TRANS MOUNTAIN PIPELINE ULC

Commodity Approval Process

Issued: April 3, 2024 Effective Date: May 1, 2024

Issued By:

Shipper Services
Trans Mountain Pipeline ULC
Suite 2700, 300 – 5th Avenue S.W.
Calgary, Alberta T2P 5J2

Contact Information:

Joanna Gurnham
Supervisor Product Quality and Measurement
Trans Mountain Pipeline ULC
Suite 2700, 300 – 5th Avenue S.W.
Calgary, Alberta T2P 5J2
(403) 206-6931
Joanna Gurnham@transmountain.com

Commodity Approval Process

Purpose

To provide quality controls regarding Petroleum handled by the pipelines and facilities to ensure the safety of people and the safe operation of the pipelines and associated facilities.

Applicability

The Commodity Approval Process applies to proposed Crude Petroleum, Refined Petroleum or any other Petroleum product ("Commodity") on the following pipelines and facilities ("Systems"):

- 1) Trans Mountain Pipeline,
- 2) Trans Mountain Pipeline (Puget Sound), and
- 3) Contract Tanks and other ancillary equipment

Capitalized terms that are not defined in this procedure are as defined in Trans Mountain Pipeline ULC's Petroleum Tariff: Rules and Regulations.¹

Overview

There are four stages to the Commodity Approval Process, namely

1) Formal Request (presented by Applicant to Carrier)

2) Review Process (completed by Carrier)

3) Stakeholders' Comments (submitted in writing to Carrier by Stakeholders, Shippers and interested

parties)

4) Commodity Approval (announcement by Carrier)

Stage 1. Formal Request

The Formal Request must be made by a shipper or potential shipper ("Applicant") who proposes to Nominate and Tender the Commodity. The Formal Request will be submitted by the Applicant to Carrier and must include a complete Proposed Commodity Form. The Proposed Commodity Form can be found in Appendix A. Carrier may make amendments to the Proposed Commodity Form as required from time to time.

The forecast information for the first year's shipments of a proposed Commodity will be used to determine routine handling requirements as well as special handling requirements, if applicable. The required test data from a recent sample (past 12 months), as outlined in Appendix B, and a current Safety Data Sheet (SDS) must also be supplied with the Proposed Commodity Form. A preliminary SDS may be submitted initially provided that an updated SDS is submitted to Carrier prior to Nomination. Data provided is expected to accurately reflect the Commodity that will be Tendered and must be submitted as a signed Certificate of Analysis per the cited methodologies in Appendix B.

The Formal Request is to be submitted to Carrier at least thirteen (13) weeks before the first Nomination of the Commodity for transportation on the Systems. Nominations for a Commodity cannot be made until system updates are complete and the Commodity has been granted Commodity Approval (Stage 4). If new facilities, new connections, or other provisions are required to handle or manage the Commodity, there may be additional restrictions on when the Commodity can be Nominated for transportation on the System(s).

Stage 2. Review Process

The review process will be conducted by Carrier within four (4) weeks of Carrier's receipt of the completed Formal Request. If requested by Carrier, the Applicant shall provide a sample of the Commodity.

The Formal Request will be reviewed for:

- I. Stream Quality
 - a) Does the Commodity adhere to quality requirements as set forth in Carrier's Tariff and policies and applicable standards?
 - b) Determination of the Petroleum Type.
 - c) Are the Commodity's properties similar to an existing stream?
 - d) Will the Commodity require special handling (buffers, flush batches, pool exclusion, etc.)?
 - e) Does the Commodity require segregated tankage at receipt, breakout, or delivery locations?
 - f) Where in the shipping schedule should the Commodity be placed to minimize the quality impacts through the introduction of the Commodity for transportation on the System(s)?
 - g) Will the Commodity require pooling?

- II. Facilities Requirements
 - a) How will the Commodity be Tendered to and Delivered from the pipeline system(s)?
 - i. Do tanks, manifolds, booster pumps, or piping need to be modified?
 - b) Are new facilities required?
 - i. Can the new Commodity be incorporated in the short and long term facilities management planning process?
 - ii. Potential impacts on future operations?
- III. Service Levels
 - a) Will approval of this Commodity affect service levels provided by Carrier?
- IV. Other items as determined by Carrier, acting reasonably.

Upon completion of the Review Process, Carrier will notify Applicant whether the Commodity has received conditional approval, which will be issued to the Applicant and Stakeholders as outlined in Stage 3.

Stage 3. Stakeholders' Comments

The conditional approval, along with SDS and provided test data will be sent to all Stakeholders, Shippers, and interested parties who will have ten (10) business days to express their comments with regard to the conditionally approved Commodity. All comments will be directed to the Carrier in writing. Carrier will compile all feedback and will make reasonable efforts to resolve issues related to the approval of the Commodity within the time frame available.

Stage 4. Commodity Approval

Upon completion of the period for Stakeholder's Comment (Stage 3), the Carrier, in its sole discretion, shall make a final decision on whether to approve the Commodity on a final basis, taking into consideration, to the extent applicable, the satisfaction of requirements for new facilities, connections or other provisions to safely manage the Commodity on the Systems, as outlined in Stage 2. If Carrier determines to approve the Commodity, it will take approximately four (4) weeks to complete system updates (VISTA, PLC and custody transfer measurement systems). Once system updates are complete, Carrier will issue notification to Applicant and Stakeholders, Shippers and interested parties that a Commodity has been granted final approval.

Active Commodities

At all times the Tendered Petroleum must reasonably resemble the Commodity as submitted and approved under the Commodity Approval Process. Should the Commodity significantly deviate, as determined by Carrier, Carrier may require updated or additional Commodity data be submitted to determine whether the Commodity may continue to be Tendered.

The Carrier may periodically, but acting reasonably, require that a Shipper provide updated data for an active Commodity to the Carrier in the form of a third-party Certificate of Analysis. Updated SDSs should be provided to the Carrier by the Shipper as available.

Inactive Commodities

The Carrier will review the Commodities approved under this Commodity Approval Process and provide quarterly updates to the Approved Commodities list². If a Commodity has not been Tendered by a Shipper in the prior twelve (12) Months period, the Commodity will be deemed by the Carrier to be inactive ("Inactive Commodity").

Prior to Nomination of an Inactive Commodity, Shipper must request to Carrier a Commodity reactivation using the Proposed Commodity Form, found in Appendix A, and such request must be approved by the Carrier prior to the Nomination of the Commodity. A Commodity reactivation may require any or all of the stages outlined in this Commodity Approval Process to be completed. The Carrier will notify Stakeholders, Shippers and interested parties of such reinstatement.

The following documents can be found on the Carrier's website (https://www.transmountain.com/tolls-tariffs):

- ¹ The Trans Mountain Pipeline ULC: Petroleum Tariff Rules and Regulations Governing the Transportation of Petroleum
- ²Approved Commodities list
- ³Trans Mountain Pipeline ULC Service Standards Regarding the Transportation of Petroleum

Appendix A: Proposed Commodity Form



Proposed Commodity Form

Please complete all fields on this form and provide test results identified on page 5.

Contact Info	ormation								
Company N	ame:								
Key Person	:			Phone:					
Email:									
Date Submi	tted:Requested 1st Shipment Date:								
Requested Pipeline(s)/Facilities:									
Trans Mountain Pipeline ULC ("Trans Mountain")									
Trans Mountain Pipeline (Puget Sound) LLC ("Puget Sound")									
Contract Tanks									
Commodity Identification Common Name of Proposed Commodity:									
Classification for Tariff:									
Supply Connection(s):									
Delivery Location(s):									
Uses Trans Mountain's receipt tankage? ☐ Yes ☐ No Uses Trans Mountain's delivery tankage? ☐ Yes ☐ No									
Volume for	ecast (indicate	ramp up and	timing of step	changes)					
Date									
M3/day									
List any ser	vice or specia	al handling re	quests (buffe	ers, segregate	d tankage, po	ool exclusio	n, etc.):		

Appendix B: Commodity Test Data Requirements

Quality Test Name	Unit	Procedure	Satisfaction					
Specifications of Petroleum								
Vapour Pressure (VPCR _{4:1} at 37.8 °C)	kPa	ASTM D6377 for Crude Petroleum ASTM D5191 for Refined Petroleum	≤103					
Water	vol %	API MPMS Ch 10.9 (ASTM D4928)	Water and Sediment combined must not exceed 0.5% volume.					
Sediment	vol %	API MPMS Ch. 10.1 (ASTM D473) or Ch. 10.8 (ASTM D4807)	Water and Sediment combined must not exceed 0.5% volume.					
Density	kg/m³at 15°C	ASTM D1298 or D5002	880 - 940 kg/m3 for Heavy 600 - <880 kg/m³ for Light Or as per pool criteria outlined in Service Standards³.					
Kinematic Viscosity	cSt at 5°C,10°C,15°C	ASTM D445 or D7042	30 - 350 cSt for Heavy 0.4 - <30cSt for Light at the stated Reference Line Temperature. ≤600 cSt at Flowing Temperature.					
Organic Chlorides	wt ppm	ASTM D4929	< 1 ppm					
Hydrogen Sulfide	wt ppm	UOP 163	≤425					
Volatile Mercaptan Sulfur	wt ppm	ASTM D5623	< 500 ppm when combined with H_2S .					
Pool Specifications								
Total Sulfur	wt %	ASTM D4294 or D2622	As per pool criteria outlined in Service Standards ³ .					
Micro Carbon Residue (MCR)	wt %	ASTM D4530	As per pool criteria outlined in Service Standards ³ .					
Neutralization Number	mg KOH/g	ASTM D664	As per pool criteria outlined in Service Standards ³ .					
Operations/Engineering R	Requirements							
Pour Point	°C	ASTM D5853						
Auto-Ignition Temperature	°C	ASTM E659	As required on SDS.					
Simulated Distillation	mass % distilled	ASTM D7169 or extended D2887	Attach SIMDIST report					
Other Requirements								
Olefins (weight ppm)	wt ppm	H ¹ -NMR	> 1% may require special handling.					
Salt Content (weight ppm)	wt ppm	ASTM D3230 or D6470						
Metals 1) nickel 2) vanadium 3) iron	wt ppm	ASTM D5708						
Fate and Behavior Testing (Flume Tank Analysis)		Testing requirements will be determined at the Carrier's sole discretion	Evaluate handling procedures in the event of a release.					

Results are to be submitted as a signed third party Certificate of Analysis.

Test methods shall be determined based on the most recent version. Carrier reserves the right to utilize other industry accepted testing methods at Carrier's discretion, including subsequent revisions to applicable standards or alternative methods when the listed standard is not suitable.

Carrier reserves the right to independently test and confirm the Commodity's characteristics.