

**ENDICOTT PIPELINE COMPANY
LOCAL PIPELINE TARIFF**

Containing the

QUALITY BANK METHODOLOGY

Governing the transportation of Petroleum by pipeline from the
Endicott Pipeline System to Trans Alaska Pipeline System Pump Station No. 1

GENERAL APPLICATION

This tariff shall apply only to those tariffs which specifically incorporate this tariff,
supplements to this tariff and successive issues hereof, by reference.

NOTICES

For Rules and Regulations (other than the Quality Bank Methodology) governing the transportation of Petroleum by pipeline
from Endicott, Alaska to the Trans Alaska Pipeline System, Pump Station No. 1, refer to Tariff F.E.R.C.
No. 31.2.0, supplements thereto and reissues thereof.

The provisions published herein will, if effective, not result in an effect on the quality of the human environment.

Filed pursuant to 18 C.F.R. § 341.4

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I. GENERAL PROVISIONS

A. Definitions

"Petroleum" means unrefined liquid hydrocarbons including gas liquids.

"Shipper" means anyone who contracts with Endicott Pipeline Company ("EPC") for transportation of Petroleum under the terms of this tariff. **[N]** Shippers of the Northstar Production Stream shall be deemed to be shippers on the EPC Pipeline for purposes of this tariff after the EPC Pipeline is connected to the Northstar Pipeline upstream of TAPS Pump Station No. 1.

B. Quality Adjustments

Shippers shall be debited and/or credited each month for all adjustments as provided for in this Item with respect to all Petroleum shipped. The credit and debit balances for each accounting shall be adjusted among all Shippers by collecting funds from those Shippers having debit balances and by thereafter remitting funds collected to the Shippers having credit balances. In the event of delay in collection or inability to collect from one or more Shippers for any reason, only adjustment funds and applicable interest charges actually collected shall be distributed pro rata to Shippers having credit balances. A monthly accounting shall be rendered to each Shipper after the end of each month.

C. Quality Bank Administrator

The EPC Quality Bank shall be administered by the Endicott Quality Bank Administrator, who shall be appointed by EPC, and by those designated by the Endicott Quality Bank Administrator to assist the Administrator (hereinafter collectively referred to as the "Endicott Quality Bank Administrator"). The name and address of EPC's designated Quality Bank Administrator will be made available upon written request to EPC.

D. Cost Recovery

All reasonable and necessary costs of operating and administering the EPC Quality Bank, including and without limitation, costs incurred for obtaining, handling and processing samples of the various Petroleum streams, assay costs, and costs incurred by the EPC Quality Bank Administrator as a result of administering the EPC Quality Bank, shall be recovered by EPC through the EPC Quality Bank debits and credits in the form of per-barrel charges on a monthly basis. The per-barrel charges will be added to all payments into the EPC Quality Bank and subtracted from all payments out of the EPC Quality Bank for that month.

E. Information Furnished to the State of Alaska

The Endicott Quality Bank Administrator shall furnish to the State of Alaska ("State") each month copies of the invoices for Quality Bank adjustments and supporting data sent to each Shipper. Such information is furnished to the State based upon the State's representation that it will hold such information in confidence and that such information will be used only by officers or agents of the State in the exercise of the officers' or agents' powers.

F. Start Up Procedure

Sampling of the **[W]** Northstar Production Point Thomson stream for purposes of the EPC Quality Bank shall begin on the first day of the first full month after the **[C]** Point Thomson stream is received for transportation by EPC through the Badami Pipeline **[N]** Endicott Pipeline is connected to the Northstar Pipeline and the Endicott Pipeline common stream is combined with the Northstar Production stream upstream of TAPS Pump Station No. 1. Quality Bank debits and credits shall be calculated for the first full month for which valid samples and valid assay results are obtained. The assay data obtained for such month shall also be used to calculate Quality Bank debits and credits from the date that the **[C]** Point Thomson stream is first received for transportation by EPC through the Badami Pipeline to the first day of such month **[N]** Endicott Pipeline is connected to the Northstar Pipeline and the Endicott Pipeline common stream is combined with the Northstar Production stream.

G. Other General Provisions

1. In the event any payment is made to any Shipper hereunder and it is subsequently determined by any Federal or state court, administrative agency or other governmental entity having jurisdiction that no other Shipper was liable for the adjustment for which payment was made, the Shipper receiving such payment shall upon receipt of an accounting from EPC return the same to EPC or its designee. EPC shall promptly utilize same to reimburse all Shippers who made such payments.

2. All payments due from any Shipper under the EPC Quality Bank methodology shall be made by such Shipper within 20 days of receipt of each accounting and, for any delay in payment beyond such 20 day period, shall bear interest calculated at an annual rate equivalent to 125% of the prime rate of interest of Citibank N.A. of New York, New York, or its successors, on ninety-day loans to substantial and responsible commercial borrowers as of the date of accounting or the maximum rate allowed by law, whichever is less.
3. If any Shipper fails to make payment due hereunder within 30 days of issuance of each accounting, EPC shall have the right to sell at public auction either directly or through an agent at any time after such 30 day period any Petroleum of the Shipper in EPC's custody. Such auction may be held on any day, except a legal holiday, and not less than 48 hours after publication of notice of such sale in a daily newspaper of general circulation published in the town, city or general area where the sale is to be held, stating the time and place of sale and the quantity and location of Petroleum to be sold. At said sale EPC shall have the right to bid, and, if it is the highest bidder, to become the purchaser. From the proceeds of said sale, EPC will deduct all payments due and expenses incident to said sale, and the balance of the proceeds of the sale remaining, if any, shall be held for whoever may be lawfully entitled thereto.
4. EPC and its designee are authorized to receive through measurement, connecting carriers or otherwise all information and data necessary to make the computations under the EPC Quality Bank methodology. All Shippers will furnish EPC or its designated Quality Bank Administrator, and consent to EPC or its designated Quality Bank Administrator acquiring from other carriers or other persons, any additional information and data necessary to make the computations under this methodology. Shippers also consent to EPC or its agents disclosing to the designated Quality Bank Administrator all information and data necessary to make the computations under this methodology
5. Adjustment payments and administrative costs in this methodology are not a part of EPC's transportation tariff rates, and such shall not be an offset or other claim by any Shipper against sums due EPC for transportation or other charges, costs, or fees due or collected under EPC's rate tariff.

II. QUALITY BANK PROCEDURES

A. Overview

A distillation-based methodology consistent with the Trans Alaska Pipeline System ("TAPS") Pump Station No. 1 Quality Bank Methodology shall be implemented for EPC. This methodology for calculation of the EPC Quality Bank debits and credits is based on valuations of Petroleum components. This methodology shall apply to the specific Petroleum streams identified in Section II.B. and also shall be applied to any streams tendered to EPC through a new connection. The Quality Bank value of each Petroleum stream shall be the volume-weighted sum of the Quality Bank values of its components. The characteristics and volumes of components for each separate Petroleum stream are based on assay information obtained using a defined set of testing procedures as set forth in Section II.C. Quality Bank credits and debits are determined by comparing the Quality Bank value of each Petroleum stream to the appropriate EPC reference stream Quality Bank value.

B. EPC Quality Bank Streams

1. The EPC Quality Bank will assess the following streams: (1) the Endicott Main Production stream ("EMP stream"), which is the output of the Endicott Main Production Island processing facility, (2) the Badami Pipeline stream, which is blended with the EMP stream at the interconnection of the Endicott Pipeline and the Badami Pipeline, (3) the Point Thomson stream, which is blended with the Badami Pipeline stream prior to its interconnection with the Endicott Pipeline, (4) ~~[N] the Northstar Production Stream,~~ and ~~[W] (5)~~ any new stream introduced into the Endicott Pipeline.
2. The EPC Quality Bank reference stream is the blended common stream downstream of the Endicott Pipeline-~~[W] Northstar Badami~~ Pipeline interconnection point that is delivered to TAPS Pump Station No. 1.

C. EPC Quality Bank Methodology

1. Assay Methodology -- Sampling Procedure
 - a. The Endicott Quality Bank Administrator will sample the Badami Pipeline stream, the Point Thomson stream, ~~[N] the Northstar Production stream,~~ and any new stream introduced into the Endicott Pipeline using continuous monthly composite samplers on a flow rate dependent basis, and assays of these continuously collected samples shall be performed monthly by the Endicott Quality Bank Administrator. The assay data regarding the EPC reference stream as received at TAPS Pump Station No. 1 used by the TAPS Quality Bank Administrator in the calculation of the TAPS Quality

Bank adjustments shall be used by the Endicott Quality Bank Administrator for the EPC reference stream. Composition of the EMP stream will be determined by the Endicott Quality Bank Administrator based on the difference between the assay results for the streams sampled by the Endicott Quality Bank Administrator and the EPC reference stream assay results. An illustration of this calculation appears in Attachment 1A hereto. Once the composition of the EMP stream is thus calculated, the Quality Bank Value of the EMP stream will be determined as if the assay values had been measured directly.

2. Assay Analysis Procedure

- a. The assays will include a true boiling point ("TBP") distillation and, as applicable, gas chromatograph analysis of each Quality Bank stream. Specifically, the TBP procedure will employ ASTM 2892 up to 650 °F and ASTM 5236 for the 650 to 1050+ °F range for the Petroleum samples. The light ends (175 °F minus) from the Petroleum streams will be subject to gas chromatograph analysis to determine the volumes of the propane ("C3"), Iso-butane ("iC4"), and normal butane ("nC4"), with the light straight run ("LSR") (sometimes referred to as natural gasoline) volume determined by difference between the total of the three components and the measured 175 °F minus volume.
- b. The specific gravities of C3, iC4, and nC4 will be derived from GPA Standard 2145.

3. Assay Data

- a. The following volume and quality data will be determined for each stream.

Component	Boiling Range °F	% Vol.	TBP Specific Gravity
Propane (C3)		X	X
I-Butane (iC4)		X	X
N-Butane (nC4)		X	X
LSR	C5-175	X	X
Naphtha	175-350	X	X
Light Distillate	350-450	X	X
Heavy Distillate	450-650	X	X
Gas Oil	650-1050	X	X
Resid	1050+	X	X
Full Petroleum Stream			X

- b. The total volume must add to 100% and the total component weighted mass must be checked against the mass of the full Petroleum stream. These weight balances must be the same within calculation and assay precision. If the assay fails this threshold test of validity, a second assay shall be performed on the sample. An example of assay data required is presented in Attachment 1. These data are the basis for all calculations in this Quality Bank methodology. The EPC Quality Bank will operate on a calendar month basis, with the continuous samples retrieved for analysis on the last day of each month.
- c. The Endicott Quality Bank Administrator shall investigate the validity of a sample that it takes (as opposed to the one taken by TAPS) if each of the following two tests is met.
 - (i) If one or more of an individual stream's reported component percentages for a month varies by more than the ranges indicated in the following table as compared to the prior month's assay.

Component	Variation in % of Stream Relative to Prior Month
Propane	±0.1
I-Butane	±0.1
N-Butane	±0.25
LSR	±0.5
Naphtha	±1.0
Light Distillate	±1.0
Heavy Distillate	±1.0
Gas Oil	±1.5
Resid	±1.0

As an example, if a Petroleum stream's heavy distillate volume percent is 23% for the prior month, a heavy distillate volume percent less than 22% or greater than 24% (exceeding the $\pm 1\%$ range) shall cause the Endicott Quality Bank Administrator to check the second test.

- (ii) The second test is whether the volume change in the specific component has resulted in a significant change in the stream's relative value when compared to the prior month's relative value using the prior month's prices. If the change results in a price movement of more than ± 15 cents per barrel, then the sample's validity must be investigated.
 - (iii) The Endicott Quality Bank Administrator shall ascertain from the tendering Shipper(s) possible causes for the change in the stream's assay. The Endicott Quality Bank Administrator may have a second assay performed for any sample it has taken. The Endicott Quality Bank Administrator may decide that the first assay is valid, that the second assay is valid, or that the sample is invalid.
 - (iv) Should the Endicott Quality Bank Administrator determine that a sample is invalid, the last assay results accepted and used in the EPC Quality Bank for the stream will be used instead of the invalid sample in the Quality Bank calculation
- d. If the TAPS Quality Bank Administrator makes any changes to the assay results initially reported for the EPC reference stream as received at TAPS Pump Station No. 1, or is ordered to make any such changes as the result of any order of the RCA or FERC or any court of competent jurisdiction, the Endicott Quality Administrator will reflect any such changes in the EPC Quality Bank debits and credits, including making any retroactive readjustments necessary to maintain consistency with the TAPS Pump Station No. 1 Quality Bank.

D. Component Unit Value Procedure

The Endicott Quality Bank Administrator will obtain from the TAPS Quality Bank Administrator all of the adjusted component unit values necessary to determine the Endicott Quality Bank stream values in accordance with the distillation methodology used at TAPS Pump Station No. 1. The EPC Quality Bank will employ the same product prices, the same adjustments to those prices, and the same weightings as the TAPS Pump Station No. 1 Quality Bank, as set forth in Tariff FERC No. ~~[W] 44.13.0 44.10.0~~ (BP Pipelines (Alaska) Inc.), FERC No. ~~[W] 21.13.0 21.10.0~~ (ConocoPhillips Transportation Alaska, Inc.), and FERC No. ~~[W] 404.13.0 404.10.0~~ (ExxonMobil Pipeline Company), effective ~~[W] January, 2018 May, 2015~~, as well as supplements thereto and successive issues thereof for as long as a distillation methodology is maintained at TAPS Pump Station No. 1.

E. Quality Bank Stream Component Calculation Procedure

After all volume, quality, and pricing data are collected, the Endicott Quality Bank Administrator will establish quality differentials for each stream identified in Section II.B.

F. Quality Bank Calculation Procedures

The assay data and calculation procedures required by this Methodology are summarized in the Attachments. The Attachments are for reference purposes only and are not intended to predict the impact of this procedure on any specific Petroleum stream or any specific company. In the event of a conflict between the provisions of this Methodology as set forth above and the Attachments, the provisions of this Methodology shall control.

ATTACHMENT 1: Yield Data for Example Streams
ATTACHMENT 1A: Calculation of Unsourced Stream
ATTACHMENT 2: Example Component Unit Values in \$/Bbl
ATTACHMENT 3: Example Stream Values in \$/Bbl
ATTACHMENT 4: Quality Bank Calculation Example

G. Unanticipated Implementation Issues

This Methodology is intended to contain a comprehensive treatment of the subject matter. However, unanticipated issues concerning implementation of this Methodology may arise. If so, the Endicott Quality Bank Administrator is authorized to resolve such issues in accordance with the goal of maintaining consistency with the distillation methodology applied by the TAPS Carriers at TAPS Pump Station No. 1. The Endicott Quality Bank Administrator's resolution of any such issue shall be final unless and until changed prospectively by orders of the FERC and RCA.

Explanation of Symbols: [C] – Cancel [N] – New [W] – Change in wording only

**ATTACHMENT 1
YIELD DATA FOR EXAMPLE STREAMS ¹**

COMPONENT	DEFINITION BOILING RANGE (°F)	STREAM A	STREAM B ⁽²⁾
PROPANE(C ₃)	---	0.00	0.22
ISOBUTANE (iC ₄)	---	0.02	0.13
NORMAL BUTANE (nC ₄)	---	0.10	0.67
LSR	C5-175	3.50	4.93
NAPHTHA	175-350	11.00	14.57
LIGHT DISTILLATE	350-450	9.00	9.00
HEAVY DISTILLATE	450-650	22.00	20.57
GAS OIL	650-1050	30.38	31.62
RESID	1050+	24.00	18.29
TOTAL		100.00	100.00
EXAMPLE VOLUME, Thousand Barrels per Month (MBPM)		900	2,100

(1) In this example, hypothetical streams are used to demonstrate the EPC Quality Bank calculations.

(2) If Stream B is not sampled directly, its yield data are calculated by difference, as demonstrated in Attachment 1A.

**ATTACHMENT 1A
CALCULATION OF YIELD DATA FOR UNSAMPLED STREAM**

COMPONENT NAME	REFERENCE STREAM ⁽¹⁾	STREAM A ⁽²⁾	STREAM B ⁽³⁾
Propane (C3)	0.15	0.00	0.22
Isobutane (iC4)	0.10	0.02	0.13
Normal Butane (nC4)	0.50	0.10	0.67
LSR (C5 - 175°F)	4.50	3.50	4.93
Naphtha (175°F - 350°F)	13.50	11.00	14.57
Light Distillate (350°F - 450°F)	9.00	9.00	9.00
Heavy Distillate (450°F - 650°F)	21.00	22.00	20.57
Gas Oil (650°F - 1050°F)	31.25	30.38	31.62
Resid (1050°F and over)	20.00	24.00	18.29
TOTAL	100.00	100.00	100.00
EXAMPLE VOLUME, MBPM	3,000.00 ⁽⁴⁾	900.00	2,100.00

(1) Reference Stream (Endicott Pipeline [W] –Northstar Pipeline common stream ~~Stream~~ at TAPS [W] Pump Station PS No. 1) yield data to be obtained from the TAPS Quality Bank Administrator.

(2) Stream A assayed by Endicott Quality Bank Administrator.

(3) Stream B calculated by difference.

(4) MBPM REFERENCE = MBPM A + MBPM B.

ATTACHMENT 2
EXAMPLE COMPONENT UNIT VALUES IN \$/Bbl⁽¹⁾

COMPONENT NAME	WEST COAST (\$/Bbl)	GULF COAST (\$/Bbl)	WEIGHTED AVERAGE (\$/Bbl)
Propane (C ₃)	19.7925	15.0442	19.68
Isobutane (iC ₄)	24.1238	18.4333	23.99
Normal Butane (nC ₄)	18.1125	18.4800	18.12
LSR (C ₅ - 175°F)	18.5850	19.5854	18.61
Naphtha (175°F - 350°F)	21.3383	21.3383	21.34
Light Distillate (350°F - 450°F)	25.9817	22.9396	25.91
Heavy Distillate (450°F - 650°F)	23.0000	22.1112	22.98
Gas Oil (650°F - 1050°F)	20.8133	21.8133	20.84
Resid (1050°F and over)	14.6349	15.0000	14.64
WEIGHTING FACTOR	97.71	2.29	

(1) To be obtained from TAPS Quality Bank Administrator.

ATTACHMENT 3
EXAMPLE STREAM VALUES IN \$/Bbl

COMPONENT NAME	STREAM A	STREAM B
Propane (C ₃)	0.000000	0.043296
Isobutane (iC ₄)	0.004798	0.031187
Normal Butane (nC ₄)	0.018120	0.121404
LSR (C ₅ - 175°F)	0.651350	0.917473
Naphtha (175°F - 350°F)	2.347400	3.109238
Light Distillate (350°F - 450°F)	2.331900	2.331900
Heavy Distillate (450°F - 650°F)	5.055600	4.726986
Gas Oil (650°F - 1050°F)	6.331192	6.589608
Resid (1050°F and over)	3.513600	2.677656
TOTAL	20.253960	20.548748

**ATTACHMENT 4
QUALITY BANK CALCULATION EXAMPLE**

QUALITY BANK REFERENCE STREAM VALUE CALCULATION

	<u>VOLUME</u> <u>(MBPM)</u>	<u>VALUE</u> <u>(\$/Bbl)</u>
STREAM A	900	20.253960
STREAM B	<u>2,100</u>	<u>20.548748</u>
TOTAL: (REFERENCE STREAM)	3,000	20.460312 ⁽¹⁾

(1) Reference Stream ([W] Northstar Endicott Pipeline Stream at TAPS [W] Pump Station PS No. 1) value to be obtained from the TAPS Quality Bank Administrator.

QUALITY BANK PAYMENT/RECEIPT CALCULATION

	<u>DIFFERENTIAL</u> ⁽²⁾	<u>(MBPM)</u>	<u>PAYMENT OR</u> <u>RECEIPT</u> <u>(M\$/Month)</u> ⁽³⁾
STREAM A	(0.206352)	900	\$ (185.72)
STREAM B	0.088436	2,100	\$ 185.72

(2) Stream value minus reference value.
(3) Differential times volume.