

ARROWHEAD SOUTH TEXAS PIPELINE, LLC
ARROWHEAD SOUTH TEXAS PIPELINE CRUDE OIL SYSTEM
RULES AND REGULATIONS
GOVERNING THE INTRASTATE TRANSPORTATION OF
CRUDE PETROLEUM BY PIPELINE

This tariff contains the rules and regulations governing intrastate transportation of crude petroleum by pipeline on the crude oil pipeline system of Arrowhead South Texas Pipeline, LLC, as filed with the Railroad Commission of Texas and published herein. All local tariffs subject to the rules and regulations in this tariff (“Local Tariffs”) are for the intrastate transportation of crude petroleum by pipeline. The rules and regulations published herein apply only under Local Tariffs making specific reference by number to this tariff; such reference shall include supplements hereto and successive issues hereof. The rates and terms in Local Tariffs are applicable only on intrastate shipments on the crude oil pipeline system of Arrowhead South Texas Pipeline, LLC named therein. If any language in a Local Tariff modifies or conflicts with the general language on the same subject in the rules and regulations herein, the specific language in the Local Tariff will control (unless exceptions are noted therein).

EFFECTIVE: October 22, 2019

Issued and Compiled By: J. Cody Deru
Vice President
Arrowhead South Texas Pipeline, LLC
1111 Travis Street
Houston, Texas 77002

P-5 Operator ID: P-363086; T-4 Permit Information: T-08609 and T-08564.

RULES AND REGULATIONS

TABLE OF CONTENTS

<u>Item</u>	<u>Subject</u>	<u>Page</u>
SECTION I RULES AND REGULATIONS OF RAILROAD COMMISSION		
	OF TEXAS RULE 3.71. PIPELINE TARIFFS.....	4
1.	ALL MARKETABLE OIL TO BE RECEIVED FOR TRANSPORTATION.....	4
2.	BASIC SEDIMENT, HOW DETERMINED - TEMPERATURE.....	4
3.	“BARREL” DEFINED.....	4
4.	OIL INVOLVED IN LITIGATION, ETC. -- INDEMNITY AGAINST LOSS.....	4
5.	STORAGE.....	4
6.	IDENTITY OF OIL, MAINTENANCE OF.....	5
7.	MINIMUM QUANTITY TO BE RECEIVED.....	5
8.	GATHERING CHARGES.....	5
9.	MEASURING, TESTING, AND DEDUCTIONS (REFERENCE SPECIAL ORDER NUMBER 20-63,098 EFFECTIVE JUNE 18, 1973) [AS SUPPLEMENTED BY RULE 28 AND RULE 29 BELOW].....	5
10.	DELIVERY AND DEMURRAGE.....	6
11.	UNPAID CHARGES, LIEN AND SALE TO COVER.....	6
12.	NOTICE OF CLAIM.....	6
13.	TELEPHONE-TELEGRAPH LINE - SHIPPER TO USE.....	6
14.	CONTRACTS OF TRANSPORTATION.....	6
15.	SHIPPER’S TANKS, ETC. - INSPECTION.....	7
16.	OFFERS IN EXCESS OF FACILITIES.....	7
17.	INTERCHANGE OF TONNAGE.....	7
18.	RECEIPT AND DELIVERY - NECESSARY FACILITIES FOR.....	7
19.	REPORTS OF LOSS FROM FIRES, LIGHTNING AND LEAKAGE [SUPPLEMENTED BY RULE 25 AND RULE 38 BELOW AND SUPPLEMENTED BY RULE 29 BELOW]:.....	7
SECTION II ARROWHEAD SOUTH TEXAS PIPELINE, LLC RULES AND REGULATIONS.....		
	DEFINITIONS:.....	8
20.	COMMODITY RULE 1 ABOVE IS SUPPLEMENTED AS FOLLOWS:.....	11
21.	STORAGE RULE 5 AND RULE 10 ABOVE ARE SUPPLEMENTED AS FOLLOWS:.....	11
22.	IDENTITY OF CRUDE OIL RULE 6 AND RULE 10 ABOVE ARE SUPPLEMENTED AS FOLLOWS:.....	11
23.	DEMURRAGE - RULE 10 ABOVE IS SUPPLEMENTED AS FOLLOWS:.....	16

24.	TELECOMMUNICATIONS - RULE 13 ABOVE IS NOT APPLICABLE TO THE PIPELINES OR FACILITIES OPERATED UNDER THIS TARIFF.	17
25.	REPORTS OF LOSS FROM FIRES, LIGHTNING AND LEAKAGE - RULE 19 ABOVE IS SUPPLEMENTED AS FOLLOWS:	17
26.	SPECIFICATIONS AND RESTRICTIONS, THE FOLLOWING MODIFIES AND SUPERSEDES RULE 1 AND RULE 2 ABOVE:	17
27.	NOMINATIONS AND MINIMUM VOLUME.	20
28.	MEASUREMENTS AND ADJUSTMENTS-RULE 9 ABOVE IS SUPPLEMENTED AS FOLLOWS:	21
29.	LIABILITY OF PARTIES-RULE 4, RULE 9 AND RULE 19 ABOVE AND RULE 42 BELOW ARE SUPPLEMENTED AS FOLLOWS:	22
30.	PAYMENT OF TRANSPORTATION AND OTHER CHARGES-RULE 11 ABOVE IS SUPPLEMENTED AS FOLLOWS:	22
31.	CHARGE FOR SPILL COMPENSATION.	24
32.	VOLUMETRIC ADJUSTMENT.	24
33.	CLAIMS FOR LOSS OR DAMAGE-RULE 12 ABOVE IS SUPPLEMENTED AS FOLLOWS:	24
34.	PRORATIONING OF CAPACITY-RULE 16 ABOVE IS SUPPLEMENTED AS FOLLOWS:	25
35.	APPLICATION OF RATES AND CHARGES.	27
36.	APPLICATION OF RATES FROM AND TO INTERMEDIATE POINTS.	27
37.	CONNECTING CARRIERS.	27
38.	LIABILITY OF CARRIER-RULE 19 ABOVE IS SUPPLEMENTED AS FOLLOWS:	27
39.	INTRASYSTEM TRANSFERS-INTENTIONALLY OMITTED	28
40.	STORAGE OF CRUDE PETROLEUM IN TRANSIT- SUPPLEMENTS RULE 5 AS FOLLOWS:	28
41.	PIPEAGE OR OTHER CONTRACTS.	29
42.	INVENTORY REQUIREMENTS.	29
43.	FINANCIAL ASSURANCES	29
44.	TITLE	30

SECTION I

**RULES AND REGULATIONS OF RAILROAD COMMISSION OF TEXAS
RULE 3.71. PIPELINE TARIFFS.**

- 1. ALL MARKETABLE OIL TO BE RECEIVED FOR TRANSPORTATION.** By the term “marketable oil” is meant any crude petroleum adapted for refining or fuel purposes, properly settled and containing not more than two percent (2%) of basic sediment, water, or other impurities above a point six (6) inches below the pipeline connection with the tank. Pipelines shall receive for transportation all such “marketable oil” tendered; but no pipeline shall be required to receive for shipment from any one person an amount exceeding three thousand (3,000) barrels of petroleum in any one (1) day; and, if the oil tendered for transportation differs materially in character from that usually produced in the field and being transported therefrom by the pipeline, then it shall be transported under such terms as the shipper and the owner of the pipeline may agree or the commission may require. [Supplemented by Rule 20, Rule 26 and Rule 42 below].
- 2. BASIC SEDIMENT, HOW DETERMINED - TEMPERATURE.** In determining the amount of sediment, water or other impurities, a pipeline is authorized to make a test of the oil offered for transportation from an average sample from each such tank, by the use of centrifugal machine, or by the use of any other appliance agreed upon by the pipeline and the shipper. The same method of ascertaining the amount of the sediment, water or other impurities shall be used in the delivery as in the receipt of oil. A pipeline shall not be required to receive for transportation, nor shall consignee be required to accept as a delivery, any oil of a higher temperature than ninety degrees Fahrenheit (90° F), except that during the summer oil shall be received at any atmospheric temperature, and may be delivered at like temperature. Consignee shall have the same right to test the oil upon delivery at destination that the pipeline has to test before receiving from the shipper. [Supplemented by Rule 26 below].
- 3. “BARREL” DEFINED.** For the purpose of these Rules, a “barrel” of crude petroleum is declared to be forty-two (42) gallons of 231 cubic inches per gallon at sixty degrees Fahrenheit (60° F).
- 4. OIL INVOLVED IN LITIGATION, ETC. -- INDEMNITY AGAINST LOSS.** When any oil offered for transportation is involved in litigation, or the ownership is in dispute, or when the oil appears to be encumbered by lien or charge of any kind, the pipeline may require of shippers an indemnity bond to protect it against all loss. [Supplemented by Rule 29 and Rule 44 below].
- 5. STORAGE.** Each pipeline shall provide, without additional charge, sufficient storage, such as is incidental and necessary to the transportation of oil, including storage at destination or so near thereto as to be available for prompt delivery to destination point, for five (5) days from the date of order of delivery at destination. [Supplemented by Rule 21 and Rule 40 below].

6. **IDENTITY OF OIL, MAINTENANCE OF.** A pipeline may deliver to consignee, either the identical oil received for transportation, subject to such consequence of mixing with other oil as are incident to the usual pipeline transportation, or it may make delivery from its common stock at destination; provided, if this last be done, the delivery shall be of substantially like kind and market value. [Supplemented by Rule 22, and Rule 42 below].
7. **MINIMUM QUANTITY TO BE RECEIVED.** A pipeline shall not be required to receive less than one (1) tank carload of oil when oil is offered for loading into tank cars at destination of the pipeline. When oil is offered for transportation for other than tank car delivery, a pipeline shall not be required to receive less than five hundred (500) barrels. [Supplemented by Rule 27 below].
8. **GATHERING CHARGES.** Tariffs to be filed by a pipeline shall specify separately the charges for gathering of the oil, for transportation, and for delivery.
9. **MEASURING, TESTING, AND DEDUCTIONS (REFERENCE SPECIAL ORDER NUMBER 20-63,098 EFFECTIVE JUNE 18, 1973) [AS SUPPLEMENTED BY RULE 28 AND RULE 29 BELOW]:**
 - A. Except as provided in subparagraph (B) of this paragraph, all crude oil tendered to a pipeline shall be gauged and tested by a representative of the pipeline prior to its receipt by the pipeline. The shipper may be present or represented at the gauging or testing. Quantities shall be computed from correctly compiled tank tables showing 100% of the full capacity of the tanks.
 - B. As an alternative to the method of measurement provided in subparagraph (A) of this paragraph, crude oil and condensate may be measured and tested, before transfer of custody to the initial transporter, by:
 - i. Lease automatic custody transfer (LACT) equipment, provided such equipment is installed and operated in accordance with the latest revision of American Petroleum Institute (API) Manual of Petroleum Measurement Standards, Chapter 6.1.; or
 - ii. Any device or method, approved by the commission or its delegate, which yields accurate measurements of crude oil or condensate.
 - C. Adjustments to the quantities determined by the methods described in subparagraphs (A) or (B) of this paragraph shall be made for temperature from the nearest whole number degree to the basis of 60 degrees Fahrenheit and to the nearest 5/10 API degree gravity in accordance with the volume correction Tables 5A and 6A contained in API Standard 2540. American Society for Testing Materials 01250, Institute of Petroleum 200, first edition, August, 1980. A pipeline may deduct the basic sediment, water, and other impurities as shown by the centrifugal or other test agreed upon the shipper and pipeline; and 1.0% for evaporation and loss during transportation. The net balance shall be the quantity deliverable by the pipeline. In allowing the deductions, it is not the intention of the

commission to affect any tax or royalty obligations imposed by the laws of Texas on any producer or shipper of crude oil. [Supplemented by Rule 28 below].

D. A transfer of custody of crude between transporters is subject to measurement as agreed upon by the transporters.

10. DELIVERY AND DEMURRAGE. Each pipeline shall transport oil with reasonable diligence, considering the quality of the oil, the distance of transportation, and other material elements, but at any time after receipt of a consignment of oil, upon twenty-four (24) hours' notice to the consignee, may offer oil for delivery from its common stock at the point of destination, conformable to Section 6 of this rule, at a rate not exceeding ten thousand (10,000) barrels per day of twenty-four (24) hours. Computation of time of storage (as provided for in Rule 5) shall begin at the expiration of such notice. At the expiration of the time allowed in Rule 5 for storage at destination, a pipeline may assess a demurrage charge on oil offered for delivery and remaining undelivered, at a rate for the first ten (10) days of one-tenth of one cent (\$.001) per barrel; and thereafter at a rate of three-fourths of one cent (\$.0075) per barrel, for each day of twenty-four (24) hours or fractional part thereof. [Supplemented by Rules 21, 22 and 23 below].

11. UNPAID CHARGES, LIEN AND SALE TO COVER. A pipeline shall have a lien on all oil to cover charges for transportation, including demurrage, and it may withhold delivery of oil until the charges are paid. If the charges shall remain unpaid for more than five days after notice of readiness to deliver, the pipeline may sell the oil at public auction at the general office of the pipeline on any day not a legal holiday. The date for the sale shall be not less than 48 hours after publication of notice in a daily newspaper of general circulation published in the city where the general office of the pipeline is located. The notice shall give the time and place of the sale, and the quantity of the oil to be sold. From the proceeds of the sale, the Pipeline Operator may deduct all charges lawfully accruing, including demurrage, and all expenses of the sale. The net balance shall be paid to the person lawfully entitled thereto. [Supplemented by Rules 30 and 31 below].

12. NOTICE OF CLAIM. Notice of claims for loss, damage or delay in connection with the shipment of oil must be made in writing to the pipeline within ninety-one (91) days after the damage, loss, or delay occurred. If the claim is for failure to make delivery, the claim must be made within ninety-one (91) days after a reasonable time for delivery has elapsed. [Supplemented by Rule 33 below].

13. TELEPHONE-TELEGRAPH LINE - SHIPPER TO USE. If a pipeline maintains a private telegraph or telephone line, a shipper may use it without extra charge, for messages incident to shipments. However, a pipeline shall not be held liable for failure to deliver any messages away from its office or for delay in transmission or for interruption of service. [Supplemented by Rule 24 below].

14. CONTRACTS OF TRANSPORTATION. When a consignment of oil is accepted, the pipeline shall give the shipper a run ticket, and shall give the shipper a statement that shows the amount of oil received for transportation, the points of origin and destination,

corrections made for temperature, deductions made for impurities, and the rate for such transportation.

15. **SHIPPER'S TANKS, ETC. - INSPECTION.** When a shipment of oil has been offered for transportation, the pipeline shall have the right to go upon the premises where the oil is produced or stored, and have access to any and all tanks or storage receptacles for the purpose of making any examination, inspection, or test authorized by these Rules.
16. **OFFERS IN EXCESS OF FACILITIES.** If oil is offered to any pipeline for transportation in excess of the amount that can be immediately transported, the transportation furnished by the pipeline shall be apportioned among all shippers in proportion to the amounts offered by each; but no offer for transportation shall be considered beyond the amount which the person requesting the shipment then has ready for shipment by the pipeline. The pipeline shall be considered as a shipper of oil produced or purchased by itself and held for shipment through its line, and its oil shall be entitled to participate in such apportionment. [Supplemented by Rule 34 below].
17. **INTERCHANGE OF TONNAGE.** Pipelines shall provide the necessary connections and facilities for the exchange of tonnage at every locality reached by two or more pipelines, when the commission finds that a necessity exists for connection, and under such regulations as said commission may determine in each case.
18. **RECEIPT AND DELIVERY - NECESSARY FACILITIES FOR.** Each pipeline shall install and maintain facilities for the receipt and delivery of marketable crude petroleum of shippers at any point on its line if the commission finds that a necessity exists therefor, and under regulations by the commission. [Supplemented by Rule 40 and Rule 42 below].
19. **REPORTS OF LOSS FROM FIRES, LIGHTNING AND LEAKAGE [SUPPLEMENTED BY RULE 25 AND RULE 38 BELOW AND SUPPLEMENTED BY RULE 29 BELOW]:**
 - A. Each pipeline shall immediately notify the commission, electronically or by telephone, of each fire that occurs at any oil tank owned or controlled by the pipeline, or of any tank struck by lightning. Each pipeline shall in like manner report each break or leak in any of its tanks or pipelines from which more than five (5) barrels escapes. Each pipeline shall file the required information with the commission in accordance with the appropriate commission form within 30 days of the spill or leak. [Supplemented by Rules 25, 29 and 38 below].
 - B. No risk of fire, storm, flood or act of God, and no risk resulting from riots, insurrection, rebellion, war, or act of the public enemy, or from quarantine or authority of law or any order, requisition or necessity of the government of the United States in time of war, shall be borne by a pipeline, nor shall any liability accrue to it from any damage thereby occasioned. If loss of any crude oil from any such causes occurs after the oil has been received for transportation, and before it has been delivered to the consignee, the shipper shall bear a loss in such proportion as the amount of his shipment is to all of the oil held in transportation by the pipeline at the time of such loss, and the shipper shall be entitled to

have delivered only such portion of his shipment as may remain after a deduction of his due proportion of such loss, but in such event the shipper shall be required to pay charges only on the quantity of oil delivered. This rule shall not apply if the loss occurs because of negligence of the pipeline.

- C. Common carrier pipelines shall mail (return receipt requested) or hand deliver to landowners (persons who have legal title to the property in question) and residents (persons whose mailing address is the property in question) of land upon which a spill or leak has occurred, all spill or leak reports required by the commission for that particular spill or leak within 30 days of filing the required reports with the commission. Registration with the commission by landowners and residents for the purpose of receiving spill or leak reports shall be required every five years, with renewal registration starting January 1, 1999. If a landowner or resident is not registered with the commission, the common carrier is not required to furnish such reports to the resident or landowner.

SECTION II
ARROWHEAD SOUTH TEXAS PIPELINE, LLC
RULES AND REGULATIONS

DEFINITIONS:

“API” means American Petroleum Institute.

“Available Capacity” means the total capacity of the System, or a particular segment thereof, available to transport Crude Petroleum in a Proration Month, as determined by Pipeline Operator in its sole discretion.

“Barrel” means forty-two (42) United States gallons at sixty degrees (60°) Fahrenheit and zero P.S.I.G.

“Base Period” means the previous 12-calendar month period beginning 13-calendar months prior to the Proration Month.

“Batched” or “Batched Shipments” means a quantity of Crude Petroleum of like characteristics delivered by Shipper for transportation by Pipeline Operator as an identifiable unit.

“Committed Shipper” means a Shipper that has committed to transporting, or paying for the transportation of, certain minimum volumes of Crude Petroleum pursuant to the terms of a TSA.

“Committed Volume” means the barrel per day volume committed to a Committed Shipper, in accordance with the TSA, multiplied by the number of days in the relevant month.

“Connecting Pipeline” as used herein, means a pipeline constructed and operated by a party or parties other than Pipeline Operator from which Crude Petroleum is received into Pipeline Operator’s pipeline on the basis of measurements made at the point where it enters said Connecting Pipeline rather than at the point where it enters Pipeline Operator’s pipeline.

Rules and Regulations: Arrowhead South Texas Pipeline System

“Consignee” means a party, including a Connecting Pipeline system, to whom Shipper has ordered the delivery of Crude Petroleum.

“Crude Petroleum” as used herein, means the direct product of oil or gas wells that meets Pipeline Operator’s product Quality Specifications set forth in Rule 26.

“Delivery Point” means those point(s) of delivery on Pipeline Operator’s System.

“Fungible Batch” shall mean a Batch of Crude Petroleum meeting Pipeline Operator’s quality specifications set forth in Rule 26, that Pipeline Operator may commingle with other Batches of Crude Petroleum meeting the same specifications pursuant to Rule 26.

“Governmental Authority” means (i) the United States of America, (ii) any state, county, parish, municipality or other governmental subdivision within the United States of America, and (iii) any court or any governmental department, commission, board, bureau, agency or other instrumentality of the United States of America or of any state, county, or municipality having applicable jurisdiction.

“Incremental Barrels” means the Barrels of Crude Petroleum that a Committed Shipper nominates and tenders for shipment in a month that exceed its Committed Volume.

“Joint Tariff System” means Arrowhead Eagle Ford Pipeline, LLC and Arrowhead Gathering Company, LLC, as governed by the Texas Joint Tariff System Rules and Regulations, Texas R.R.C. No. 1, and supplements thereto and reissues thereof.

“Joint Tariff Common Stream” means the common stream as defined in the Texas Joint Tariff System Rules and Regulations, Texas R.R.C. No. 1, and supplements thereto and reissues thereof, and shall include all Crude Petroleum delivered to and moved through the Joint Tariff System that is commingled or intermixed with Crude Petroleum received into the Shared System.

“Local Tariff” means all local tariffs subject to the rules and regulations in this tariff.

“Law” shall mean all applicable local, state and federal constitutions, laws (including common law), treaties, statutes, orders, decrees, rules, regulations, codes, and ordinances issued by any Governmental Authority, and including judicial or administrative orders, consents, decrees, and judgments, and determinations by, or interpretations of any of the foregoing by any Governmental Authority having jurisdiction over the matter in question.

“New Shipper” means any Shipper who does not qualify as a Regular Shipper or Committed Shipper. Once a Shipper is assigned New Shipper status, such Shipper must remain a New Shipper for a period of 12 consecutive calendar months before it will become eligible to qualify for Regular Shipper status.

“New Shipper Capacity” means ten percent (10%) of the total available capacity of Pipeline Operator’s system (or portion thereof, as applicable) for the Proration Month.

Rules and Regulations: Arrowhead South Texas Pipeline System

“Nomination” means any offer by a Shipper to Pipeline Operator of a stated quantity of Crude Petroleum for transportation from a specified Receipt Point or Points to a specified Delivery Point or Points in accordance with this tariff.

“Person” shall mean any individual, corporation, partnership, joint venture, association, joint stock company, or limited liability company.

“Pipeline Operator” means Arrowhead South Texas Pipeline, LLC.

“Proration Month” means the month for which capacity on Pipeline Operator’s System is subject to prorationing under Rule 34 of this tariff.

“Quality Specifications” shall have the meaning set forth in Rule 26 of this tariff.

“Receipt Point” means the point or points where Crude Petroleum is received into Pipeline Operator’s System.

“Regular Shipper” means a Shipper that has shipped Crude Petroleum on Pipeline Operator’s system during each month of the Base Period.

“Shared Common Stream” means the sum of all Crude Petroleum received into the Pipeline Operator’s System, the common stream of a Shared System Pipeline Operator, or the Joint Tariff Common Stream at receipt points on the Shared System upstream of the Three Rivers Measurement Station, and has no meaning other than for purposes of the Shared Gravity Bank in Rule 22.

“Shared Gravity Bank” means the gravity bank in Rule 22 of this tariff that is operated by the Shared System Pipeline Operators for the benefit of all shippers tendering into the Shared Common Stream.

“Shared System” means (i) the Joint Tariff System upstream of the Three Rivers Measurement Station, (ii) the System upstream of the Three Rivers Measurement Station, and (iii) the Three Rivers System, together, solely for the purposes of the Shared Gravity Bank in Rule 22.

“Shared System Pipeline Operators” means the Pipeline Operator and Arrowhead Gathering Company, LLC. The Shared System Pipeline Operators will administer the Shared Gravity Bank described in Rule 22.

“Shipper” means a party who contracts with Pipeline Operator for the gathering or transportation of Crude Petroleum under this tariff.

“Specified Grade” means Crude Petroleum meeting certain specifications designated by Pipeline Operator for such grade of Crude Petroleum.

“System” means Pipeline Operator’s pipeline system and all related facilities to which the rules and regulations stated herein apply.

“Three Rivers Measurement Station” means the metering, gravity measurement and other equipment located at the Three Rivers Valero Refinery and the Gardendale Pipeline Three Rivers Station, which is the last delivery point on the Three Rivers System.

“Three Rivers System” means the Three Rivers Pipeline Crude Oil System, operated by Arrowhead Gathering Company, LLC, as governed by the Texas Local Tariff, Texas R.R.C. No. 8.0., and supplements thereto and reissues thereof.

“Tender,” “Tenders,” or “Tendered” shall mean the presentation by a Shipper to Pipeline Operator of a stated quantity of Crude Petroleum for transportation from a specified Receipt Point to a specified Delivery Point in accordance with this tariff.

“TSA” means an agreement involving transportation services, including but not limited to, a Transportation Service Agreement or a Throughput and Deficiency Agreement executed by the Pipeline Operator and a Committed Shipper.

20. COMMODITY RULE 1 ABOVE IS SUPPLEMENTED AS FOLLOWS:

Pipeline Operator is engaged in the transportation of Crude Petroleum, as that term is defined herein, and will not accept any other commodity for transportation hereunder, except as specifically stated herein.

21. STORAGE RULE 5 AND RULE 10 ABOVE ARE SUPPLEMENTED AS FOLLOWS:

Pipeline Operator shall accept Crude Petroleum only when Shipper has provided the necessary equipment and facilities for receipt of Crude Petroleum into Pipeline Operator’s System and delivery of Crude Petroleum from Pipeline Operator’s System at pressures and pumping rates required by Pipeline Operator. The cost of such facilities shall be provided at the sole cost of Shipper seeking access to Pipeline Operator’s System. Pipeline Operator may require evidence showing that the necessary facilities are available for delivering shipments onto Pipeline Operator’s System at the Receipt Point(s) and receiving shipments from Pipeline Operator’s System at the Delivery Point(s) before any obligation to furnish transportation service shall arise.

22. IDENTITY OF CRUDE OIL RULE 6 AND RULE 10 ABOVE ARE SUPPLEMENTED AS FOLLOWS:

To address certain differences in gravity within the Crude Petroleum transported on the Shared Common Stream, Pipeline Operator, all carriers who provide transportation services using the same facilities as Pipeline Operator, and all carriers who provide joint tariff services with Pipeline Operator have established a Shared Gravity Bank to calculate, collect and remit monetary adjustments among all Shippers tendering to the Shared Common Stream. Each Shipper will be required, as a condition to shipping on the Shared System, to deliver all Crude Petroleum into the Shared Common Stream and participate in the Shared Gravity Bank, which will be administered by Shared System Pipeline Operators on a monthly basis in accordance with the following provisions.

Rules and Regulations: Arrowhead South Texas Pipeline System

A. Shared Gravity Bank. The purpose of the Shared Gravity Bank is to mitigate, to the fullest extent possible, damage or improvement to Shippers whose Crude Petroleum is commingled in the Shared Common Stream. Differences in gravity of all of the Shippers' Crude Petroleum streams that are mixed within the Shared Common Stream either increase or decrease the quality of the Shared Common Stream, and deliveries of Crude Petroleum may have gravities that differ from the gravity of the Shared Common Stream. Pursuant to the Shared Gravity Bank, Shared System Pipeline Operators will either charge a Shipper or pay a Shipper depending upon the relationship between the gravity of the Shared Common Stream and the weighted average gravity of a Shipper's deliveries of Crude Petroleum into the Shared Common Stream and the weighted average gravity of such Shipper's receipts of Crude Petroleum from the Shared Common Stream. The amounts payable by all Shippers to Shared System Pipeline Operators pursuant to the Shared Gravity Bank will equal the amounts owed by Shared System Pipeline Operators to all Shippers pursuant to the Shared Gravity Bank. The operation of the Shared Gravity Bank requires Shared System Pipeline Operators to share information in order to calculate the weighted average gravity value for each month as required by the Receipt Bank (below), and to calculate the weighted average gravity value of Crude Petroleum for each month as required by the Delivery Bank (below); therefore, as a condition of shipment of Crude Petroleum in the Shared Common Stream, each Shipper agrees to waive any rights to confidentiality related to the information that must be shared between the Shared System Pipeline Operators to calculate the weighted average gravity values for the Receipt Bank and the Delivery Bank for each month, solely for this purpose. All Shippers tendering into the Shared Common Stream on Pipeline Operator's System will be bound by the Shared Gravity Bank under the provisions of this Rule 22, and all shippers tendering into the Shared Common Stream on other carriers shall be bound by the Shared Gravity Bank under the applicable rules and regulations specified in the individual tariffs of those carriers. Each Shipper, by its tender of Crude Petroleum into the Shared Common Stream, accepts and agrees to all of the terms, conditions and consequences contained in this Rule 22. Each of the Shared System Pipeline Operators shall ensure that this Shared Gravity Bank is applied to their respective systems upstream of the Three Rivers Measurement Station. For purposes of the Shared Gravity Bank, measurements made for the Joint Tariff System shall be made at the Three Rivers Measurement Station.

B. Receipt Bank.

i. If the weighted average gravity value of Crude Petroleum delivered by any Shipper into the Shared Common Stream differs from the weighted average gravity value of the Shared Common Stream for such month, then such Shipper will be debited or credited by an amount determined from the following formula:

$$SA_R = SQ_R * (GV_{CSR} - SGV_R)$$

where:

$SA_R =$	Shipper adjustment (expressed in dollars) with respect to Crude Petroleum received from the Shipper; positive amounts will be debited and negative amounts will be credited.
----------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Rules and Regulations: Arrowhead South Texas Pipeline System

--	--

$SQ_R =$	Quantity of Crude Petroleum delivered by the Shipper into the Shared Common Stream during that month (expressed in barrels).
----------	------------------------------------------------------------------------------------------------------------------------------

$GV_{CSR} =$	The Gravity Value per barrel of all Crude Petroleum delivered into the Shared Common Stream (expressed in dollars per barrel), which is equal to the weighted average of the Gravity Values of all Shippers in the Shared Common Stream.
--------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

$SGV_R =$	The Gravity Value per barrel of the Crude Petroleum delivered by the Shipper into the Shared Common Stream (expressed in dollars per barrel), as determined from <u>Schedule 1</u> .
-----------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- ii. The sum of debits and credits to all Shippers under this Paragraph B for all Crude Petroleum received by Shared System Pipeline Operators into the Shared Common Stream is zero.

C. Delivery Bank.

- i. If the weighted average gravity value of Crude Petroleum delivered to any Shipper from the Shared Common Stream differs from the weighted average gravity value of the Shared Common Stream for such month, then such Shipper will be debited or credited by an amount determined from the following formula:

$SA_D =$	$SQ_D * (GV_{CSD} - SGV_D)$
----------	-----------------------------

where:

$SA_D =$	Shipper adjustment (expressed in dollars) with respect to Crude Petroleum delivered to the Shipper; positive amounts will be credited and negative amounts will be debited.
----------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------

where:

$SQ_D =$	Quantity of Crude Petroleum delivered to the Shipper from the Shared Common Stream during that month (expressed in barrels).
----------	------------------------------------------------------------------------------------------------------------------------------

$GV_{GSD} =$	The Gravity Value per barrel of Crude Petroleum in the Shared Common Stream delivered from the Shared Common Stream (expressed in dollars per barrel), which is equal to the weighted
--------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	average of the Gravity Values of Crude Petroleum delivered to all Shippers from the Shared Common Stream.
--	-----------------------------------------------------------------------------------------------------------

SGV _D =	The Gravity Value per barrel of the Crude Petroleum delivered from the Shared Common Stream to the Shipper (expressed in dollars per barrel), as determined from <u>Schedule 2</u> .
--------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- ii. The sum of debits and credits to all Shippers under this Paragraph C for all Crude Petroleum delivered out of the Shared Common Stream by Shared System Pipeline Operators is zero.

- D. Sample calculations. Sample calculations are attached hereto as Schedule 3.

- E. Determination by Shared System Pipeline Operators. At the end of each month, the quantity of Crude Petroleum in the Shared Common Stream received from and delivered to each Shipper and the related Gravities will be determined and recorded by Shared System Pipeline Operators at points where Shared System Pipeline Operators customarily record Gravities and quantities received into and delivered from the System. Shared System Pipeline Operators also will determine each month the weighted average Gravity value of all Crude Petroleum received (Receipt Bank) into the Shared Common Stream and the weighted average Gravity value of all Crude Petroleum delivered (Delivery Bank) out of the Common Stream. If either, (i) more than once during any twelve month period, Shared System Pipeline Operators determine that a Shipper’s monthly deliveries into the Shared Common Stream exceed a weighted average API Gravity of 49.5 degrees and the gravity of the Shared Common Stream exceeds a weighted average API Gravity of 49.5 degrees or (ii) at the end of any month, Shared System Pipeline Operators determine that a Shipper’s deliveries into the Shared Common Stream during such month exceed a weighted average API Gravity of 50.0 degrees and the gravity of the Shared Common Stream exceeds a weighted average API Gravity of 50.0 degrees, then such Shipper shall be precluded from shipping Crude Petroleum in the Shared Common Stream during the calendar month following such determination; provided, however that such Shipper shall be allowed to resume shipping Crude Petroleum in accordance with this tariff on the first day of the next calendar month.

- F. Statement. Within 30 days following the end of each month, Pipeline Operator shall send to each Shipper a statement setting forth the debits and/or credits allocated to such Shipper for such month.

- G. Payments.
 - i. With respect to each Shipper in the Shared Common Stream, if the sum of the credits allocated to such Shipper exceeds the sum of the debits allocated to such Shipper, such Shipper shall pay to Shared System Pipeline Operators an amount equal to such excess no later than the 15th day after its receipt of a Shared System

Pipeline Operator's statement. If the sum of the debits allocated to such Shipper exceeds the sum of the credits allocated to such Shipper, Shared System Pipeline Operators shall pay to such Shipper an amount equal to such excess no later than 30 days following the delivery of a Shared System Pipeline Operator's statement.

- ii. Notwithstanding paragraph G(i), if any Shipper in the Shared Common Streams fails to make a payment required to be made by it hereunder, any amounts payable to Shippers under this paragraph G will be reduced by such Shipper's proportionate share of such underpayments in that month based upon the ratio that the amount owed to such Shipper under this paragraph G in that month bears to the amounts owed to all Shippers under this paragraph G in that month, provided however, that if the underpayment is eventually cured by the non-paying Shipper, than each other Shipper shall receive the full payment it was entitled to prior to the underpayment.
 - iii. Shippers shall have the right to enforce this Rule 22 against, and seek payment under this Rule 22 from, any non-paying shipper in the Shared Common Stream either at the Commission or in any other appropriate venue. Additionally, the Shared System Pipeline Operators shall refuse to transport Crude Petroleum for such non-paying shipper on the System, the Joint Tariff System, or their individual systems, respectively until full payment is made, and any such Shipper's inability to ship under hereunder shall not relieve such Shipper of, or modify or affect, any volume commitment or deficiency payment obligation such Shipper has under a TSA to one of the Shared System Pipeline Operators. As soon as the non-paying Shipper is delinquent in making payments to a Pipeline Operator under this Rule 22, to the extent permitted under applicable law, Shared System Pipeline Operators shall cooperate with any other Shippers in the Shared Common Stream in recovering amounts owed by such non-paying Shipper.
- H. Liability. Shared System Pipeline Operators will take commercially reasonable actions to collect any amounts owed to Shared System Pipeline Operators by any Shipper in the Shared Common Stream under this Rule 22, but Shared System Pipeline Operators will have no liability to any Shipper for any amounts owed to such Shipper by a non-paying Shipper under this Rule 22. Any non-paying Shipper in the Shared Common Stream shall be liable to all other Shippers in the Shared Common Stream under this Rule 22 for such Shipper's non-payment.
- I. Administration. Shared System Pipeline Operators shall work together as necessary to, and shall, administer the Shared Gravity Bank, and shall perform the clearinghouse business of calculating and effecting adjustments among all Shippers in the Shared Common Stream delivering Crude Petroleum into the Shared Common Stream for differences in API gravity of Crude Petroleum received from all Shippers in the Shared Common Stream. Shared System Pipeline Operators shall receive and track all monies received from Shippers in the Shared Common Stream pursuant to the Shared Gravity Bank for the benefit of all Shippers in the Shared Common Stream.

Rules and Regulations: Arrowhead South Texas Pipeline System

- J. Adjustments. During November of each calendar year (and more often if the Shared System Pipeline Operators deem appropriate), Shared System Pipeline Operators shall review the formulae set forth in Rules 22(B) and 22(C) and the Gravity adjustments in Schedules 1 and 2, in light of current market conditions and may amend such formulae and Gravity adjustments by notifying all Shippers in the Shared Common Stream of such amendment. The amended formulae will become effective beginning the following January 1 and will remain effective until again modified in accordance with this Rule 22(J). If any Shipper does not agree with any the amendments of such formulae and Gravity adjustments, such Shipper may protest or challenge such amendment either at the Commission or in any other appropriate venue.
- K. Gravity. Shared System Pipeline Operators will be responsible, at their sole cost and expense, for determining and/or securing data on all Gravities and Volumes of Crude Petroleum delivered into and out of the Shared Common Stream. The Gravity will be determined by ASTM 6822-02 (Standard Test Method for Density, Relative Density, API Gravity of Crude Petroleum and Liquid Petroleum Products by Thermo-hydrometer Method).
- L. Audit. Any individual Shipper on the Shared Common Stream will at any time during normal business hours and upon reasonable notice have access to the books, accounts and records of Shared System Pipeline Operators for the purpose of verifying that Shared System Pipeline Operators are administering the Shared Gravity Bank in accordance with the terms of this Rule 22. Each Shipper will bear the cost of any audit requested by it.
- 23. DEMURRAGE - RULE 10 ABOVE IS SUPPLEMENTED AS FOLLOWS:**
- A. In the event Pipeline Operator has accepted Crude Petroleum for transportation in reliance upon Shipper's representations as to acceptance at the Delivery Point, and there is failure to promptly accept such Crude Petroleum as scheduled at Delivery Point, then and in such event Pipeline Operator shall have the right to divert, reconsign, or make whatever arrangements for disposition of the Crude Petroleum it deems appropriate to clear its pipeline facilities.
- B. If Shipper cannot accept the scheduled delivery and Shipper makes timely arrangements for delivery at another local or more distant delivery point, Pipeline Operator will permit such diversion or reconsignment consistent with the provisions of Rule 23 of this tariff. Pipeline Operator will consider all such diversion or reconsignment arrangements to be timely if notice of these alternate arrangements is received by Pipeline Operator in sufficient time to avoid shutting down operation of the affected pipeline segment or facilities. If suitable diversion or reconsignment arrangements are made by Shipper but Pipeline Operator is not notified in time sufficient to avoid a shutdown of the affected pipeline segment or facilities, then an assessment of two thousand five hundred dollars (\$2,500.00) for each hour of lost operation or fraction thereof will be made on Shipper.
- C. If Shipper fails to make suitable arrangements for diversion or reconsignment of the Crude Petroleum, and Pipeline Operator does not have available intermediate or local storage facilities that will permit Pipeline Operator to promptly divert the Crude Petroleum,

Pipeline Operator will seek the most expeditious means to divert or dispose of the Crude Petroleum. Such disposition includes the right to sell the Crude Petroleum at private or public sale. Pipeline Operator may be a purchaser at such public sale. From the proceeds of any such sale, Pipeline Operator may pay itself all transportation and other charges and expenses in caring for and maintaining the Crude Petroleum and the costs of sale, and the balance shall be held for whomsoever may be lawfully entitled thereto.

- D. In the event that physical limitations or any other factors prevent Pipeline Operator from arranging for the prompt disposal of the Crude Petroleum and Pipeline Operator is forced to shut down operation of the pipeline facilities, Shipper will be assessed penalties and fees as follows:
- i. Shipper will be responsible for the prompt payment of any and all claims that may be brought against Pipeline Operator from other Shippers or affected Parties as a result of the extended interruption of scheduled pipeline service.
 - ii. Shipper will also be responsible for the prompt payment of any and all costs incurred by the pipeline to provide alternative service to its other Shippers whose Crude Petroleum are blocked in the pipeline facilities by the shutdown. Such costs may include expenses for trucking said products and any related charges for loading and/or unloading the Crude Petroleum.
 - iii. Shipper will be assessed fees of two thousand five hundred dollars (\$2,500.00) for each hour of lost operation or fraction thereof to compensate Pipeline Operator for revenues lost during the time the pipeline facilities were forced to shut down.

24. TELECOMMUNICATIONS - RULE 13 ABOVE IS NOT APPLICABLE TO THE PIPELINES OR FACILITIES OPERATED UNDER THIS TARIFF.

25. REPORTS OF LOSS FROM FIRES, LIGHTNING AND LEAKAGE - RULE 19 ABOVE IS SUPPLEMENTED AS FOLLOWS:

Pipeline Operator shall not be obligated to provide notification to landowners or residents of a spill or leak on their property unless said landowners and residents are duly registered with the commission. Upon reporting of a spill or leak under Rule 19A to the commission, the commission will be requested to provide Pipeline Operator with a list of landowners or residents whose lands are affected by said spill or leak. Pipeline Operator shall then have thirty (30) days from the day Pipeline Operator receives such list to provide the requisite notification to the landowners' addresses as provided on such list.

26. SPECIFICATIONS AND RESTRICTIONS, THE FOLLOWING MODIFIES AND SUPERSEDES RULE 1 AND RULE 2 ABOVE:

- A. The specifications set forth in this Rule 26 are the required specifications for all Crude Petroleum delivered to Pipeline Operator's System.

Rules and Regulations: Arrowhead South Texas Pipeline System

B. Shipper shall deliver Crude Petroleum shipments to Pipeline Operator’s System that meet the following specifications:

Quality Specifications		ASTM Testing Method
API Gravity, API	74.9 or less	ASTM D 1298
Sulfur Content, Weight %	0.42 or less	ASTM D 5504
H ₂ S, ppm in vapor	10 PPM or less	ASTM D 5705, as modified for crude petroleum
Max Reid Vapor Pressure, psi	10.0	ASTM D 6377
Max True Vapor Pressure, psi	11.0	ASTM D 2879
Basic sediment, water, and other impurities	1% or less	ASTM D 4007

Shipper shall also ensure that Crude Petroleum delivered to Pipeline Operator’s System (i) is properly settled; (ii) is not contaminated by the existence of or excess amounts of impure substances, including but not limited to, chlorinated or oxygenated hydrocarbons, arsenic, lead, or other metals; (iii) has a temperature not in excess of one hundred and twenty degrees (120°) Fahrenheit; (iv) has a gravity, viscosity, pour point, and other characteristics are such that it will be readily susceptible to transportation through the Pipeline Operator’s System; (v) has a true vapor pressure that will not result in Pipeline Operator’s noncompliance with Federal, State, or local requirements regarding hydrocarbon emissions; (vi) will not materially affect the quality of other shipments on the System or cause disadvantage to other Shippers or Pipeline Operator; and (vii) will not, in Pipeline Operator’s sole judgment, expose Pipeline Operator’s employees and/or its representatives or the System to an undue risk of harm or property damage. In addition, Pipeline Operator reserves the right to reject (any and all of, but not limited to) shipments of Crude Petroleum where Shipper or Consignee has failed to comply with applicable laws, rules, and regulations made by government authorities regulating shipment of Crude Petroleum. If Crude Petroleum is accepted from tankage, settled bottoms in such tanks must not be above a point six inches (6") below the bottom of the pipeline connection with the tank from which it enters Pipeline Operator’s facilities and such Crude Petroleum must not contain basic sediment, water or other impurities in excess of one percent (1%) average in suspension above the pipeline connection.

The requirements set forth in this Rule 26(B) are collectively referred to herein as the “**Quality Specifications.**”

C. If, upon investigation, Pipeline Operator determines that a Shipper has delivered to Pipeline Operator’s facilities Crude Petroleum that does not comply with the Quality Specifications, Pipeline Operator may (i) require that Shipper transport such Crude

Petroleum as a segregated Batch, separate and apart from the common stream then being transported by Pipeline Operator, in accordance with terms and conditions to be agreed upon by Pipeline Operator and Shipper; (ii) accept such delivery if Pipeline Operator determines that the quality of the Crude Petroleum, when commingled as a Fungible Batch, will nonetheless meet the Quality Specifications; (iii) exclude such Crude Petroleum and any future deliveries of Crude Petroleum from Shipper until such time as Shipper returns the quality of its Crude Petroleum to a level satisfactory to Pipeline Operator in accordance with this tariff; and/or (iv) dispose of any Crude Petroleum delivered into its System that does not meet the Quality Specifications. Disposal thereof, if necessary, may be made in any reasonable commercial manner, and any liability associated with the contamination or disposal of any Crude Petroleum shall be borne by Shipper introducing the contaminated Crude Petroleum into Pipeline Operator's system. Such Shipper's liability in such an event includes, but is not limited to, claims from other Shippers, carriers, or users of the contaminated Crude Petroleum and the costs of any regulatory or judicial proceeding. Upon determination that Shipper's Crude Petroleum does not conform to the Quality Specifications, Pipeline Operator shall notify Shipper of such non-conformance to the Quality Specifications, including a reasonable description of such non-conformance.

- D. Where Crude Petroleum is delivered to pipeline through automatic custody transfer measurement facilities, Pipeline Operator may require use of a monitor which rejects Crude Petroleum containing in excess of one percent (1%) basic sediment and water. [This limitation by Pipeline Operator is supplementary to the one percent (1%) basic sediment and water limit above a point six (6) inches below pipeline connection provided for in Rule 1.]
- E. In addition to having the other rights set forth in this Rule 26, if Crude Petroleum received by Pipeline Operator does not meet the Quality Specifications and Pipeline Operator has not approved the transportation of such Crude Petroleum in advance, Pipeline Operator reserves the right to charge Shipper (i) the actual costs and expenses incurred by Pipeline Operator to treat, handle, or otherwise dispose of all such contaminated Crude Petroleum, and (ii) a one-hundred (100) cents per Barrel charge for the volume of contaminated Crude Petroleum transported by Pipeline Operator ("**Off-Spec Penalty**"). The Off-Spec Penalty is a penalty intended to discourage deliveries of Crude Petroleum to Pipeline Operator's System that violate Pipeline Operator's Quality Specifications. In addition, if a Shipper tenders Crude Petroleum with an API gravity in excess of 75.0, Pipeline Operator reserves the right to assess a 20% deduction on such volumes.
- F. Pipeline Operator may refuse to accept for transportation or require Batched movement of any material tendered for transportation that is not Crude Petroleum and that does not otherwise meet the Quality Specifications or which in Pipeline Operator's opinion differs materially in character from Crude Petroleum being transported by Pipeline Operator. Batched transportation shall be under Rule 42 and upon such terms and conditions as set forth herein.
- G. Shipper shall be liable for any contamination or damage to other Crude Petroleum in Pipeline Operator's custody and/or to Pipeline Operator's System and other facilities

directly caused by failure of the Crude Petroleum Tendered to meet the Quality Specifications.

- H. Pipeline Operator will from time to time give notice to Shippers establishing categories of Crude Petroleum and Specified Grade(s) therein that it will regularly transport as a common stream between each Receipt Point and each Delivery Point. For the avoidance of doubt, if a Specified Grade has crude quality specifications more restrictive than those generally applicable to Crude Petroleum in this Rule 26, Pipeline Operator shall apply the more restrictive crude quality specifications for the Specified Grade to Barrels in the common stream for such Specified Grade, as well as the other crude quality specifications generally applicable to Crude Petroleum in this Rule 26. Shipper shall, at the request of Pipeline Operator, make such Specified Grade(s) available in such quantities and at such times as may be necessary to permit such common stream movements. Pipeline Operator may from time to time, after reasonable notice to Shippers who have shipped a category of Crude Petroleum or a Specified Grade therein in the prior three months, cease to transport such category of Crude Petroleum or Specified Grade as a common stream or change the specifications of a particular category of Crude Petroleum or a Specified Grade transported as a common stream. In addition, the specifications for any Specified Grades are, without limitation, subject to modification from time to time in the event upstream connecting carriers modify their specifications for similar grades of Crude Petroleum.
- I. At the request of a Shipper, and subject to other provisions of this tariff, Pipeline Operator may agree to accept for shipment other categories of Crude Petroleum or Specified Grades to be transported as a common stream pursuant to a rates tariff, subject to the operating conditions of the facilities. Such request must specify (1) a vapor pressure using ASTM D6377 methodology and/or an API (American Petroleum Institute) gravity range; and (2) a sulfur content weight % limitation. Crude Petroleum Tendered for transportation which differs in grade and general characteristics from that usually transported by Pipeline Operator will, at Pipeline Operator's option, be transported only under terms agreed upon, in writing, by Shipper and Pipeline Operator.

27. NOMINATIONS AND MINIMUM VOLUME.

- A. The minimum size of any tender of a particular type of Crude Petroleum that will be accepted at a Receipt Point by Pipeline Operator from one Shipper shall be 2,000 Barrels, provided that Pipeline Operator may accept tenders of less than 2,000 Barrels if operationally possible and acceptance may be done so in a non-discriminatory manner. Pipeline Operator may, at its sole discretion and in a non-discriminatory manner, revise the minimum tender size set forth in this Rule 27 when necessary to maintain efficient operation of its System. Pipeline Operator will not be obligated to make any single delivery that is less than the current minimum tender size unless Pipeline Operator's operations dictate otherwise. The term "single delivery" in this Rule 27 means a delivery of Crude Petroleum, in one continuous operation to one Shipper or Consignee into a single facility, furnished by such Shipper or Consignee, to which Pipeline Operator is connected.
- B. Crude Petroleum for shipment through lines of Pipeline Operator will be received only on properly executed Nominations from Shipper showing the point at which the Crude

Petroleum is to be received, point of delivery, Consignee and amount of Crude Petroleum transported. Pipeline Operator may refuse to accept Crude Petroleum for transportation if Shipper has not furnished documentation demonstrating that it has made provision for prompt receipt thereof at the Nominated Delivery Point.

- C. Before Pipeline Operator will accept a Nomination from a New Shipper, such Shipper must (i) comply with the requirements of Pipeline Operator regarding creditworthiness and financial assurances, including those set forth in this tariff, (ii) demonstrate to Pipeline Operator the adequacy of such Shipper's facilities, and (iii) provide any information reasonably requested by Pipeline Operator.
- D. Any Shipper desiring to Nominate Crude Petroleum for transportation shall make a Nomination to Pipeline Operator in writing on or before the twentieth (20th) day of the month preceding the month during which the transportation under the Nomination is to begin; except that, if Transportation Space is available for current movement, Pipeline Operator may, at Pipeline Operator's discretion, accept changes to a Nomination from Shipper for transportation of Crude Petroleum submitted after the twentieth (20th) day of the month preceding the month during which the transportation under the Nomination is to begin. Pipeline Operator shall also accept changes to a Nomination during the shipping month, subject to capacity limitations.
- E. Pipeline Operator may refuse to accept Crude Petroleum for transportation if Shipper is not in compliance with other provisions of this tariff or where Shipper has failed to comply with all applicable Law regulating shipments of Crude Petroleum.

28. MEASUREMENTS AND ADJUSTMENTS-RULE 9 ABOVE IS SUPPLEMENTED AS FOLLOWS:

- A. All Crude Petroleum transported by Pipeline Operator shall be measured at the applicable Receipt Point and Delivery Point, and may also be measured at any other time deemed appropriate by Pipeline Operator, with such measurement made in accordance with applicable A.P.I. Manual of Petroleum Measurement Standards. All measurements and tests shall be performed by Pipeline Operator or Pipeline Operator's designee, but Shipper or its representative may be present to witness such measurements and tests.
- B. Crude Petroleum received from Shipper and Crude Petroleum delivered to Shipper shall, in each instance, be evidenced by tickets, showing opening and closing meter readings or tank gauges, as applicable, temperature, pressure, and any other data essential to the determination of quantity. All tickets shall be deemed final and accepted by Shipper unless disputed in writing within 90 days of the corresponding invoice date. In the event that a designee of Pipeline Operator (which may include Shipper) performs the tests and measurements, all tickets that rely on such tests and measurements shall be deemed final and accepted by Pipeline Operator unless disputed in writing within 90 days of the corresponding invoice date.
- C. A representative of Pipeline Operator shall have the right to enter upon the premises where Shipper's Crude Petroleum is received or delivered and have access to any and all storage

receptacles or meters for the purposes of measuring and testing and to make any examination, inspection, measurement or test required.

- D. In measuring the quantity of Crude Petroleum received and delivered, corrections shall be made from volumes at actual or observed temperature to volumes at 60 degrees Fahrenheit and for pressure to 14.696 psia. Quantities shall be corrected for this purpose by use of applicable API-ASTM volume correction factor tables.
- E. Pipeline Operator shall make a deduction of two-tenths of one percent (0.2%) to the total amount of Crude Petroleum received from a Shipper at a Receipt Point to cover evaporation, interface losses, and other normal losses experienced during transportation.
- F. The net quantity available for delivery from Pipeline Operator to Shipper at the Delivery Point shall be the amount of Shipper's Crude Petroleum received at the Receipt Point, less (i) any adjustment Pipeline Operator is required to make for temperature and any deduction that Pipeline Operator is required to make for basic sediment, water, and other impurities, (ii) the adjustment made under Paragraph E to account for losses experienced during transportation, (iii) any adjustment required under Rule 32, and (iv) any other adjustments provided for in this tariff.

29. LIABILITY OF PARTIES-RULE 4, RULE 9 AND RULE 19 ABOVE AND RULE 42 BELOW ARE SUPPLEMENTED AS FOLLOWS:

- A. As a condition to Pipeline Operator's acceptance of Crude Petroleum under this tariff, each Shipper agrees to defend, indemnify, and hold harmless Pipeline Operator against claims or actions for injury or death of any and all persons whomever and for damage to property of or any other loss sustained by Pipeline Operator, Shipper, Consignee and/or any third party resulting from or arising out of 1) any breach of or failure to adhere to any provision of this tariff by Shipper, Consignee, their agents, employees or representatives and 2) the negligent acts, or failures to act of Shipper or Consignee, their agents, employees or representatives in connection with delivery or receipt of Crude Petroleum.
- B. The Pipeline Operator, while in possession of Crude Petroleum herein described, shall not be liable for any loss thereof; damage hereto; or delay caused by act of God, war, act of public enemy, quarantine, the authority of law, strikes, riots, civil disorder, requisition or necessity of the Government of the United States in time of war, default of Shipper, or from any cause not due to the negligence of the Pipeline Operator.

30. PAYMENT OF TRANSPORTATION AND OTHER CHARGES-RULE 11 ABOVE IS SUPPLEMENTED AS FOLLOWS:

- A. Pipeline Operator will invoice Shipper for transportation rates, fees, and charges and all other amounts accruing on Crude Petroleum accepted in accordance with Pipeline Operator's then current invoicing and payment policies and procedures, and based upon the net amount deliverable to Shipper as determined under Rule 28(F).

Rules and Regulations: Arrowhead South Texas Pipeline System

- B. Shipper shall pay the transportation and all other charges applicable to the shipment, and, if required pursuant to Rule 30, shall prepay or guarantee the same before acceptance by the Pipeline Operator, or pay the same before delivery. In addition, a Committed Shipper shall also pay Pipeline Operator any charges such Shipper owes to Pipeline Operator under a TSA, including, but not limited to, deficiency charges.
- C. Pipeline Operator shall have a self-executing lien on all Crude Petroleum delivered to Pipeline Operator to secure the payment of all unpaid charges due by such Shipper and may withhold such Crude Petroleum from delivery until all of such unpaid charges shall have been paid. Such lien shall extend to all Crude Petroleum, including Shipper's Line Fill, in Pipeline Operator's possession beginning with Shipper's first receipt of transportation or other services from Pipeline Operator. Shipper agrees to execute such additional documents as may be reasonably necessary to perfect or evidence such lien. If a bill of lading is required under applicable law for such a lien to arise, acceptance of the Nomination will be deemed to be the bill of lading for all Crude Petroleum, including Shipper's line fill, subject to such Nomination. The lien provided herein shall be in addition to any lien or security interest provided by this tariff or applicable law.
- D. If any charge remains unpaid after the due date specified in Pipeline Operator's invoice, including TSA amounts owed, then such amount shall bear interest from the day after the date of the invoice until paid, calculated at an annual rate equivalent to 125% of the prime rate of interest, as of the date of Pipeline Operator's invoice, charged by the Citibank N.A. of New York, New York, for ninety (90) day loans made to substantial and responsible commercial borrowers or the maximum rate allowed by law, whichever is the lesser.
- E. In the event Shipper fails to pay any charges when due, including amounts owed under a TSA, Pipeline Operator shall have the right, until such payments, including interest thereon, are made in full, to: (i) refuse to provide Shipper access to Pipeline Operator's System or provide services pursuant to this tariff, (ii) offset the current and future amounts owed by Shipper against any amounts Pipeline Operator owes to Shipper, and (iii) exercise any other rights and remedies granted under this tariff or existing under applicable Law.
- F. If any charges owed to Pipeline Operator, including those owed under a TSA, shall remain unpaid five (5) days after the due date specified in the invoice for such charges, or, in the absence of unpaid charges, when there shall be failure to take the Crude Petroleum at the destination point as provided in these rules and regulations, the Pipeline Operator may, by an agent, sell said Crude Petroleum at public auction for cash on any day not a Sunday or legal holiday, and not less than forty-eight (48) hours after publication of notice, in a daily newspaper, of the time and place of such sale and the quantity of Crude Petroleum to be sold. The Pipeline Operator may be a bidder and purchaser at such sale. Out of the proceeds of said sale the Pipeline Operator may pay itself all transportation and any other lawful charges, expense of notice, advertisement, sale, and other necessary expense, and of caring for and maintaining the Crude Petroleum, and the net balance shall be held without interest for whomsoever may be lawfully entitled thereto; if the proceeds of said sale do not cover all expenses incurred by Pipeline Operator, Shipper and/or Consignee are liable to Pipeline Operator for any deficiency.

31. CHARGE FOR SPILL COMPENSATION.

In addition to the transportation charges and all other charges accruing on Crude Petroleum accepted for transportation, a per barrel charge will be assessed and collected in the amount of any tax, fee, or other charge levied against the Pipeline Operator in connection with such a commodity, pursuant to any change in application of existing Federal, State or local act or regulations or the implementation of any new Federal, State or local act or regulation which levies a tax, fee or other charge on the receipt, delivery, transfer or transportation of such commodities within their jurisdiction for the purpose of creating a fund for the prevention, containment, cleanup and/or removal of spills and/or the reimbursement of persons sustaining loss therefrom. If such a tax, fee, or other charge is levied against Pipeline Operator, Pipeline Operator shall file to place into effect a per barrel rate to recover such tax, fee, or other charge. Pipeline Operator shall be under no obligation to contest or protest on behalf of Shipper or its Consignee the legality of such tax, fee, levy or other charges.

32. VOLUMETRIC ADJUSTMENT.

All shipments of Crude Petroleum that meet the Quality Specifications but which have an API gravity of 62.0 degrees or above, as determined by either the composite average of the sample pot or on an individual truckload basis as determined by its truck ticket (as determined in Pipeline Operator's sole discretion), shall be subject to a deduction to cover the shrinkage resulting from the mixture thereof, in the Pipeline Operator's facilities. Such deduction shall be determined in accordance with the following table:

<u>API GRAVITY, Degrees</u>	<u>% VOLUME DEDUCTION</u>
62.0 through 74.9	1%

The deduction set forth in this Rule 32 shall be in addition to the deductions made pursuant to Rule 28.

33. CLAIMS FOR LOSS OR DAMAGE-RULE 12 ABOVE IS SUPPLEMENTED AS FOLLOWS:

As a condition precedent to recovery by Shipper for loss, damage, or delay in receipt or delivery of Shipper's Crude Petroleum for which Pipeline Operator may be responsible, Shipper's claims for loss or damage must be made in writing to Pipeline Operator within nine (9) months after delivery of the affected Crude Petroleum, or in case of a failure to make delivery of Shipper's Crude Petroleum, then within nine (9) months after a reasonable time for delivery has elapsed. Suits for loss or damage shall be instituted before a court of competent jurisdiction not later than two (2) years and one (1) day from the day when notice in writing is given by Pipeline Operator to Shipper that Pipeline Operator has disallowed the claim or any part or parts thereof specified in the notice. Where claims for loss or damage are not filed or suits are not instituted thereon in accordance with the foregoing provisions, such claims will not be paid and the Pipeline Operator will not be liable.

34. PRORATIONING OF CAPACITY-RULE 16 ABOVE IS SUPPLEMENTED AS FOLLOWS:

- A. **When capacity will be prorated.** When Pipeline Operator receives more Nominations in a month for transportation of Crude Petroleum on a line segment of the System than Pipeline Operator is able to transport, Pipeline Operator shall allocate the Available Capacity of the line segment under the provisions of this Rule 34.
- B. **Division of capacity between Shipper classes.** Available capacity for a Proration Month shall be divided among Committed Shippers as a class, Regular Shippers as a class, and New Shippers as a class.
- C. **Availability of capacity to Committed Shippers.** Except as provided in Rule 34(C)(i) below, Pipeline Operator shall allocate to each Committed Shipper a volume of the Committed Shipper Capacity for the Proration Month that is equal to its Committed Volume, as such Committed Volume is defined under the terms of the Committed Shipper's TSA. If a Committed Shipper Nominates Incremental Barrels, such Incremental Barrels shall be allocated under Rule 34(F) below.
- i. In the event that the System's capacity is reduced for a Proration Month, for example due to Force Majeure or maintenance, the allocation of System capacity to each Committed Shipper under this Rule 34(C) shall be reduced by the same percentage as the reduction in System capacity that is caused by the Force Majeure event or operational issue. If an event of Force Majeure or other operational issue causes a service disruption on only a portion of Pipeline Operator's System or at a particular Receipt Point or Delivery Point, Pipeline Operator shall continue to provide full operational service with respect to the unaffected portions of Pipeline Operator's System and to the unaffected Receipt Points and Delivery Points. Pipeline Operator will reduce the allocations of System capacity to each Committed Shipper affected by such Force Majeure event by the same percentage as the reduction in capacity of the affected portion of the System or the reduction in receipt or delivery capability of the affected Receipt Point or Delivery Point.
- D. **Availability of capacity to New Shippers.** Following the allocation of capacity to Committed Shippers, as set forth in Paragraph C, Pipeline Operator shall then allocate the New Shipper Capacity among all New Shippers who have submitted a proper nomination for the Proration Month. Each such New Shipper shall be allocated a volume of the New Shipper Capacity for the Proration Month that is equal to:
- i. its nomination, if the total volume nominated by all New Shippers for the Proration Month is less than or equal to ten percent (10%) of the total available capacity of Pipeline Operator's system (or portion thereof, as applicable) for the month; provided, however, that no New Shipper shall be allocated more than 2.50 percent of the available system capacity (or portion thereof, as applicable) for a Proration Month; or

- ii. its pro rata share, in accordance with its nomination, of ten percent (10%) of the New Shipper Capacity, if the total volume nominated by all New Shippers is greater than 10 percent (10%) of the available capacity of Pipeline Operator's system (or portion thereof, as applicable); provided, however, that no New Shipper shall be allocated more than 2.50 percent of the available system capacity (or portion thereof, as applicable) for a Proration Month.
- E. **Availability of capacity to Regular Shippers.** After the allocation of the Committed Shipper Capacity to Committed Shippers and New Shipper Capacity to New Shippers, Pipeline Operator shall allocate the remaining available system capacity among all Regular Shippers who have properly submitted a nomination for the Proration Month. Each such Regular Shipper shall be allocated a volume of capacity each Proration Month that is equal to the lesser of (i) its nomination for the Proration Month, or (ii) a fraction of the capacity available to Regular Shippers during the Proration Month, where the numerator of such fraction shall equal the total shipments by the Regular Shipper on Pipeline Operator's system during the Base Period, and the denominator of which shall equal the total shipments by all Regular Shippers on Pipeline Operator's system during the Base Period.
- F. **Remaining Capacity.** Any remaining capacity that is not allocated through the application of Paragraphs C, D, and E shall be allocated first among all Committed Shippers having unmet Nominations on a pro rata basis, and then to Regular Shippers having unmet Nominations on a pro rata basis, according to the level of each Regular Shipper's initial capacity allocation, and then to New Shippers having unmet Nominations on a pro rata basis, according to the level of the initial capacity allocation
- G. **Basis for allocation; notification.** During periods when Pipeline Operator applies the provisions of this Rule 34:
 - i. The capacity allocated to a Shipper will be provided as a daily or monthly value, at Pipeline Operator's discretion, and will be calculated for the Proration Month; and
 - ii. Pipeline Operator will use its reasonable efforts to notify each Shipper of its allocation not later than three (3) days prior to the first (1st) day of the Proration Month.
- H. **Failure to use allocated capacity.**
 - i. If a Shipper does not use the capacity allocated to it under this Rule 34 at the times and in the amounts designated by Pipeline Operator, Pipeline Operator shall have the right to use Shipper's unused capacity to fulfill the unmet Nominations of other Shippers.
 - ii. If any Shipper other than a Committed Shipper does not use at least ninety percent (90%) of the capacity allocated to it under this Proration Policy in a Proration Month, such Shipper shall pay Pipeline Operator a per Barrel penalty equal to the then-current transportation rate on the System for each Barrel of capacity that Shipper was allocated but did not use in the Proration Month. Notwithstanding the

foregoing, Pipeline Operator has the discretion to waive or modify application of this Paragraph H(ii) when Pipeline Operator determines that Shipper's failure to use such allocated capacity was due to factors beyond Shipper's control

- I. **Transfers of Capacity and Shipment History.** A Shipper may not assign, convey, loan, transfer, or allow another Shipper to use in any manner (i) the capacity allocated to Shipper under this Rule 34, or (ii) the shipment history accumulated by a Shipper, which is used by Pipeline Operator for purposes of administering this Rule 34; provided, however, that a Shipper's allocation of capacity or shipment history may be transferred as an incident of the bona fide sale of Shipper's business or to a successor to Shipper's business by the operation of law, such as an executor or trustee in bankruptcy.
- J. **Use of Affiliates.** A Shipper may not use an affiliated shipper or any other cooperating entity to increase its allocation of capacity under this Rule 34.

35. APPLICATION OF RATES AND CHARGES.

Crude Petroleum accepted for mainline transportation shall be subject to the rates and charges in effect on the date of receipt of such Crude Petroleum by the Pipeline Operator. Mainline transportation and all other lawful charges will be collected on the basis of net volume of Crude Petroleum delivered. All net volumes will be determined in the manner described in Rule 28(F).

36. APPLICATION OF RATES FROM AND TO INTERMEDIATE POINTS.

Pipeline Operator will receive Crude Petroleum for transportation only from and to established Receipt Points and Delivery Points. For Crude Petroleum accepted for transportation from any point on Pipeline Operator's lines not named in tariffs making reference hereto, which is intermediate to a point from which rates are published in said tariffs, through such unnamed point, the rate published therein from the next more distant point specified in the tariff will apply from such unnamed point. For Crude Petroleum accepted for transportation to any point not named in tariffs making reference hereto, which is intermediate to a point which rates are published in said tariffs, through such unnamed point, the rate published therein to the next more distant point specified in the tariff will apply.

37. CONNECTING CARRIERS.

When both receipts from, and deliveries to, a Connecting Pipeline of substantially the same grade of Crude Petroleum are scheduled at the same interconnection, Pipeline Operator reserves the right, with cooperation of the Connecting Pipeline, to offset like volumes of such Crude Petroleum in order to avoid the unnecessary use of energy which would be required to physically pump the offsetting volumes. When this right is exercised, Pipeline Operator will make the further deliveries for Shipper involved from its System.

38. LIABILITY OF CARRIER-RULE 19 ABOVE IS SUPPLEMENTED AS FOLLOWS:

Rules and Regulations: Arrowhead South Texas Pipeline System

- A. Custody of Crude Petroleum shall begin when the Crude Petroleum enters the System and shall cease when it passes from the System.
- B. Pipeline Operator, while in possession of Crude Petroleum herein described, shall not be liable for, and Shipper hereby waives any claims against Pipeline Operator for, any loss damage, or delay, because of an act of God, the public enemy, quarantine, the authority of law, strikes, riots, or the acts of Shipper or Consignee, or from any other cause not due to the gross negligence or willful misconduct of Pipeline Operator. Pipeline Operator shall not be liable for, and Shipper hereby waives any claims against Pipeline Operator for, any loss or damage to Crude Petroleum prior to delivery of Crude Petroleum to Pipeline Operator at the Receipt Points and after delivery of Crude Petroleum to Shipper at the Delivery Points.
- C. In case of loss or damage of any Crude Petroleum from any such causes, other than the gross negligence or willful misconduct of Pipeline Operator, after it has been received for transportation at the Receipt Point and before the same has been delivered to Shipper at the Delivery Points, such losses shall be charged proportionately to each Shipper in the ratio that its Crude Petroleum, or portion thereof, received and undelivered at the time the loss or damage occurs, bears to the total of all Crude Petroleum, or portions thereof, then in the custody of Pipeline Operator for shipment via the lines or other facilities in which the loss or damage occurs. Pipeline Operator will be obligated to deliver only that portion of such Crude Petroleum remaining after deducting Shipper's proportion of such loss determined as aforesaid. In the aforementioned instance, transportation charges will be assessed only on the quantity delivered to Shipper.
- D. Pipeline Operator will not be liable for discoloration, contamination, or deterioration of the Crude Petroleum transported hereunder unless and to the extent such discoloration, contamination, or deterioration of Crude Petroleum transported results from the gross negligence of Pipeline Operator.
- E. Notwithstanding anything to the contrary in this tariff and except in instances of Pipeline Operator's gross negligence or willful misconduct, in no event shall Pipeline Operator be liable or responsible to any Shippers, its affiliates, successors in interest, beneficiaries or assignees, for any consequential, incidental, indirect, special or punitive damages, or for loss of profits or revenues, that arise in relation to the transportation of Crude Petroleum under this tariff, regardless of whether such claim arises under or results from tort or strict liability.

39. INTRASYSTEM TRANSFERS-INTENTIONALLY OMITTED

40. STORAGE OF CRUDE PETROLEUM IN TRANSIT- SUPPLEMENTS RULE 5 AS FOLLOWS:

- A. Pipeline Operator will only provide working tankage that is incidental and necessary to the transportation of Crude Petroleum, but does not provide or offer storage service. Shipper or Consignee may, by request on the original tender or shipping order, or by order for diversion or reconsignment enroute, have Crude Petroleum tendered for shipment stored

in tanks furnished by Shipper or Consignee at points on the lines of Pipeline Operator, when intermediate to the designation shown on the tender of shipments, subject to the conditions provided in this Rule 40.

- B. All lawful transportation charges from point of origin to the storage point published in tariffs lawfully on file with the Railroad Commission of Texas shall be paid upon delivery of Crude Petroleum into the tanks at storage point or may be required in advance of such transportation at the option of Pipeline Operator and pursuant to Rule 40.

41. PIPEAGE OR OTHER CONTRACTS.

Separate pipeage and other contracts in association with pipeline connections or other facilities ancillary to Pipeline Operator's System and in accordance with this tariff shall be required of any Shipper before any duty of transportation by the Pipeline Operator shall arise. A pipeage contract may include additional charges for reimbursement for facilities necessary to receive or deliver Shipper's shipments.

42. INVENTORY REQUIREMENTS.

Pipeline Operator will require each Shipper to supply a pro rata share of Crude Petroleum necessary for pipeline fill and working stock (which includes tank bottoms) for efficient operation of the System prior to delivery. Crude Petroleum provided by a Shipper for this purpose may be withdrawn from the System only after shipments have ceased and if written notice to discontinue shipments in the System is received on or before the 20th day of the preceding calendar month. Such withdrawal shall be made by Pipeline Operator over a reasonable period, not to exceed 3 months after such notice to discontinue shipments is received.

43. FINANCIAL ASSURANCES

- A. If (i) a prospective or existing Shipper's credit rating is below investment grade as rated by Moody's, S&P, or Fitch, (ii) a Shipper fails to pay Pipeline Operator's invoiced amounts when due, and such failure continues for a period of five (5) Business Days after Notice of such failure is provided by Pipeline Operator, or (iii) Pipeline Operator otherwise has reasonable grounds for insecurity regarding a Shipper's performance of any obligation under this tariff (whether or not then due) by a Shipper or prospective shipper (including, without limitation, the occurrence of a material change in the creditworthiness of Shipper), then Pipeline Operator may, by Notice to the Shipper or prospective shipper, singularly or in combination with any other rights it may have, demand, and Shipper or prospective shipper shall provide, Financial Assurances. Financial Assurances means (i) advance payment in cash by Shipper for one (1) Month of obligations due under the tariff, or (ii) delivery of an Acceptable Letter of Credit in an amount equal to not less than two (2) Months of obligations due under the tariff.
- B. If an existing Shipper or prospective Shipper fails to provide Financial Assurances within ten (10) days of Shipper's receipt of Pipeline Operator's written request for such assurances, Pipeline Operator shall not be obligated to accept Crude Petroleum, or a Nomination, for transportation until such requirement is fully met.

44. TITLE

By nominating Crude Petroleum, the Shipper represents and warrants to the Pipeline Operator that the Shipper owns or controls all of the Crude Petroleum delivered under the tariff.

Schedule 1

Table of Receipt Bank Gravity Values

TABLES OF DIFFERENTIALS FOR USE IN DETERMINING ADJUSTMENTS FOR DIFFERENCE IN GRAVITY OF CRUDE PETROLEUM DELIVERED FROM SHIPPERS INTO SYSTEM

API Gravity	Diff \$ per BBL	API Gravity	Diff \$ per BBL	API Gravity	Diff \$ per BBL
49.0 or less	0.00	52.7	6.70	56.4	10.40
49.1	1.10	52.8	6.80	56.5	10.50
49.2	1.20	52.9	6.90	56.6	10.60
49.3	1.30	53.0	7.00	56.7	10.70
49.4	1.40	53.1	7.10	56.8	10.80
49.5	1.50	53.2	7.20	56.9	10.90
49.6	1.60	53.3	7.30	57.0	11.00
49.7	1.70	53.4	7.40	57.1	11.10
49.8	1.80	53.5	7.50	57.2	11.20
49.9	1.90	53.6	7.60	57.3	11.30
50.0	4.00	53.7	7.70	57.4	11.40
50.1	4.10	53.8	7.80	57.5	11.50
50.2	4.20	53.9	7.90	57.6	11.60
50.3	4.30	54.0	8.00	57.7	11.70
50.4	4.40	54.1	8.10	57.8	11.80
50.5	4.50	54.2	8.20	57.9	11.90
50.6	4.60	54.3	8.30	58.0	12.00
50.7	4.70	54.4	8.40	58.1	12.10
50.8	4.80	54.5	8.50	58.2	12.20
50.9	4.90	54.6	8.60	58.3	12.30
51.0	5.00	54.7	8.70	58.4	12.40
51.1	5.10	54.8	8.80	58.5	12.50
51.2	5.20	54.9	8.90	58.6	12.60
51.3	5.30	55.0	9.00	58.7	12.70
51.4	5.40	55.1	9.10	58.8	12.80
51.5	5.50	55.2	9.20	58.9	12.90
51.6	5.60	55.3	9.30	59.0	13.00
51.7	5.70	55.4	9.40	59.1	13.10
51.8	5.80	55.5	9.50	59.2	13.20
51.9	5.90	55.6	9.60	59.3	13.30
52.0	6.00	55.7	9.70	59.4	13.40
52.1	6.10	55.8	9.80	59.5	13.50
52.2	6.20	55.9	9.90	59.6	13.60
52.3	6.30	56.0	10.00	59.7	13.70
52.4	6.40	56.1	10.10	59.8	13.80
52.5	6.50	56.2	10.20	59.9	13.90
52.6	6.60	56.3	10.30	60.0	14.00

Rules and Regulations: Arrowhead South Texas Pipeline System

Schedule 2					
Table of Delivery Bank Gravity Values					
TABLES OF DIFFERENTIALS FOR USE IN DETERMINING ADJUSTMENTS FOR DIFFERENCE IN GRAVITY OF CRUDE PETROLEUM DELIVERED FROM SYSTEM TO SHIPPERS					
API Gravity	Diff \$ per BBL	API Gravity	Diff \$ per BBL	API Gravity	Diff \$ per BBL
Less than 40.0	0.00	43.6	1.08	47.3	2.19
40.0	0.00	43.7	1.11	47.4	2.22
40.1	0.03	43.8	1.14	47.5	2.25
40.2	0.06	43.9	1.17	47.6	2.28
40.3	0.09	44.0	1.20	47.7	2.31
40.4	0.12	44.1	1.23	47.8	2.34
40.5	0.15	44.2	1.26	47.9	2.37
40.6	0.18	44.3	1.29	48.0	2.40
40.7	0.21	44.4	1.32	48.1	2.43
40.8	0.24	44.5	1.35	48.2	2.46
40.9	0.27	44.6	1.38	48.3	2.49
41.0	0.30	44.7	1.41	48.4	2.52
41.1	0.33	44.8	1.44	48.5	2.55
41.2	0.36	44.9	1.47	48.6	2.58
41.3	0.39	45.0	1.50	48.7	2.61
41.4	0.42	45.1	1.53	48.8	2.64
41.5	0.45	45.2	1.56	48.9	2.67
41.6	0.48	45.3	1.59	49.0	2.70
41.7	0.51	45.4	1.62	49.1	2.73
41.8	0.54	45.5	1.65	49.2	2.76
41.9	0.57	45.6	1.68	49.3	2.79
42.0	0.60	45.7	1.71	49.4	2.82
42.1	0.63	45.8	1.74	49.5	2.85
42.2	0.66	45.9	1.77	49.6	2.88
42.3	0.69	46.0	1.80	49.7	2.91
42.4	0.72	46.1	1.83	49.8	2.94
42.5	0.75	46.2	1.86	49.9	2.97
42.6	0.78	46.3	1.89		
42.7	0.81	46.4	1.92		
42.8	0.84	46.5	1.95		
42.9	0.87	46.6	1.98		
43.0	0.90	46.7	2.01		
43.1	0.93	46.8	2.04		
43.2	0.96	46.9	2.07		
43.3	0.99	47.0	2.10		
43.4	1.02	47.1	2.13		
43.5	1.05	47.2	2.16		

Schedule 3

SAMPLE CALCULATION OF RECEIPT GRAVITY BANK

Shipper	Volume of Crude Petroleum received by Shipper	API Gravity	Weighted Average API Gravity	Gravity Value Per Barrel (\$/BBL)
Shipper A (Receipt Point a)	10000	48		
Shipper A (Receipt Point b)	20000	42		
Shipper A (Receipt Point c)	<u>30000</u>	44		
Total Shipper A	<u>60000</u>		44	0
Shipper B (Receipt Point x)	35000	48		
Shipper B (Receipt Point y)	5000	57		
Shipper B (Receipt Point z)	<u>0</u>	0		
Total Shipper B	<u>40000</u>		49.125	1.1
Shared Common Stream	<u>100000</u>			
Shared Common Stream Gravity Value (GV _{CSR})				0.44
Shipper A Calculation				
	$SA_R = SQ_R \times (GV_{CSR} - SGV_R)$			
	$SA_R = 60,000 \text{ bbls.} \times (0.44 - 0)$			
	$SA_R = \$26,400$	(Shipper A receives \$26,400)		
Shipper B Calculation				
	$SA_R = SQ_R \times (GV_{CSR} - SGV_R)$			
	$SA_R = 40,000 \text{ bbls.} \times (0.44 - 1.1)$			
	$SA_R = (\$26,400)$	(Shipper B pays \$26,400)		

Schedule 3

SAMPLE CALCULATION OF DELIVERY GRAVITY BANK

Shipper	Volume of Crude Petroleum delivered to Shipper	API Gravity	Weighted Average API Gravity	Gravity Value Per Barrel (\$/BBL)
Shipper A (Three Rivers Refinery)	60000	48		
Shipper A (Joint tariff into Gardendale)	0			
Total Shipper A	60000		46.2	1.86
Shipper B (Three Rivers Refinery)	0			
Shipper B (Joint tariff into Gardendale)	40000	57		
Total Shipper B	40000		46.3	1.89
Shared Common Stream	100000			
Shared Common Stream Gravity Value (GV _{CSD})				1.872
<u>Shipper A Calculation</u>				
	$SA_D = SQ_D \times (GV_{CSD} - SGV_D)$			
	$SA_D = 60,000 \text{ bbls.} \times (1.872 - 1.86)$			
	$SA_D = \$720$		(Shipper A pays \$720)	
<u>Shipper B Calculation</u>				
	$SA_D = SQ_D \times (GV_{CSD} - SGV_D)$			
	$SA_D = 40,000 \text{ bbls.} \times (1.872 - 1.89)$			
	$SA_D = (\$720)$		(Shipper B receives \$720)	