Trans Mountain Pipeline Amendment FS2393

State of Washington
Department of Ecology

In the Matter of Remedial Action by: Trans Mountain Oil Pipe Line Corporation 1333 West Broadway, Suite 900 Vancouver, B.C. V6H 4C2 Canada	First Amended Enforcement Order No. DE 91-N192

To: Glenn A. Irving
Vice President, Secretary, and General Counsel

Michael Boyle
Corporate Solicitor and Assistant Secretary

I.

Jurisdiction

This Order is issued pursuant to the authority of RCW 70.105D.050(1).

II.

Statement of Facts

1. The Department of Ecology (Ecology) observed releases of petroleum product on January 15, 1991; December 11, 1991; and March 7, 1992 from the Trans Mountain Oil Pipe Line Corporation - Laurel Pump Station, 1009 East Smith Road near the City of Bellingham in Whatcom County, Washington.

2. Trans Mountain Oil Pipe Line Corporation notified Ecology (letter to B. Trejo, Ecology, dated November 27, 1991) that soil contamination, not related to the petroleum product releases described above, was identified by Trans Mountain Oil Pipe Line Corporation on October 25, 1991 during an upgrade of the Laurel Pump Station.

3. Trans Mountain Oil Pipe Line Corporation responded to the reported releases and commenced containment and cleanup operations. Trans Mountain Oil Pipe Line Corporation also retained geotechnical and environmental consulting firms to perform preliminary contamination assessments. On June 19, 1991, Trans Mountain Oil Pipe Line Corporation concurred with Ecology's decision to issue an Enforcement Order to expedite remedial actions at the facility.

4. Soil, sediments, groundwater, and surface water have been demonstrated to be contaminated or are potentially contaminated as a result of the petroleum releases from the Trans Mountain Oil Pipe Line Corporation - Laurel Pump Station based on the results presented in the following plans and reports: (1) Proposed Site Assessment Plan For The Condensate Spill At Laurel Pump Station, January 15, 1991, Trans Mountain Oil Pipe Line Corporation, February 1, 1991; (2) Laurel Pump Station Condensate Spill: Fisheries Assessment, Seymour & Associates, May 16, 1991; (3) Site Assessment Report - Soil & Water Analysis, Laurel Pump Station Natural Gas Condensate Spill, East Smith Road, Whatcom County, Washington, Purnell & Associates, May 17, 1991; and (4) Work Plan, Remedial Investigation/Feasibility Study, Laurel Pump Station, Laurel, Washington for Trans Mountain Oil Pipe Line Corporation, Dames & Moore, January 6, 1992.

III.

Ecology Determinations

1. The Trans Mountain Oil Pipe Line Corporation is an "owner and operator" as defined in RCW 70.105D.020(6) of a portion of a "facility" as defined in RCW 70.105D.020(3).

2. The facility or "site" is defined as the Laurel Pump Station property located at 1009 East Smith Road, Bellingham, Washington and all other properties in the vicinity of the pump station property which have been affected or are potentially affected by spills, leaks, or discharges of petroleum products or other hazardous substances from the pump station, if any, including the following areas: (1) Area 1 - all property located up to 350 feet west of the pump station property line, south of Smith Road, including the portion of the access easement located west of the pump station property line; (2) Area 2 - all property located north of Area 1 including the adjacent eastern access road, north of Smith Road; (3) Area 3 - Deer Creek and its tributaries including all wetlands, ditches, culverts, streams, ponds, creeks, and other surface water bodies and uplands adjacent to Deer Creek and its tributaries from the southern Smith Road culvert, immediately north of Area 1, downstream to Guide Meridian Road. The facility or site definition may be expanded based on the results of future remedial actions.

3. The substances found at the facility as described above are "hazardous substances" as defined in RCW 70.105D.020(5).

4. Based on the presence of these hazardous substances at the facility and all factors known to the Department, there is a release or threatened release of hazardous substances from the facility, as defined in RCW 70.105D.020(10).

5. By a letter of April 1, 1991, Trans Mountain Oil Pipe Line Corporation voluntarily waived its rights to notice and comment and accepted Ecology's determination that Trans Mountain Oil Pipe Line Corporation is a "potentially liable person" under RCW 70.105D.040 with respect to the site.

6. Pursuant to RCW 70.105D.030(1) and 70.105D.050, the Department may require potentially liable persons to investigate or conduct other remedial actions with respect to the release or threatened release of hazardous substances, whenever it believes such action to be in the public interest.

7. Based on the foregoing facts, Ecology believes the remedial action required by this Order is in the public interest.

IV.

Work to be Performed

Based on the foregoing Facts and Determinations, it is hereby ordered that Trans Mountain Oil Pipe Line Corporation take the remedial actions described in the attached Exhibit A, Scope of Remedial Actions, and Exhibit B, Performance Schedule for Remedial Actions in accordance with Chapter 173-340 WAC unless otherwise specifically provided for herein. Exhibits A and B are incorporated by reference and are integral and enforceable parts of this Enforcement Order.

V.

Terms and Conditions of Order

1. Definitions

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

2. Public Notice

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

3. Remedial Action Costs.

Trans Mountain Oil Pipe Line Corporation shall pay to Ecology costs incurred by Ecology prior to the effective date of the Order and costs incurred by Ecology pursuant to this Order. These costs shall include work performed by Ecology or its contractors for investigations, remedial actions, and Order preparation, oversight and administration. Ecology costs shall include costs of direct activities; e.g., employee salary, laboratory costs, travel costs, contractor fees, and employee benefit packages; and agency indirect costs of direct activities. Trans Mountain Oil Pipe Line Corporation shall pay the required amount within 90 days of receiving from Ecology an itemized statement of costs that includes a summary of costs incurred, a general description of work performed, an identification of involved staff, and the amount of time spent by involved staff members on the project. Failure to pay Ecology's costs within 90 days of receipt of the itemized statement of costs may result in interest charges.

4. Designated Project Coordinators.

The project coordinator for Ecology is:

Name Barbara J. Trejo
Washington State Department of Ecology

Address 3190 - 160th Avenue Southeast
Bellevue, Washington 98008-5452

The project coordinator for Trans Mountain Oil Pipe Line Corporation is:

Name Dan O'Rourke

Trans Mountain Oil Pipe Line Corporation

Address 1333 West Broadway, Suite 900

Vancouver, B.C. V6H 4C2 Canada

The project coordinators shall be responsible for overseeing the implementation of this Order. To the maximum extent possible, communications between Ecology and Trans Mountain Oil Pipe Line Corporation, and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order, shall be directed through the project coordinators. Should Ecology or Trans Mountain Oil Pipe Line Corporation change project coordinators, written notification shall be provided to Ecology or Trans Mountain Oil Pipe Line Corporation at least ten (10) calendar days prior to the change.

5. Performance. All work performed pursuant to this Order shall be under the direction and supervision, as necessary, of a professional engineer or hydrogeologist, or similar expert, with appropriate training, experience and expertise in hazardous waste site investigation and cleanup. Trans Mountain Oil Pipe Line Corporation shall notify Ecology as to the identity of such engineer(s) or hydrogeologist(s), and of any contractors and subcontractors to be used in

carrying out the terms of this Order, in advance of their involvement at the Site. Trans Mountain Oil Pipe Line Corporation shall provide a copy of this Order to all agents, contractors or subcontractors retained to perform work required by this Order and shall ensure that all work undertaken by such agents, contractors and subcontractors will be in compliance with this Order.

Except when necessary to abate an emergency situation, Trans Mountain Oil Pipe Line Corporation shall not perform any remedial actions at the Trans Mountain Oil Pipe Line Corporation - Laurel Pump Station and adjacent properties affected by the pump station operation outside that required by this Order unless Ecology concurs, in writing, with such additional remedial actions.

WAC 173-340-400(7)(b)(i) requires that "construction" that is required under this Order and is performed on the Site must be under the supervision of a professional engineer registered in Washington.

6. Access

Ecology or any Ecology authorized representative shall have the authority to enter and freely move about all property at the Site at all reasonable times for the purposes of, inter alia: inspecting records, operation logs, and contracts related to the work being performed pursuant to this Order; reviewing the progress in carrying out the terms of this Order; conducting such tests or collecting samples as

Ecology or the project coordinator may deem necessary; using a camera, sound recording, or other documentary type equipment to record work done pursuant to this Order; and verifying the data submitted to Ecology by Trans Mountain Oil Pipe Line Corporation. Ecology shall provide reasonable notice before entering property unless an emergency prevents notice. While at the Site, Ecology and any Ecology authorized representatives shall observe reasonable safety requirements imposed by Trans Mountain Oil Pipe Line Corporation, provided that such requirements are brought to the attention of Ecology and any Ecology authorized representatives. Ecology shall allow split or replicate samples to be taken by Trans Mountain Oil Pipe Line Corporation during an inspection unless doing so would interfere with Ecology's sampling. Trans Mountain Oil Pipe Line Corporation shall allow split or replicate samples to be taken by Ecology and shall provide Ecology seven (7) days notice before any sampling activity. However, Trans Mountain shall provide Ecology only as much advance notice as is practical under the circumstances when (1) sampling becomes necessary due to unforeseen circumstances or (2) sampling is to occur during a rain event.

To the extent that compliance with this Order requires access to property not owned or controlled by Trans Mountain Oil Pipe Line Corporation, Trans Mountain Oil Pipe Line Corporation shall make every reasonable effort to obtain

signed access agreements for itself, its contractors, and agents, and provide Ecology with copies of such agreements. With respect to non-Trans Mountain Oil Pipe Line Corporation property upon which monitoring wells, pumping wells, treatment facilities, or other response actions are to be located, the access agreements to the extent practicable shall also provide that no conveyance of title, easement, or other interest in the property shall be consummated without provisions for the continued operation of such wells, treatment facilities, or other response actions on the property. The access agreements should also provide to the extent practicable that the owners of any property where monitoring wells, pumping wells, treatment facilities, or other response actions are located shall notify Ecology by certified mail at least thirty (30) days prior to any conveyance, of the property owner's intent to convey any interest in the property and of the provisions made for the continued operation of the monitoring wells, treatment facilities, or other response actions installed pursuant to this Order.

7. Public Participation

Trans Mountain Oil Pipe Line Corporation shall assist Ecology in preparing and/or updating a public participation plan for the Site. Trans Mountain Oil Pipe Line Corporation may assist Ecology with the plan preparation prior to the issuance of the Order. Ecology shall maintain the

responsibility for public participation at the Site. Trans Mountain Oil Pipe Line Corporation shall help coordinate and implement public participation for the Site.

8. Retention of Records

Trans Mountain Oil Pipe Line Corporation shall preserve in a readily retrievable fashion, during the pendency of this Order and for ten (10) years from the date of completion of the work performed pursuant to this Order, all records, reports, documents, and underlying data in its possession relevant to this Order. Should any portion of the work performed hereunder be undertaken through contractors or agents of Trans Mountain Oil Pipe Line Corporation, a record retention requirement meeting the terms of this paragraph shall be required of such contractors and/or agents.

9. Dispute Resolution

Trans Mountain Oil Pipe Line Corporation may request Ecology to resolve factual or technical disputes which may arise during the implementation of this Order. Such request shall be in writing and directed to the signatory of this Order. Ecology resolution of the dispute shall be binding and final. Trans Mountain Oil Pipe Line Corporation is not relieved of any requirement of this Order during the pendency of the dispute and remains responsible for timely compliance with the terms of the Order unless otherwise provided by Ecology in writing.

10. Reservation of Rights

Ecology reserves all rights to issue additional orders or take any action authorized by law in the event or upon the discovery of a release or threatened release of hazardous substances not addressed by this Order, upon discovery of any factors not known at the time of issuance of this Order, in order to abate an emergency, or under any other circumstances deemed appropriate by Ecology.

Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances from the Trans Mountain oil Pipe Line Corporation - Laurel Pump Station.

In the event Ecology determines that conditions at the Site are creating or have the potential to create a danger to the health or welfare of the people on the Site or in the surrounding area or to the environment, Ecology may Order Trans Mountain Oil Pipe Line Corporation to stop further implementation of this Order for such period of time as needed to abate the danger.

11. Transference of Property

No voluntary or involuntary conveyance or relinquishment of title, easement, leasehold, or other interest in any portion of the Site shall be consummated by Trans Mountain Oil Pipe Line Corporation without provision for continued implementation of all requirements of this Order and

implementation of any remedial actions found to be necessary as a result of this Order.

Prior to transfer of any legal or equitable interest Trans Mountain Oil Pipe Line Corporation may have in the Site or any portions thereof, Trans Mountain Oil Pipe Line Corporation shall serve a copy of this Order upon any prospective purchaser, lessee, transferee, assignee, or other successor in such interest. At least thirty (30) days prior to finalization of any transfer, Trans Mountain Oil Pipe Line Corporation shall notify Ecology of the contemplated transfer.

12. Compliance With Other Applicable Laws

All actions carried out by Trans Mountain Oil Pipe Line Corporation pursuant to this Order shall be done in accordance with all applicable federal, state, and local requirements.

13. Revisions to the Scope of Work and Schedule

Revisions to the scope of work or to the schedule shall be granted only when a request for revision is submitted to the Ecology project coordinator within five business days after Trans Mountain Oil Pipe Line Corporation knew or should have known of the need for the revision, and when good cause exists for granting the revision. All revision shall be requested in writing. The request shall specify the reason(s) the revision is needed. A revision of schedule shall be granted only for such period as Ecology determines

EXHIBIT A

SCOPE OF REMEDIAL ACTIONS

I. PRE-REMEDIAL INVESTIGATION REPORT

Submit to Ecology for review an independent pre-remedial investigation report for all the investigation work performed by Trans Mountain which has not previously been submitted to Ecology in a report format including the information obtained during Trans Mountain's 1991 - 1992 upgrade of the pump station.

II. REMEDIAL INVESTIGATION AND FEASIBILITY STUDY

Conduct a remedial investigation and feasibility study (RI/FS) pursuant to WAC 173-340-350. The RI/FS shall address known or potential contamination resulting from the January 1991, December 1991, and March 1992 petroleum spills as well as known or potential contamination resulting from current and historic operations including spills or leaks at and from the pump station. The RI/FS shall also include information to determine the impact or potential impact of releases of hazardous substances at the facility on the natural resources and ecology of the area, an ecological and human health risk assessment, wetland delineation, and an evaluation of interim cleanup actions.

A. Submit to Ecology for review and approval a RI/FS work plan pursuant to WAC 173-340-350. The work plan format shall follow the general format presented in the EPA Superfund Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA. The work plan shall include a health & safety plan (WAC 173-340-810), sampling and analysis plan (WAC 173-340-820), wetland delineation plan, a natural resource damage assessment plan, and a discussion of data gaps associated with each item described in WAC 173-340-350(6). If Trans Mountain believes that an item described in WAC 173-340-350(6) is not applicable to the site, a brief explanation about why it is not applicable shall be included in the work plan.

The health & safety plan is reviewed but not approved by Ecology. If Trans Mountain believes that the existing health & safety plan (Amended Health and Safety Plan For Trans Mountain Oil Pipe Line Corporation, Laurel Station RI/FS, March 20, 1992, prepared by Dames & Moore) meets the legal requirements for worker health and safety (WAC 173-340-810) for the work to be completed for the RI/FS described above, Ecology shall be notified by Trans Mountain, in writing, the basis for its decision about the adequacy of the health & safety plan. If the existing plan does not meet the legal requirements for worker health &

safety, Trans Mountain shall include a revised health & safety plan which shall be submitted with the work plan.

B. Submit to Ecology for review and approval a RI/FS report. The report shall follow the EPA suggested RI/FS format.

III. INTERIM ACTIONS

A. Submit a written response to each comment included in Ecology's June 19, 1991 comment letter on Purnell & Associates' May 17, 1991, Site Assessment Report - Soil and Water Analysis, Laurel Pump Station Natural Gas Condensate Spill, East Smith Road, Whatcom County, Washington and the Seymour & Associates' May 16, 1991, Laurel Pump Station Condensate Spill: Fisheries Assessment. The written response shall be in a report or letter format and shall include responses made prior to the issuance of this Order.

B. Surface Water Monitoring ~~System~~

1. Submit to Ecology for review biweekly surface water sampling results obtained by Trans Mountain at surface water monitoring stations established by Trans Mountain to monitor surface water quality from areas contaminated by hazardous substances.

   The water quality parameters to be analyzed shall include but not be limited to the volatile organics: benzene, toluene, ethylbenzene, and xylene (BETX); the full range of petroleum hydrocarbons; pH; conductivity; and temperature. The Washington Department of Ecology analytical procedures for petroleum hydrocarbon analysis for water (WTPH-G, WTPH-D, WTPH-418.1) shall be used to analyze the full petroleum hydrocarbon range. The analytical method selected for BETX shall be in compliance with WAC 173-340-830, analytical procedures.

   The water quality sampling result submittals shall include but not be limited to a surface water station location map, a summary of surface water sampling results, copies of the laboratory data sheets, and a description of any water quality sampling results which exceed groundwater or surface water quality criteria.

C. Submit to Ecology for review detailed hydrogeological cross sections which cover the area within a one-mile radius of the January 15, 1991, leak site to confirm Purnell & Associates hypothesis that no aquifer other

than the shallow aquifer is contaminated with natural gas condensate or other contaminants related to the Laurel Pump Station and that no drinking water wells are affected. Logs from registered and unregistered wells identified within a one-mile radius of the January 15, 1991, leak site as well as any other information available to Trans Mountain or their consultants shall be used to develop the cross sections.

D. Dam and Surface Water Maintenance

1. Submit to Ecology for review a plan for maintaining and operating Dam #2, located downstream of Smith Road, ~~and~~ Dam #3, east of Hannegan Road, and the dam constructed by Trans Mountain for the March 1992 petroleum spill. The plan shall also include a discussion of the cleanup of visible contamination on the surface water. A copy of the plan shall also be sent by certified or registered mail to the Department of Wildlife and Mark Schuller, Department of Fisheries (Fisheries), 333 E. Blackburn Road, Mt. Vernon, Washington for Fisheries files.

2. Begin implementation of the Dam #2 and Dam #3 dam and surface water maintenance plan.

3. Begin implementation of the dam and surface water maintenance plan for the dam constructed by Trans Mountain for the March 1992 petroleum spill.

4. Submit to Ecology for review and comment an evaluation of the feasibility of removing Dam #2, Dam #3, and the dam constructed by Trans Mountain for the March 1992 petroleum leak. The evaluation shall include but not be limited to a discussion of potential environmental impacts such as migration of contaminants or contaminated sediments as a result of the dam removal, a summary of surface water testing, and visual and olfactory contamination observations.

5. Submit to Ecology for review a Dam Removal Plan if the evaluation described in D.4., above, indicates that dam removal is feasible and Ecology agrees with the evaluation. The plan shall provide detailed steps for completing the dam removal including a discussion of any SEPA or other permit requirements such as a hydraulic permit, water quality modification permit, or other applicable permit requirements and specific requirements for preventing further environmental damage as a result of the dam removal.

E. Spill Prevention Plan

1. Submit to Ecology for review a spill prevention plan which shall address future potential leaks, spills, or unauthorized discharges from the Laurel Pump Station site. The plan shall include but not be limited to the following information and procedures:

   a. A description of a reporting system to be used to notify immediately persons responsible for the management of the facility and appropriate state, federal, and local authorities;

   b. A description and a site plan showing equipment or facilities for the prevention, containment or treatment of leaks, spills, and unauthorized discharges;

   c. A list of all hazardous substances as defined in Chapter 70.105D RCW, Hazardous Waste Cleanup - Model Toxics Control Act which are used, processed, or stored at the facility including the normal quantity maintained on the premises. The applicable Material Safety Data Sheets (MSDS) shall be included as an appendix to the plan.

   d. A brief description of any leaks, spills, or unauthorized discharges which occurred during the 36-month period preceding the effective date of this Order and subsequent measures taken by Trans Mountain Oil Pipe Line Corporation to prevent or to reduce the possibility of further leaks, spills, or unauthorized discharges; and

   e. An implementation schedule for additional equipment or facilities which might be required for E.1.b, above, but which are not yet operational.

   The Spill Prevention Plan must be reviewed and certified by a professional engineer registered in the State of Washington. Such certification shall in no way relieve Trans Mountain Oil Pipe Line Corporation of its duty to prepare and fully implement the Spill Prevention Plan for the Laurel Pump Station.

2. Begin the Spill Prevention Plan implementation.

3. Submit to Ecology the results of the studies, evaluations, or other items outlined by Trans Mountain in its Spill Prevention Plan implementation schedule.

F. Oil/Water Separator

1. Submit to Ecology as-builts of the Laurel Pump Station oil/water separators along with a list of hazardous substances that historically may have been discharged. The as-builts shall identify historic sources connected to the separators as well as current sources.

2. Submit a sampling and analysis plan for water samples to be collected from the separators. The initial sampling round shall include priority pollutant and petroleum hydrocarbon analyses if the sources which discharge to the separators cannot be determined. If the sources discharging to the separators have been identified then the sampling may be limited to those hazardous substances associated with each source. The sampling and analysis plan shall meet the submittal requirements of WAC 173-340-430(6).

3. Collect water samples from the oil/water separator outlets.

4. Submit to Ecology a written report of the chemical analytical results for each separator sampling event. The report shall include a summary of the analytical and quality control/quality assurance results, copies of all laboratory analytical and quality control/quality assurance data, and describe any changes to the procedures described in the sampling and analysis plan prepared for F.2, above.

G. Wetlands Delineation and Mitigation

A wetland mitigation plan shall be required for cleanup actions in wetland areas of the site. Appropriate wetland delineation shall be accomplished in advance of the wetland mitigation plan. Attachment 1, Report Recommendations For Wetland Determinations/Delineations and Compensatory Wetlands Mitigation Plans provides general guidelines for wetland determinations/delineations and mitigation plans.

1. Submit to Ecology for review and comment a wetland determination/delineation for the following areas:

   a. Laurel Pump Station property; Area 1; Area 2; and the portions of Area 3 upstream of

Hannegan Road, which have been affected by the January 1991 natural gas condensate leak.

b. All other areas of the site which have been identified as affected or potentially affected by the pump station operation in the Ecology reviewed and approved wetland delineation plan required under section II.A. Pump station operations include but are not limited to historic and current operations, upgrading, spill responses, interim actions, final remedial actions.

2. Submit to Ecology a Wetland Mitigation Plan for the site.

3. Implement the wetland mitigation plan.

H. Interim Cleanup Action - Laurel Pump Station Property: Non-Wetland Areas Affected by the January 15, 1991 Natural Gas Condensate Leak

1. Submit to Ecology a work plan and a sampling and analysis plan for the following interim cleanup actions for non-wetland areas of the Laurel Pump Station property affected by the January 15, 1991 natural gas condensate leak:

a. Removal of the existing drain tile;

b. Excavation of any contaminated non-wetland soils which exceed the cleanup criteria for the contaminants of concern. Contaminated non-wetland soils and any stockpiled soils from the January 15, 1991 leak site excavation shall be immediately moved to on-site treatment beds for bioremediation immediately after excavation.

c. Backfilling of the excavations completed for H.1.a and H.1.b with clean native soil or structural fill. Compacted native soils or structural fill used for backfilling must have hydraulic conductivity values less than or equal to the in-situ native soils to prevent this area from acting as a conduit for any potential future leaks, spills, or discharges from this site unless the backfill cannot be placed to meet hydraulic conductivity values due to limitations imposed by the pipe line. The backfilled areas must immediately be reseeded with appropriate fast growing native vegetation to prevent sedimentation to nearby surface

waters.

d. Evaluate whether a new drainage system should be installed to replace the drain tile. Install the new drainage system as required. The new system shall contain any future potential leaks or discharges of hazardous substances.

The work plan and sampling and analysis plan shall include the appropriate items in WAC 173-340-430(6), Submittal Requirements. In addition to the items identified in WAC 173-340-430(6), the following shall be included in the plans:

(1) An evaluation of the feasibility of conducting the work described in H.1.a to H.1.d., above, during the different seasons when precipitation varies;

(2) A State Environmental Policy Act (SEPA) checklist or environmental impact statement (EIS) for all interim actions which require a state, county, or city permit and/or National Environmental Policy Act (NEPA) documents for federal permits;

(3) An application for a Water Quality Modification from the Department of Ecology - Water Quality Section, if required; and

(4) A sediment/drainage control plan which shall allow no sediments to be discharged to any surface water body including but not limited to wetlands, drainage ditches, creeks, streams, and ponds.

(5) A plan which describes how bioremediation will be accomplished. The on-site bioremediation must be managed to maximize bioremediation (destruction) of hazardous substances rather than aeration (volatilization). While volatilization will occur during excavation and treatment, it should be minimized. Therefore, the following must be accomplished as part of the bioremediation at the site:

(a) Excavate and place soil in lined, covered treatment beds;

(b) Control and manage all runoff related to the bioremediation treatment beds; and

(c) properly manage the soil moisture, pH, temperature, and nutrient additions to maximize the bioremediation time frame.

2. Begin Interim Cleanup Actions

3. Submit report of interim cleanup actions to Ecology.

I. Contaminated Soil Stockpiles

Trans Mountain has generated contaminated soil stockpiles at the pump station as a result of the upgrading of their facility. These stockpiles shall be monitored, sampled, and evaluated for interim cleanup action options pursuant to WAC 173-340-430, Interim Actions.

1. Submit to Ecology for review and comment an Operation and Maintenance Plan for the soil stockpiles pursuant to WAC 173-340-400(4)(b) and (c). The plan shall include air monitoring based on requirements or recommendations from appropriate regulatory agencies.

2. Submit to Ecology for review and approval an interim cleanup action plan for the remediation of contaminated soil stockpiles pursuant to WAC 173-340-430. The proposed cleanup action shall use permanent solutions to the maximum extent practicable (WAC 173-340-360). The cleanup options evaluated as well as the proposed cleanup action shall be presented in the plan.

3. Implement the approved interim cleanup action plan.

4. Submit to Ecology for review and approval a report of the results of the soil stockpile cleanup action.

IV. SELECTION OF CLEANUP ACTIONS

A. Trans Mountain shall submit a SEPA checklist or EIS to Ecology or other appropriate local or state agency and/or NEPA documents, if required, to appropriate federal agencies for the proposed draft cleanup action plan proposed by Ecology. The checklist, EIS, and/or other documents or copies shall be included, as a minimum, with the draft cleanup action plan for public comment.

Ecology shall prepare and issue a draft cleanup action plan for the proposed cleanup actions at the site. The draft cleanup action plan shall meet the requirements under WAC 173-340-360(10) and (11).

V. CLEANUP ACTIONS

A. Cleanup actions shall be accomplished by Trans Mountain in compliance with WAC 173-340-400, Cleanup Actions. Submit to Ecology for review and approval all plans, specifications, and other documents required under WAC 173-340-400(4). In addition to the requirements under WAC 173-340-400(4), Trans Mountain shall prepare a wetland mitigation plan, other mitigation plans determined to be appropriate based on the results of the RI/FS, and an evaluation of the feasibility of completing the cleanup action during the different seasons when precipitation varies. The evaluation shall be submitted with the plans, specifications, and other documents.

B. Implement cleanup actions after Ecology reviews and approves plans, specifications, wetland or other mitigation plans, and other documents.

EXHIBIT B

PERFORMANCE SCHEDULE FOR REMEDIAL ACTIONS

The performance schedule for remedial actions, below, follows the format established in Exhibit A, Scope of Remedial Actions.

The actual start date or the maximum number of days after the effective date of the First Amended Enforcement Order for submittals or actions follows each item. Draft plans, reports, or other documents shall be submitted at least 60 days in advance of the final submittal dates to allow Ecology time to review and comment on documents and Trans Mountain time to revise documents based on Ecology's comments.

Ecology's failure to perform any obligation undertaken in this Order within the time specified in Exhibit B shall not excuse Trans Mountain Oil Pipe Line Corporation from performing any of its obligations under this Order. However, the time allowed for Trans Mountain Oil Pipe Line Corporation to perform any obligation that is dependent on the review or approval of Ecology shall be extended by the number of days that Ecology is late in completing such review or approval.

PERFORMANCE SCHEDULE

		NUMBER OF DAYS AFTER THE EFFECTIVE DATE OF ORDER		
ITEM	**START OR DUE DATE**	**START**	**DRAFT**	**FINAL**
I. Pre-Remedial Report	6/12/92			
II. RI/FS				
A. Work Plan			90 days	30 days after receipt of Ecology's comments on draft

		NUMBER OF DAYS AFTER THE EFFECTIVE DATE OF ORDER		
B. Report			330 days	30 days after receipt of Ecology's comments on draft
III. Interim Actions				
A. Response	Complete			
B. Monitoring		7 days		
C. Cross Sections	Complete			
D. Dam Maintenance				
1. Plan			21 days	30 days after receipt of Ecology's comments on draft
2. Implementation	12/27/91			
3. Implementation		21 days		
4. Evaluation			60 days	30 days after receipt of Ecology's comments on draft
5. Removal Plan			130 days	30 days after receipt of Ecology's comments on draft
E. Spill Prevention Plan				

		NUMBER OF DAYS AFTER THE EFFECTIVE DATE OF ORDER		
1. Plan	6/30/92			
2. Implementation	4/27/92			
3. Study Results	8/01/92			
F. Oil/Water Separator				
1. As-builts	7/01/92			
2. Plan	6/15/92			
3. Sampling	14 days after the plan approved			
4. Results	15 days after each sampling event			
G. Wetlands				
1. Delineation			330 days	30 days after receipt of Ecology's comments on draft
2. Mitigation Plan			570 days	30 days after receipt of Ecology's comments on draft
3. Mitigation Plan Implementation		To be determined		
H. Interim Action - Non Wetland				
1. Work Plan	6/1/92			
2. Interim Cleanup Action	Complete			

		NUMBER OF DAYS AFTER THE EFFECTIVE DATE OF ORDER		
3. Report	6/30/92			
I. Contaminated Soil Stockpiles				
1. O & M Plan			45 days	30 days after receipt of Ecology's comments on draft
a. implementation		45 days		
2. Work Plan			75 days	30 days after receipt of Ecology's comments on draft
3. Implement cleanup action	30 days after the plan approved			
4. Report	60 days after III.I.3 work complete			
IV. Cleanup Action Selection				
SEPA/NEPA Checklist or EIS			450 days	30 days after receipt of Ecology's comments on draft

				NUMBER OF DAYS AFTER THE EFFECTIVE DATE OF ORDER	
	Ecology issues draft cleanup plan			480 days	30 days after receipt of Ecology's comments on draft
V.	Cleanup Actions				
	Submit plans, specifications, or other documents			570 days	30 days after receipt of Ecology's comments on draft
	Begin cleanup action		To be deter-mined		

Note: Items listed as "complete" were completed under the original Enforcement Order.

ATTACHMENT I

REPORT RECOMMENDATIONS FOR WETLAND DETERMINATIONS/DELINEATIONS

1. General location map, using USGS Quadrangle, *(1": 2,000')*, with site clearly defined. If a site is not associated with easily recognizable landmarks, a smaller scale map may be appropriate.

2. Topographic map of area, preferably with two foot contour intervals.

3. Site map ***(large scale – no smaller than 1": 400')***.

4. For large and/or complex projects, a large scale *(1": 400' to 1": 100')* air photo with overlays displaying site property and wetland boundaries. An orthophotograph displaying 2 foot contour intervals is preferred. If an orthophotograph is not available, have the center of a small scale *(e.g. 1": 3,333' to 1": 5,000')* air photograph enlarged to 1": 400'.

5. Site designated on a National Wetland Inventory Map.

6. Site designated on a Soil Survey Report soils map with proximate soil series profile descriptions appended.

7. Discussion in text regarding methods and results with special emphasis on whether approach was simple, intermediate, or complex as described in the 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands.

8. Any previous site documentation and/or analysis including but not limited to SEPA checklist, soils engineering analysis, plant and/or wetland inventories, Washington Natural Heritage Program data, threatened and endangered species, etc.

9. All completed field data sheets *(Corps format for 3 parameter application)* numbered to correspond with each sample site.

10. Map of numbered sample sites ***(large scale and superimposed on topographic map and/or air photograph)***. The report should identify sites where one or more of the three parameters were not sampled.

11. Field stakes should be placed marking each sample site for agency verification.

12. The wetland boundary should be staked and flagged in the field and accurately mapped on a large scale map *(e.g., **county assessor's map**)* or on a large scale air photograph.

13. For difficult boundary determinations, at least three samples should be taken; one in the nonwetland, one in the wetland, and one at the boundary. All three wetland parameters *(soil, plants, hydrology)* should be displayed for each sample.

REPORT RECOMMENDATIONS
For Compensatory Wetlands Mitigation Plans

A. INTRODUCTION

Mitigation for creation, restoration or enhancement of wetlands should compensate for lost functions and values. Wetlands should be designed to be **persistent** features in the landscape, negating the need for continued water level manipulation, revegetation or other types of management. An available water supply is crucial to wetland development. Design should also consider relationships of the wetland to the watershed, other wetlands, adjacent uplands and deep water habitats.

B. THE WETLAND MITIGATION PLAN

(to be prepared by a qualified wetlands consultant)

Conduct a **thorough ecological assessment** of the impacted wetland. Compare the values and functions of the impacted wetland to the wetland to be created, restored or enhanced.

2) **Establish goals and objectives** for the mitigation site. Goals are broad and non-specific, objectives are site specific and direct the actions of the project. Include performance standards with specific criteria for measuring project success.

3) **Prepare detailed construction and revegetation plans.** Include where species are being planted, what is being planted and the size and density of plantings. Include the same information for the buffer area. Indicate drainages and topography to 2 ft. intervals. Specify a time schedule for construction events. Site work should include the following:

- erosion control, natural contouring, proper elevations
- plant only native species, control exotic species
- fertilize and irrigate as needed to increase plant survival
- have a biologist on site during all phases of construction

4) **Develop a monitoring plan** that will measure project success through sampling of specific criteria (eg. % plant cover, %plant survival). Use a standardized sampling technique to determine whether criteria have been met. Monitoring should be done at least annually and for a minimum for 5 years. Prepare a "time-zero" report which includes an as-built survey and photographs of the established wetland. Include a signed contract with a qualified consultant to ensure monitoring is conducted.

5) **Develop a contingency plan** for corrective actions to be taken if objectives are not met. The contingency plan should be enforced with a bond to ensure successful mitigation.

** *These are general guidelines only. For the complete guidelines, call the Department of Ecology at 493-9260.*