



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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June 25, 2014

Mr. Mike Droppo
Environmental Manager
Kinder Morgan Canada, Inc.
2700, 300 – 5th Avenue SW
Calgary, AB T2P 5J2x
Canada

Re: Notice of Completion of First Amended Enforcement Order No. DE 91-N192 at the Laurel Station Site near Bellingham, WA, FSID# 2893, CSID# 102.

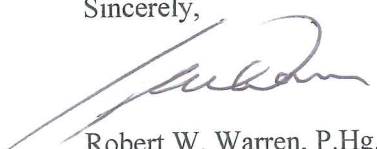
Dear Mr. Droppo:

The Washington State Department of Ecology (Ecology) Toxics Cleanup Program has reviewed the file for this site, which includes the Final Remedial Investigation and Feasibility Study Report dated June 2, 2014, to determine if the substantive requirements of First Amended Enforcement Order No. DE 91-N192 (Enforcement Order) has been met. A matrix of the Enforcement Order requirements and their disposition is included in Appendix A of the Final Remedial Investigation and Feasibility Study Report. A copy of this matrix is enclosed.

Ecology has determined that the substantive requirements of Enforcement Order No. DE 91-N192 has been completed at the Laurel Station site or are incorporated in required future work. Ecology and Trans Mountain Pipeline (Puget Sound) LLC agreed that future work will be conducted under a Consent Decree, which was entered in Whatcom County Superior Court by an Order, dated June 6, 2014, in Case No. 14-2-01294-9.

Please note that because previous interim actions were not conducted under a consent decree with the Department of Ecology, this letter does not constitute a settlement by the State of Washington under RCW 70.105D.040(4).

Sincerely,



Robert W. Warren, P.Hg., MBA
Section Manager
Toxics Cleanup Program

Enclosure

cc: Michael Dunning, Perkins Coie
Karen Mixon, URS
Valerie Rickman, AAG, Ecology Division
Elaine Heim, Ecology
Donna Musa, Ecology
David L. South, Ecology



Enforcement Order No. DE 91-N192							
E.O. Exhibit A Item - First Amended EO No 91-N192 (effective 6-15-92)	Associated Documentation	Ecology Correspondence	STATUS				Ecology Disposition ✓ = completed Orange = Pending Red = Need Information or correction
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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.	61, 96, 106	71					✓ The Draft Remedial Investigation Feasibility Study Report, Laurel Station, once approved, meets this requirement.
II. REMEDIAL INVESTIGATION AND FEASIBILITY STUDY							
Conduct a remedial investigation and feasibility study (R/IFS) pursuant to WAC 173-340-350. The R/IFS 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 R/IFS 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, and ecological and human risk assessment, wetland delineation, and an evaluation of interim cleanup actions.							✓ The Draft Remedial Investigation Feasibility Study Report, Laurel Station, once approved, meets this requirement.
A. Submit to Ecology for review and approval a R/IFS 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.	12, 41, 88, 124, 125, 127, 129	25, 36, 123, 126, 128, 130	✓ 123, 126, 128, 130				✓
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 R/IFS, March 20, 1992, prepared by Dames and Moore) meets the legal requirements for worker health and safety (WAC 173-340-810) for the work to be completed for the R/IFS 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.	12, 41, 88, 124	25, 36, E47, 123	✓ 123				✓
B. Submit to Ecology for review and approval a R/IFS report. The report shall follow the EPA suggested R/IFS format.							✓ The Draft Remedial Investigation Feasibility Study Report, Laurel Station, once approved, meets this requirement.
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 Soil, East Smith Road, Whatcom County, Washington, and the Seymour & Associates' May 16, 1991, Laurel Pump Station Condensate Soil, Fisheries Assessment. The written response shall include responses made prior to the issuance of this Order.	19, 20, 37, E8			✓			✓ See referenced associated documentation.
B. Surface Water Monitoring							
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.	12, 13, 26, 50, 95, 101, T19, T22, T24, T26, T27, T28, T29, T38, T42						✓ These data are in the database submitted with the Supplemental R/IFS.
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.	22, 94, 96, 100			✓			✓ See referenced associated documentation.

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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, 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.	69, 83 18, 32, 92	21, 75, 93	✓ E22				✓
2. Begin implementation of the Dam #2 and Dam #3 dam and surface water maintenance plan.	E22			✓			✓
3. Begin implementation of the dam and surface water maintenance plan for the dam constructed by Trans Mountain for the March 1992 petroleum spill.	72	77, E19		✓			✓ The plan is item 83.
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.	T17, T18		✓ E27 (Dam 3)				✓
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 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;	24, 42, 51, 57, E12 24, 42, 51, E16	48	✓ E14, E18				✓
b. A description and a site plan showing equipment or facilities for the prevention, containment or treatment of leaks, spills, and unauthorized discharges;	24, 42, 51			✓			✓ Approval of the plan includes approval of items a through e.
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.	24, 42, 51			✓			✓ Approval of the plan includes approval of items a through e.
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	24, 42, 118			✓			✓ Approval of the plan includes approval of items a through e.
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.	24, 42, 51 (D&M copy not signed by PE)			✓			✓ Approval of the plan includes approval of items a through e.
2. Begin the Spill Prevention Plan implementation.	24, 79			✓			✓ Updated stormwater pollution prevention plan currently in effect (last update 9-27-2012).
3. Submit to Ecology the results of the studies, evaluations, or other items outlined by Trans Mountain in its Spill Prevention Plan implementation schedule.	67, 79	68		✓			✓ Updated stormwater pollution prevention plan currently in effect (last update 9-27-2012).
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.	9, 15, 30, 68, E2	11, E1		✓			✓ The oil/water separators currently discharge under NPDES permit No WAR001522.
2. Submit a sampling and analysis plan for water samples to be collected from the separators. The initial sampling round shall include the 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).	14, 37, 38, 68, 84	62, 65, 76	✓ 86				✓ The oil/water separators currently discharge under NPDES permit No WAR001522.
3. Collect water samples from the oil/water separator outlets.	95, 101			✓			✓ The oil/water separators currently discharge under NPDES permit No WAR001522.
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.	95, 101, T28, T32, T42, T46, T47, T52, T53, T55, T56, T59			✓ T53, T63			✓ Sample data are submitted in the Discharge Monitoring Reports.

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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, <u>Report Recommendations For Wetland Determinations/Delineations, and Compensatory Wetlands Mitigation Plans</u> , 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:	52, T12, T13, T16	45					✓ Included in Appendix D of the RI/FS report.
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.	52, T12, T13, T16	45, E7, E17		✓			✓ Included in Appendix D of the RI/FS report.
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.		E7				✓	✓ Included in Appendix D of the RI/FS report.
2. Submit to Ecology a Wetland Mitigation Plan for the site.						✓	✓ Included in Appendix D of the RI/FS report.
3. Implement the wetland mitigation plan.						✓	✓ Included in Appendix D of the RI/FS report.
H. Interim Cleanup Action - Laurel Pump Station Property <u>Non-Wetland Areas Affected by the January 15, 1991 Natural Gas Condensate Leak</u>							
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:	33, 46, 47, 55	40, T31		✓			✓ Any remaining items will be taken care of in the final cleanup action as required in the Cleanup Action Plan for the site.
a. Removal of the existing drain tile;	44, 55	E34	✓ E34				
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 onsite treatment beds for bioremediation immediately after excavation.	44, 55			✓			
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 submittal requirements. The backfilled areas must immediately be reseeded with the appropriate fast growing native vegetation to prevent sedimentation to nearby surface waters.	44, 55			✓			
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.	44			✓			
The work plan and sampling and analysis plan shall include the appropriate items in the WAC 173-340-430 (6). 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 and 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.	114			✓			
(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 the 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.	44, T23			✓			
3. Submit report of interim cleanup actions to Ecology.	44, 59, T23, T40	66		✓			

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III. Contaminated Soil Stockpiles							
Trans Mountain has generated contaminated soil stockpiles at the pump station as a result of upgrading 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.	73, 85, 89, 111, 112	80, 107, E40 (Whatcom Co. Health Dept. letter), E44 (NWAPA letter)	✓ E32				✓ Stockpiles removed from site
2. Submit to Ecology for review and approval an interim cleanup action plan for the remediation of contaminated soil stockpiles pursuant to WAC 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.	78, 112, 113, 115, E29, E30, E51	E28, E31, E33, E43, E49, E50		✓			
3. Implement the approved interim cleanup action plan.	108, 115		✓				
4. Submit to Ecology for review and approval a report of the results of the soil stockpile cleanup action.	115, E25		✓ T64				
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).	114 (submittal of SEPA checklist)	16, E50		✓			Updated SEPA Checklist Submitted to Ecology on 3-26-2014
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.	58, 70	60		✓			This will be covered in a Consent Decree with attached Cleanup Action Plan (CAP). The CAP will require all necessary follow-on documents.
						✓	