operator, or a designee with authority to bind the owners and operators of the facilities or vessels covered by the plan.
  - ☐ An authorized representative(s) of a nonprofit corporation established to provide oil spill contingency plan coverage.
  - ☐ An authorized resident agent of the vessel(s) submitting the plan.
  - ☐ An authorized representative(s) of a company contracted to the vessel or facility and approved by Ecology to provide containment and clean-up services.
- ☒ **Plan contains Ecology's binding agreement form ECY 070-612.**

Or,

- ☐ **An equivalent binding agreement that includes:**
  - ☐ The name, address, phone number, email address, and website of the submitting party.
  - ☐ Acceptance of the plan and commitment to a safe and immediate response to spills and to substantial threats of spills that occur in, or could impact Washington waters or Washington's natural, cultural and economic resources.

☐ Commitment to having an incident commander in state within six hours after notification of the spill.

☐ Commitment to the implementation and use of the plan during a spill and substantial threat of a spill, and to the training of personnel to implement the plan.

☐ Verification of authority and capability to make necessary and appropriate expenditures in order to implement plan provisions.

☐ Commitment to working in Unified Command within the incident command system to ensure that all personnel and equipment resources necessary to the response will be called out to clean up the spill safely and to the maximum extent practicable.

Comment: N/A

GENERAL PLAN CONTENT: WAC 173-182-230 (2)(3)(a)(c)(d)

YES ☒ NO ☐ Plan contains a reference to and is consistent with the Northwest Area Contingency Plan (NWACP).

YES ☒ NO ☐ Plan contains a list of the federal and/or state requirements intended to be met by the plan.

YES ☒ NO ☐ Plan contains a log sheet to document revisions and updates to the plan.

YES ☒ NO ☐ Plan contains a complete cross reference table reflecting the locations in the plan specific to Washington requirements.

Comment: N/A

CONTRACTED RESOURCES: WAC 173-182-230(3)(e)

Primary Response Contractor (PRC)

☐ N/A Plan does not rely on a PRC to meet applicable planning standards.

YES ☒ NO ☐ Plan indicates use of PRC(s) to meet applicable planning standards.

YES ☐ NO ☒ Plan contains the required PRC information including:

☒ Name, address, 24-hour phone number, or other means of 24-hour contact.

☒ A contract or letter summarizing the terms of the contract and signed by the PRC.

☐ If the contract is not in the plan, a commitment that the contract will be made available to Ecology upon request.

Spill Management Team (SMT)

☒ N/A Plan does not rely on a contracted SMT to meet applicable planning standards.

YES ☐ NO ☐ Plan indicates use of a contracted SMT to meet applicable planning standards and details what roles the SMT may fill on behalf of the plan holder.

YES ☐ NO ☐ Plan contains the required SMT information including:

☐ Name, address, 24-hour phone number phone number or other means of 24-hour contact.

☐ A contract or letter summarizing the terms of the contract and signed by the SMT.

☐ If the contract is not in the plan, a commitment that the contract will be made available to Ecology upon request.

Wildlife Response Service Provider (WRSP)

☐ **N/A** **Plan does not rely on a contracted WRSP to meet applicable planning standards.**

YES ☒ **NO** ☐ **Plan indicates use of a WRSP to meet applicable planning standards.**

YES ☐ **NO** ☒ **Plan contains the required WRSP information including:**

- ☒ Name, address, 24-hour phone number, or other means of 24-hour contact.
- ☒ A contract or letter summarizing the terms of the contract and signed by the PRC.
- ☐ If the contract is not in the plan, a commitment that the contract will be made available to Ecology upon request.

Comment: Please include a commitment that contracts for your PRCs and WRSPs will be made available to Ecology upon request.

MUTUAL AID AGREEMENTS: WAC 173-182-230(3)(e)(iii)

☒ **N/A** **Plan does not indicate use of Mutual Aid Agreement to meet applicable planning standards.**

YES ☐ **NO** ☐ **Plan indicates a Mutual Aid Agreement which is needed to meet applicable planning standards**

- ☐ Includes a copy of the current agreement.
- ☐ The terms of the agreement are described in the plan.

Comment: N/A

PROCEDURES TO TRACK AND ACCOUNT FOR RECOVERED OIL AND WASTE: WAC 173-182-230(3)(f)

YES ☒ **NO** ☐ **Plan contains procedures to track and account for:**

- ☒ Entire volume of oil recovered.
- ☒ Oily waste generated and disposed of during spill.

YES ☒ **NO** ☐ **Plan contains:**

- ☒ Forms to account for recovered oil and waste.
- ☒ A commitment to provide records to Ecology upon request.
- ☒ Link to the WA state specific NWACP disposal plan in Section 9405, or reference, or the plan contains a disposal plan template consistent with the NWACP.

Comment: N/A

ADDITIONAL FACILITY/PIPELINE CONTENT: WAC 173-182-230(4)

☐ **N/A** **This is not a facility or pipeline plan.**

YES ☐ **NO** ☒ **Plan contains the following facility specific information:**

- ☒ Name, location, type, and address of the facility.
- ☒ Starting date and description of operations.
- ☒ Description of oil handling operations that occur at the facility.

- ☒ Pipeline inventory with routes and pipeline capacities.
- ☒ Tank inventory with tank capacities.
- ☐ A list of oil products handled by name with density, specific gravity, API, oil group number (1-5), and sulfur content. This can be in table format.
- ☒ Written description and maps of the facility that includes topography, storm water and other drainage systems, mooring areas, pipelines, tanks, oil processing areas, storage, and transfer sites.
- ☒ A description of the geographical area that could be impacted from a worst case spill at the location(s) using a 48-hour trajectory.
- ☒ For pipelines, a narrative describing how the response zone in the plan was identified.

Comment: Appendix C, Figure C 8, lists Crude Oil as a product name. Each of the various crude oils transported through the Cherry Point Crude Pipeline need to be listed by name and be separate entries in the table. Oils with a potential to submerge or sink must be identified within the product list (please see the comment in the *non-floating oil* section of this checklist for more information on how to meet that requirement). We recommend only including one product list in your plan with all required information to avoid issues with plan updates (currently there are two: Appendix C, Figure C 8 and Figure 2.2).

ADDITIONAL VESSEL CONTENT (Except plans covering multiple vessels with different owners): WAC 173-182-230(5)

☒ N/A **This is not a vessel plan.**

YES ☐ NO ☐ **Plan contains the following vessel specific information:**

- ☐ Name of each vessel covered under the plan.
- ☐ Name, location, and address of the owner or operator.
- ☐ Official identification code (IMO number), or call sign.
- ☐ Country of registry.
- ☐ All ports of call or areas of expected operation in Washington waters.
- ☐ List all oil(s) or product(s) by name and include; density, gravity, API, oil group number, sulfur content (sweet/sour) and general ship capacity for amounts carried as cargo or fuel.
- ☐ Description of the operations covered by the plan (i.e. bunkering, lightering, or other over-water transfers).
- ☐ A diagram indicating cargo, fuel, and ballast tanks and piping, power plants, and other oil storage and transfer sites and operations.

Comment: N/A

ADDITIONAL MULTI-VESSEL PLAN CONTENT: WAC 173-182-230(6)

☒ N/A **This is not a multi-vessel plan.**

YES ☐ NO ☐ **Plan demonstrates the maintenance of a vessel enrollment list in an acceptable format and made accessible to Ecology on a 24-hour daily basis. List must be updated at least every three days. Vessel enrollment list must include:**

- ☐ Name and vessel type for each vessel covered under the plan.
- ☐ Worst case discharge oil type and quantity.

- ☐ The name and API gravity of the densest oil handled on the enrolled vessels.
- ☐ Vessel Agent.
- ☐ Name of SMT(s) for each vessel enrolled under the plan.
- ☐ Name of Protection & Indemnity Club.

YES ☐ NO ☐ **Plan contains information on the vessels covered by the plan including the following information:**

- ☐ A list of the types of vessels.
- ☐ Typical oil type by group and volume carried by the types of vessels covered by the plan.
- ☐ The worst case discharge volume for each planning standard area applicable to the plan.
- ☐ The procedure for the plan holder to acquire vessel diagrams when asked by Ecology.

YES ☐ NO ☐ **Plan contains a commitment to provide the following information if requested:**

- ☐ Vessel diagrams indicating cargo, fuel, ballast tanks, piping, power plants, and other oil storage.

YES ☐ NO ☐ **Plan describes typical vessel operations in Washington for the vessels enrolled.**

Comment: N/A

ADDITIONAL UMBRELLA PLAN CONTENT: SUPPLEMENTAL RESOURCES: WAC 173-182-230(7) & 232

☒ N/A **This is not an Umbrella plan, or the Umbrella plan does not indicate use of supplemental resources.**

YES ☐ NO ☐ **Plan indicates the use of supplemental resources as a means to provide coverage to vessels with a worst case spill volume that exceeds the capability of directly contracted resources.**

YES ☐ NO ☐ **Umbrella Plan holder maintains an enrollment list that includes the name of the primary response contractor that will provide supplemental resources for enrolled members.**

YES ☐ NO ☐ **Plan contains documentation of the supplemental resources agreement between the vessel owner/operator and another PRC.**

YES ☐ NO ☐ **Documentation of supplemental resource agreement(s) may include:**

- ☐ Authorization for the umbrella plan holder to activate the supplemental agreement, sufficient to meet the worst case discharge of the covered vessel, during a drill, spill, or substantial threat of a spill. This enrollment form may be used to secure this documentation.

AND

- ☐ Commitment letter from qualified individuals. Or,
- ☐ Commitment letters from insurance representatives or vessel agents. Or,
- ☐ Include member signed enrollment agreements or other letters of intent or include a statement that the documentation will be made available to ecology upon request.

YES ☐ NO ☐ **Plan describes the process for the activation of supplemental resources including:**

- ☐ Contact information for the supplemental resources provider.
- ☐ Activation directions.
- ☐ How coordination with the vessel QI and primary PRC occurs.

Comment: N/A

CLAIMS PROCEDURE: WAC 173-182-230(8)

YES ☒ NO ☐ **Plan contains concise procedures to establish a process to manage oil spill liability claims of persons or property, including:**

☒ Identification of group/individuals responsible for managing claims.

Comment: N/A

FIELD DOCUMENT (FACILITY): WAC 173-182-240, WAC 173-182-264 and WAC 173-182-350

☐ N/A **This is not a facility plan.**

YES ☒ NO ☐ **Plan contains a field document that contains time critical information for field staff use during the initial emergency phase of a spill.**

To ensure field document is appropriately interrelated with the plan, the plan must include:

☒ Locations where the field document is located for use by field staff, e.g., in specific offices, vehicles, etc.

To ensure the plan is appropriately interrelated with the field document, the field document must include:

☒ Procedures and equipment used to detect, assess and document the size of a spill and forms for documenting initial response assessment, procedures for safety assessment of the spill by trained crew and how appropriate air monitoring is planned for.

☒ A prioritized call down list with names and phones numbers of required notifications that field staff must complete when a spill is discovered.

☒ A checklist that identifies steps to initiate an appropriate response to the spill.

☒ A form to document notifications.

☒ Guidance for field staff to identify spills to ground including notification procedures.

Comment: N/A

VESSEL FIELD DOCUMENT: WAC 173-182-240, 260, 262, and 264

☒ N/A **This is not a vessel plan.**

YES ☐ NO ☐ **Plan contains a field document that contains time critical information for use during a spill or substantial threat of a spill.**

To ensure field document is appropriately interrelated with the plan, the plan must include:

☐ Locations where the field document is located for use by field staff, e.g., in specific offices, location on a ship, etc.

☐ Identification of a central reporting office/individual for implementing the notification process.

☐ A prioritized call down list with names and phones numbers of required notifications to government agencies, response contractors, and spill management team members for spills.

☐ A form to document notifications.

☐ If the portion (personal phone numbers) of the list is not included in the plan, a commitment to provide the list to Ecology upon request and demonstrate it in drills.

☐ Guidance for determining and instructions for reporting vessel incidents that poses a substantial threat of a spill, i.e., vessel emergency.

☐ Procedures to activate and call out the ERTV (if applicable).

- ☐ Procedures to detect, assess and document the size of a spill and forms for initial response assessment. (See initial response actions below)
- ☐ A checklist with steps to initiate an appropriate response to the spill.

Comment: N/A

FIELD DOCUMENT (multi-vessel checklist): WAC 173-182-240

☒ N/A **This is not a multi-vessel plan.**

YES ☐ NO ☐ **Plan contains a field document that contains time critical information for vessel crew to use during the initial emergency phase of a spill or threat of a spill.**

To ensure field document is appropriately interrelated with the plan, the plan must include:

- ☐ Procedures to ensure each covered vessel is provided the field document prior to entering Washington waters.
- ☐ The location where the field document is to be kept on the vessel (e.g., in bridge of ship, etc.)

To ensure the plan is appropriately interrelated with the field document, the field document must include:

- ☐ A prioritized call down list with names and phones numbers of required notifications that a vessel crew must complete when a spill or threat of a spill is discovered.
- ☐ Notification placard that is to be placed on the bridge of each ship that describes notification procedures for activating the plan.
- ☐ Guidance for reporting vessel incidents or emergencies that pose a substantial threat of a spill.
- ☐ Procedures and equipment to detect, assess, and document the size of a spill and forms for initial response assessment.
- ☐ A checklist with steps to initiate an appropriate response to the spill, listed in a logical progression of response activities.
- ☐ Procedures to activate and call out the ERTV (or ERTV is not applicable).
- ☐ A form to document notifications.

Comment: N/A

REQUIREMENTS FOR VESSEL OPERATORS WITH ACCESS TO EMERGENCY RESPONSE TOWING VESSEL: WAC 173-182-242

☒ N/A **This is not a vessel plan, or the vessels covered by the plan do not transit through the Strait of Juan de Fuca.**

YES ☐ NO ☐ **The vessels covered by the plan transit through the Strait of Juan de Fuca. The plan includes required information for contracting with the ERTV:**

- ☐ Documentation of contracted access to the ERTV at Neah Bay.
- ☐ Detailed information about the ERTV's capabilities.
- ☐ Circumstances that may lead to activation and the process for call out of the ERTV.

Comment: N/A

INITIAL RESPONSE ACTIONS: WAC 173-182-250

YES ☐ NO ☒ **Plan contains specific initial response actions and forms that will be used to document the response including:**

- ☒ Initial spill assessment and site safety forms used to document initial spill actions.
- ☒ A description of equipment used to conduct an initial spill assessment during darkness and low visibility conditions such as:
  - ☒ Visual methods, tracking buoys, trajectory modeling, aerial overflights, thermal, and/or infrared imagery.
- ☒ A description of how site safety is assessed for all types of spills, including spills to groundwater:
  - ☒ Initial air monitoring protocols and equipment.
- ☒ Procedures used to confirm the occurrence, and estimate the quantity and nature of the spill.
- ☐ Commitment to update the initial report if the estimated quantity or extent of the contamination changes significantly.

Comment: There is a commitment to update the initial report if the quantity or extent changes in Section 2.4. Please include this as a footnote in the Notifications Section as well.

NOTIFICATION AND CALL OUT PROCEDURES: WAC 173-250(1); 173-182-260 and 264 (for facilities)

YES ☒ NO ☐ **Plan contains spill notification and call-out procedures including:**

- ☒ Procedures for notifications including a form to document notifications.
- ☒ Procedures must establish a clear prioritized call down list with names and phones numbers of required immediate notifications to government agencies, response contractors, and spill management teams.
  - ☒ Immediate notification of the Washington State Emergency Management Division and National Response Center is included.
- ☒ If portions of the notification list, such as internal company notifications, are not included in the plan there must be commitment that the notification documents is available for review by ecology.

Comment: N/A

VESSEL NOTIFICATION REQUIREMENTS FOR A DISCHARGE OR SUBSTANTIAL THREAT OF A DISCHARGE: WAC 173-182-262

☒ N/A **This is not a vessel plan.**

YES ☐ NO ☐ **Plan contains discharge or substantial threat of discharge (vessel emergency) information, including:**

- ☐ Vessel procedures include directions to notify WEMD within one hour of a discharge or substantial threat of a discharge *or as soon as is feasible* without further endangering the vessel or personnel.
- ☐ Procedures the vessel is to follow to coordinate with the State of Washington, the United States Coast Guard, and the plan holder to protect resources.
- ☐ Procedures the vessel is to follow to implement the contingency plan as described in the plan.

Comment: N/A

FACILITY SPILLS TO GROUND/CONTAINMENT THREATENING WATERS OF STATE: WAC 173-182-264

☐ **N/A** **This is not a facility plan.**

YES ☒ **NO** ☐ **Plan contains procedures to assess whether spills to ground or permeable secondary containment could threaten waters of the state.**

- ☒ Plan describes procedures for assessment using the considerations listed in the regulation, WAC 173-182-264 (1)(a) and (b).
- ☒ Assessment for spills of unknown volume should include at a minimum:
  - ☒ Whether the spill is still on-going or source is secured.
  - ☒ Whether the spill is located adjacent to waters of the state, or there is a pathway to waters of the state, and
  - ☒ Whether the environmental conditions, such as rain events, or known shallow groundwater make impacts to waters of the state likely.

Comment: N/A

MAINTENANCE RECORDS FOR PLAN HOLDER OWNED RESPONSE EQUIPMENT: WAC 173-182-270

N/A ☐ **Plan holder does not own response equipment.**

YES ☒ **NO** ☐ **Plan contains schedules, methods and procedures for equipment maintenance including:**

- ☒ Plan includes a plan holder-owned equipment list or description, or maintains the list on the WRRL.
- ☒ Plan describes the schedule, method, and procedure for inspecting and conducting maintenance on response equipment, and the personnel responsible for ensuring resources are maintained and have the ability to commit funds for repair or replacement
- ☒ Commitment to maintaining records for a period of five years and to make records available to Ecology upon request.
- ☒ A site visit and equipment inspection occurred on April 3, 2019, or is planned to occur after the plan approval.

Comment: N/A

SPILL MANAGEMENT TEAM (SMT): WAC 173-182-280

YES ☒ **NO** ☐ **Plan contains SMT information consistent with the Incident Command System and Northwest Area Contingency Plan including:**

- ☒ An organizational diagram depicting the chain of command for the spill management team for a worst case spill. This could be a reference to the NWACP.
- ☒ For the purpose of ensuring depth of the spill management team, a table detailing the names of personnel (or the name of an approved contracted SMT) to fill the ICS roles as specified in the table in WAC 173-182-280 (1)(b)
- ☒ A job description for each spill management position, or a reference to the Incident Management Handbook with position descriptions.
- ☒ A detailed description of the planning process that will be used to manage the spill or reference to the Incident Management Handbook that will be used.

- ☒ Commitment to be able to provide a Primary and two alternate Incident Commanders that can form a Unified Command at the initial command post. The IC must be able to arrive in state within six hours of notification.
- ☒ Narrative description of estimated timeframes for arrival of the rest of the spill management team in state.
- ☒ Commitment to work in Unified Command within ICS.
- ☒ Detailed transition procedures for orderly transition of initial response team to regional or away teams, including shift changes.
- ☒ Detailed training program including training type and frequency provided for each SMT member. A combination of training and experience in drills and spills may be used to describe SMT personnel capabilities within response roles. Training details may be organized by position or may be an inventory of staff training levels and must include:
  - ☒ ICS training type and frequency.
  - ☒ NWACP content and policies.
  - ☒ Use and location of GRPs.
  - ☒ Contents of the Contingency Plan.
  - ☒ Worker health and safety.

Comment: N/A

PLANS COVERING MULTIPLE VESSELS MAINTAIN CONTRACTED ACCESS TO APPROVED SMT OR IN-HOUSE TEAM: WAC 173-182-280(6)

☒ N/A **This is not a multi-vessel plan.**

YES ☐ NO ☐ **The plan includes required information for enrolled vessels contracting with a state-approved SMT or in-house team:**

- ☐ Describe the transition process from plan personnel to the incoming vessel owner or operator's team.
- ☐ Include checklists and process to facilitate an effective transition.
- ☐ Enrollment process and vessel enrollment list includes information on SMTs for enrolled vessels.
- ☐ Plan holders must notify Ecology immediately of any significant changes to their SMT.

Comment: N/A

FACILITY PLANNING STANDARDS FOR NON-DEDICATED WORKBOATS AND OPERATORS: WAC 173-182-315

☐ N/A **This is not a facility plan.**

YES ☒ NO ☐ **Plan describes a procedure to support a worst case spill response with work boats and operators that could arrive beginning at 48 hours.**

- ☒ Includes discussion about using non-dedicated workboats to help deploy GRPs**,** enhance skimming, and/or to provide logistical support during a spill. *Can refer to the contracted PRC application.*

Comment: N/A

VESSELS – PLANNING STANDARD FOR VESSELS OF OPPORTUNITY (VOO): WAC 173-182-317

☒ **N/A** **This is not a vessel plan.**

YES ☐ **NO** ☐ **Plan demonstrates access to appropriate number of VOOs for the area of operations.**

- ☐ Plan lists the VOO regions in which they transit or operate.
- ☐ Contracts with a PRC to meet the standard and plan includes a contract or letter from the PRC summarizing coverage. The plan references the PRC application and/or the WRRL for details about the VOO vessels and the training and management of contracted VOO.

OR;

- ☐ Plan holder meets the standard with non-PRC assets, which are fully described in the plan and listed on the WRRL.

YES ☐ **NO** ☐ **Plan contains procedures for call out and deployment of VOO.**

Comment: Enter section comment or type N/A

FACILITY PLANNING STANDARDS FOR AERIAL SURVEILLANCE: WAC 173-182-320

☐ **N/A** **This is not a facility plan.**

YES ☒ **NO** ☐ **Facility planning standards for aerial surveillance is assessed and indicates:**

- ☒ Aerial tracking resources are identified in the plan, including types and call out information, and could be on-scene within six hours of the spill notification.
- ☒ Resources are capable of supporting operations for 3 ten-hour periods during the initial 72 hours of the spill.

OR;

- ☒ Contracts with a PRC to meet the standard and plan includes a contract or letter from the PRC summarizing coverage. The plan may reference the PRC application for additional operational details.

Comment: N/A

VESSEL PLANNING STANDARDS FOR AERIAL SURVEILLANCE: WAC 173-182-321

☒ **N/A** **This is not a vessel plan.**

YES ☐ **NO** ☐ **Covered vessel planning standards for aerial surveillance is assessed and indicates:**

- ☐ Name of aerial surveillance resource provider and description of logistical resources.
- ☐ Contracts with a PRC to meet the standard and plan includes a contract or letter from the PRC summarizing coverage. The plan may reference the PRC application for additional operational details.
- ☐ Plan meets best achievable technology requirements in WAC 173-182-321(3), including access to approved aircraft with low-visibility equipment suite.

Comment: Enter section comment or type N/A

PLANNING STANDARDS FOR OILS THAT MAY SUBMERGE OR SINK: WAC 173-182-324

☐ **N/A** **Plan indicates oils that may weather and sink when spilled to the environment are not carried, handled, stored, or transported, and therefore planning standard is not applicable.**

YES ☒ **NO** ☐ **The plan holder or contracted PRC has necessary personnel and equipment capability within the time frames outlined in WAC 173-182-324. The contract or a summary of the contract terms are included in the plan.**

YES ☐ **NO** ☒ **Plan describes:**

- ☐ A detailed process for identification if the oil has a potential to submerge or sink.
- ☒ A description of the process for detecting, delineating, and recovering non-floating oils in the areas that may be impacted. The plan can reference the non-floating oil tools and processes found in the NWACP.

Comment: Please consolidate all of the product tables in this contingency plan into one table. You must also list all crude oils transported by name and include the associated properties of each oil including density, gravity, API, oil group number, sulfur content (sweet/sour) per WAC 173-182-230 (5)(f). This product table/list should indicate with an asterisk, or other unique identifier, any oils considered to have the potential to become non-floating—including crude oils, heavy fuel oils, vacuum gas oil, used and waste oils, and asphalt (as you have done in Figure 2.2).

PLANNING STANDARDS FOR DISPERSANTS: WAC 173-182-325

YES ☐ **N/A** ☒ **Plan Holder carries, handles, stores, or transports Group 2, 3, or 4 persistent oil that is known to be dispersible and that may impact any area where preapproval or case-by-case use of dispersants is available as per NWACP Section 9406.**

☒ **N/A** **If yes, the plan must include:**

- ☐ A description of the capability for the use of dispersants including an acknowledgement of the NWACP use of dispersant policies, and a commitment to monitor the efficacy of its use.

AND;

The plan refers to a contract with a PRC with operational dispersant capability and includes a contract or letter summarizing coverage, signed by a current authorized representative of the PRC.

- ☐ A description of dispersant stockpiles, type, and capability.
- ☐ A description of how the equipment will be transported to the staging area and the appropriate vessels or aircraft resources to apply the dispersant and monitor its effectiveness at the scene.
- ☐ Resources are capable of being on-scene within 12 hours of notification.

OR;

- ☐ Plan holder refers to the approved PRC application for detail on their dispersant capability and operational plan.

Comment: N/A

PLANNING STANDARDS FOR IN-SITU BURNING: WAC 173-182-330

YES ☒ **NO** ☐ **Plan holder operates in an area where in-situ burning (marine and/or inland) may be considered as a response option based on NWACP Section 9407.**

☐ **N/A**

If yes, the plan must include:

- ☐ Location of two 500-foot fire booms, air monitoring equipment, personal protective equipment, igniters, and aircraft or vessels used to deploy the igniters.
- ☐ Demonstrated access to an additional 1,000 feet of conventional boom, towing bridles, and workboats capable of towing boom in on-water burning operations.
- ☐ Description of how the equipment will be transported to the staging area and appropriate vessels and aircraft, and personnel resources to monitor the effectiveness at the scene.
- ☐ Resources are capable of being on-scene within 12 hours of notification.
- ☐ References the NWACP in-situ burning response tools.

OR;

- ☒ Plan refers to PRC with in-situ burn capability (marine and/or inland) capable of meeting the above requirements in accordance with the NWACP in-situ burning response tools. Plan holder refers to the approved PRC application for detail on their in-situ burn capability. Plan includes a contract or letter summarizing coverage and signed by a current authorized representative of the PRC.

Comment: N/A

PLANNING STANDARDS FOR STORAGE: WAC 173-182-335

YES ☒ **NO** ☐ **Plan contains required information on storage tactics, including:**

- ☒ On water storage devices.
- ☒ Interim shore-side storage locations.

N/A ☐ **Plan holder does not seek shore-side storage credit.**

YES ☒ **NO** ☐ **Plan contains information to allow shore-side storage credit including:**

- ☒ Permanent shore-side tankage identified. Must include written agreement with owner of tankage being identified.

Comment: N/A

DETERMINING EFFECTIVENESS OF RECOVERY SYSTEMS AND EFFECTIVE DAILY RECOVERY CAPACITY: WAC 173-182-345 and 348.

N/A ☒ **Plan holder does not own recovery equipment.**

YES ☐ **NO** ☐ **Plan provides determination of effective recovery systems and daily recovery capacity for plan holder owned equipment.**

Comment: N/A.

COVERED VESSEL PLANNING STANDARDS FOR TECHNICAL MANUALS: WAC 173-182-349

☒ **N/A** **This is not a vessel plan, or the plan holder does not transit Neah Bay, Cathlamet, or San Juan Islands.**

YES ☐ **NO** ☐ **Plan holder includes a link to a Technical Manual that meets the requirement of 173-182-349.**

Comment: N/A

FACILITY WORST CASE SPILL PLANNING VOLUME: WAC 173-182-030(73) and 230(3)(b)

☒ **N/A** **This is not a facility plan.**

YES ☐ **NO** ☐ **Plan identifies an appropriate worst case spill volume for the facility based on the largest above ground storage tank on the facility site. This includes:**

- ☐ Product type most likely for WCS.
- ☐ For multiple facilities using a single plan, separate worst case spill volumes is identified for each facility.

Worst Case Spill volume is: Click here to enter text.

YES ☐ **NO** ☐ **Plan contains acceptable methodology, including calculations to arrive at the worst case volume.**

Comment: Enter section comment or type N/A

VESSEL WORST CASE SPILL PLANNING VOLUME: WAC 173-182-030(73) and 230(3)(b)

☒ **N/A** **This is not a vessel plan.**

YES ☐ **NO** ☐ **Plan identifies an appropriate worst case spill volume based on a spill of the vessel's entire cargo and fuel. This includes:**

- ☐ Product type most likely for WCS.
- ☐ **Worst Case Spill volume is:** Click here to enter text.

UMBRELLA PLAN WORST CASE SPILL PLANNING VOLUME: WAC 173-182-030(73) and 230(3)(b)

☒ **N/A** **This is not an Umbrella plan**

YES ☐ **NO** ☐ **The Umbrella Plan provides a narrative that details the worst case spill volume, product types, types of vessels, transit areas, ports, and operations covered by the plan.**
Describe here: *Click here to enter text.*

Comment: Enter section comment or type N/A

PIPELINE WORST CASE SPILL PLANNING VOLUME: WAC 173-182-030(73) and 230(3)(b)

☐ **N/A** **This is not a pipeline plan.**

YES ☒ **NO** ☐ **Plan identifies an appropriate worst case spill volume, or set of volumes, for the pipeline including:**

- ☒ Product type most likely for WCS.
- ☒ **Worst Case Spill volume is:** Nooksack River 13,820 bbls, Bayview Products Terminal (largest tank) 110,000 bbls, Skagit River 6,024 bbls, Stillaguamish River 8,045 bbls, Snohomish River 9,775 bbls, Ebey Slough 19,000 bbls, Duwamish River 7,184 bbls, Renton Station (single tank) 10,000 bbls, Green River (1) 5,786 bbls, Green River (2) 7,168 bbls, Puyallup River 6,740 bbls, Cowlitz River 6,390 bbls, Lewis River 6,095 bbls, Nisqually River 23,764 bbls, Toutle River 6,173

bbls, Kalama River 6,387 bbls, Columbia River 5,351bbls, Cherry Point Crude Pipeline 10,843 bbls.

☒ **Pipeline Worst Case Spill is based on one of the following:**

- Location of pump stations.
- Key block valves.
- Geographic considerations.
- Largest break out tank or battery of tanks.

☒ **The volume is determined as the largest of the following methodologies, and all methodologies are detailed in the plan:**

- Maximum time to detect release + maximum shutdown response time (minimum of 30 minutes) X maximum flow rate per hour + largest line drainage volume after shutdown.
- Maximum historic discharge from the pipeline.
- Largest single break out tank or battery of tanks.

YES ☒ NO ☐ **Plan contains acceptable methodology for more than one worst case spill volume for different pipeline sections.**

Comment: N/A

PLANNING STANDARDS: WAC 173-182-350-450

YES ☒ NO ☐ **Plan references the appropriate planning standard(s) that apply to the plan's operations:**

The following planning standards apply to your plan:

☐ Transfer sites for covered vessels at facilities where transfers occur, and for facilities with a vessel terminal - WAC 173-182-355

☒ Transmission pipelines that may impact shorelines of statewide significance - WAC 173-182-365

☒ Transmission pipeline tank farms - WAC 173-182-366

☐ San Juan County - WAC 173-182-370

☐ Padilla Bay - WAC 173-182-375

☐ Commencement Bay Quartermaster Harbor - WAC 173-182-380

☐ Nisqually - WAC 173-182-385

☐ Dungeness - WAC 173-182-390

☐ Neah Bay Staging Area - WAC 173-182-395

☐ Copalis, Flattery Rocks, Quillayute Needles - WAC 173-182-400

☐ Grays Harbor - WAC 173-182-405

☐ Willapa - WAC 173-182-410

☐ Cathlamet Staging Area - WAC 173-182-415

☐ Vancouver - WAC 173-182-420

☐ Tri-cities - WAC173-182-430

☐ Planning Standards for the Washington Coast - WAC173-182-450

YES ☒ NO ☐ **Planning standard spreadsheets demonstrate adequate boom, storage, and recovery equipment strategically staged to meet the prescribed planning standard timeframes.**

Comment: N/A

RESPONSE AND PROTECTION STRATEGIES: WAC 173-182-510

YES ☒ NO ☐ **The plan identifies methods to track and contain spilled oil and enhance the recovery and removal operations that are described in the plan.**

☒ Plan contains land-based strategies to divert, deflect, collect, or block oil movement.

YES ☐ NO ☒ **The plan includes a description of how environmental protection will occur, including:**

☐ Commitment to implement GRP strategies as needed to protect environment

☐ Discussion of applicable GRPs.

☒ Identification of resources at risk, including those on the surface, shoreline, water column and benthic risks—or reference to the applicable GRP(s) with these considerations.

☒ Non-floating oil considerations including identification of waterway depths, water density, sediment load, sea floor or river bottom types, and response options based on those factors—or reference to applicable GRP(s) with these considerations.

☐ Web link to GRPs.

YES ☒ NO ☐ **Facility does not impact a sole-source aquifer; or, the plan identifies the aquifer that may be impacted, the types of substrate in the vicinity, and the geographical extent of sensitive sites.**

YES ☒ NO ☐ **GRPs have not been developed to meet this requirement; or, the plan holder describes plan specific response strategies to protect significant sensitive sites. The plan holder must work with Ecology to verify these sites.**

YES ☒ NO ☐ **The plan identifies potential initial command post locations.**

Comment: The plan needs to include a commitment to implement GRP strategies, a discussion of the GRP's which are applicable to the areas in which the Olympic Pipeline and Cherry Point Crude Pipeline operate, and a web link to those GRP's. Please note, the 18-month phase in period for the oil spill contingency plan rule will be effective July 18, 2021. This update will require information on water column and seafloor resources at risk from non-floating oil spills in accordance with requirements for response and protection strategies under WAC *173-182-510*. This would be an opportune time to incorporate these updates; Ecology has drafted boilerplate language to assist plan holders in meeting this requirement.

GEOGRAPHIC INFORMATION PLANNING STANDARDS FOR PIPELINE PLAN HOLDERS: WAC 173-182-515

☐ N/A **This is not a pipeline plan.**

YES ☐ NO ☒ **Plan includes a narrative that describes the geographic information planning tool that supports the plan holder in mapping and tracking spilled oil, decision making, and enhancing the recovery and removal operations that are described in the plan.**

The tool includes the following as applicable for areas which may be impacted by a spill:

☒ Pipeline details such as location information for line segments, block valves, break out tanks, containment structures, control stations, safety equipment, pipeline right of way, access points, and pipeline control points.

☒ Sensitive natural, cultural, and economic area information including applicable GRPs.

☐ Information on public resources, water intakes, sole source aquifers, existing monitoring wells, and drinking water supplies.

☒ Topography of the area.

☐ Oil spill response equipment staging information.

YES ☐ NO ☒ **The contingency plan contains a commitment to utilize the tool during drills and spills.**

YES ☐ NO ☒ **The contingency plan contains a commitment to update the tool at a minimum once every five years or in response to lessons learned during drill and spill events.**

Comment: The narrative in Section 2.2.3 describing the geographic information planning tool needs to state that information on public resources, water intakes, sole source aquifers, existing monitoring wells, drinking water supplies, and oil spill response equipment staging information are included in the tool. The narrative also needs to contain a commitment to utilize the tool during drills and spills and to update it at a minimum once every five years or in response to lessons learned during drill and spill events.

PLANNING STANDARDS FOR SHORELINE CLEANUP: WAC 173-182-522

YES ☐ NO ☒ **Plan demonstrates adequate preparation for immediate and prolonged shoreline cleanup operations including access to 100 trained shoreline cleanup workers within 24 hours and additional resources to support 14 additional days of shoreline cleanup work.**

- ☒ Plan includes procedures for identifying shoreline types and determining appropriate response tactics, **AND**
- ☐ Plan describes data collection, communication, transmission, and management for shoreline clean-up assessment techniques, **AND**
- ☒ Plan refers to a contract with a PRC for shoreline clean-up capability and equipment, and references the applicable PRC application for details about the operational plan capable of meeting the planning standard, **OR**
- ☐ Plan holder owns and maintains contractors for personnel resources necessary to meet the personnel and equipment requirements, and the plan contains a detailed operational shoreline clean-up plan capable of meeting the planning standard.

Comment: The plan must describe how data collection, communications, data transmission and data management, in relation to shoreline cleanup, will be conducted. Ecology can provide sample language to help you meet this requirement.

FACILITY PLANNING STANDARDS FOR GROUNDWATER SPILLS: WAC 173-182-530

☐ N/A **This is not a facility plan.**

YES ☒ NO ☐ **Plan includes appropriate description of:**

- ☒ Methods used to immediately assess spills that may threaten groundwater.
- ☒ Contact information for resources to be used to investigate, contain, and remediate/recover spills to groundwater.

Comment: N/A

PLANNING STANDARDS FOR AIR MONITORING TO PROTECT RESPONDERS AND THE PUBLIC: WAC 173-182-535

YES ☐ NO ☒ **Plan describes applicable federal, state, and local requirements and the plan holder's resources for conducting air monitoring to protect responders and the public, including:**

- ☒ A description of how initial site safety assessment for responders will occur.
- ☒ A description of how work area air monitoring will occur.
- ☒ A description of how community air monitoring (area wide monitoring) will occur.

- ☒ A description of air monitoring instruments and detection limits that will be used by responders when monitoring for public safety.
- ☒ A description of action levels for various oil constituents of concern (benzene, H_2S, etc.) based on products handled.
- ☐ A description of data management protocols and reporting time frames to the Unified Command.
- ☒ A description of communication methods to at-risk populations.
- ☒ A description of how evacuation zones and shelter-in-place criteria are established.

Comment: In relation to community air monitoring, the plan needs to contain a description of data management protocols and time frames for reporting air monitoring results to the Unified Command. Consider consulting with CTEH to ensure your air monitoring plan (including data management protocols and reporting time frames) is accurately described in your plan. Ecology can provide sample language to help you meet this requirement upon request.

PLANNING STANDARDS FOR WILDLIFE RESPONSE: WAC 173-182-540

YES ☒ NO ☐ **The plan meets applicable federal, state, and NWACP requirements for response to and care for wildlife injured or endangered by oil spills, including:**

- ☒ Plan describes how to conduct and manage the various field aspects of a wildlife response including impact assessment, reconnaissance, deterrence, capture, stabilization, and rehabilitation.
- ☒ Plan commits to conduct wildlife response actions in accordance with applicable federal and state regulations and the Northwest Area Contingency Plan
- ☒ Contact information for approved organizations, available under contract or other approvable means, and that maintain the required equipment, personnel, permits, materials, and supplies, for conducting wildlife response operations in accordance with the capabilities detailed in WAC 173-182-540(2), (3), and (4).
- ☒ Access to approved equipment and personnel capable of arriving on-scene at required intervals.
- ☒ Access to approved equipment and personnel to conduct and manage the various field aspects of wildlife response.

Comment: Please remove IOSA from your lists of Marine Mammal Monitoring and Deterrence resources. This organization was included in Ecology's boilerplate template as a mistake.

ALTERNATIVE METHODS OF EVALUATING PLANNING STANDARDS: WAC 173-182-620

☐ N/A **Plan does not include a request for an alternative to a planning standard.**

YES ☐ NO ☒ **Plan includes an alternative planning standard that achieves equivalent or higher protection in terms of spill preparedness and response compared to the applicable planning standard. The plan addresses the following:**

- ☒ Identifies the planning standard(s) for which alternative will be substituted.
- ☐ Provides a detailed description of the alternative.
- ☒ Provides an analysis for how the proposal will provide equal or greater protection compared to the applicable planning standard.

Comment: An Alternative Planning Standard proposal for the Bayview Products Terminal is located in Appendix E.7. Please include a new Letter of Intent for additional storage available from Rain for Rent.

DRILLS: WAC 173-182-700 through 740

YES ☐ N/A ☒ This plan requests an alternative to the drill program.

- ☐ Identifies the requirement for which alternative will be substituted.
- ☐ Provides a detailed description of the alternative.
- ☐ Provides an analysis for how the proposal will provide equal or greater protection compared to the applicable planning standard.

YES ☒ NO ☐ Plan commits to Washington's drill program. Plan includes:

- ☒ A written commitment to schedule drills to satisfy the timing and frequency requirements of WAC 173-182-700 and WAC 173-182-710.
- ☒ Commitment to provide Ecology an opportunity to help design and evaluate all tabletop and deployment drills for which credit is requested.
- ☒ Commitment to update plan if deficiencies are identified during drill performance and evaluation.

☒ N/A This is not a multi-vessel plan.

YES ☐ NO ☐ Plan includes statement committing to working with Ecology to systematically over time test all spill management teams that support your vessel enrollees as required by WAC 173-182-710(3).

Comment: Wildlife deployment drills and multiple plan holder large scale deployment drills are now required by WAC 173-182-710. Please update your list of required drills in Figure A.2 to include these drill types.

REVIEW:

As stated under WAC 173-182-910(2), approval does not constitute an express assurance regarding the adequacy of this plan nor does it constitute a defense to liability imposed under state law. Further, in accordance with WAC 173 182 142(2), the Department of Ecology must be notified as soon as possible and within 24 hours of any significant change that could affect implementation of the plan. A schedule for the prompt return of the plan to full operational status must be provided. A facsimile or e-mail will be considered written notice for the purposes of this subsection.

As part of my review of this plan, I received one comment letter from stakeholders. I have considered these comments in this review.

Based on applicable provisions of Chapter 173-182 WAC, this checklist, and the plan approval criteria found in Washington law, I recommend that the contingency plan for BP Pipelines (North America) Northwest Pipelines District be conditionally approved.

For full approval to be granted, please provide updates that address all items that have not been checked "Yes" on this checklist within 60 days. If you are unable to meet this deadline, please contact us immediately to discuss an extension.

Oil Spill Preparedness Planner: Scott Zimmerman **Date:** June 7, 2021

Oil Spill Contingency Plan Approval Certificate

DEPARTMENT OF ECOLOGY
State of Washington

The Oil Spill Contingency Plan for

BP Pipelines (North America) Northwest Pipelines District

has been CONDITIONALLY APPROVED pursuant to Chapter 173-182 Washington Administrative Code by the

WASHINGTON STATE
DEPARTMENT OF ECOLOGY
Spill Prevention, Preparedness, and Response Program
Spill Preparedness Section

June 09, 2021
Date of Approval

Linda Pilkey-Jarvis
Preparedness Section Manager

December 09, 2022
Plan Expiration Date