

F.E.R.C. ICA Tariff**F.E.R.C. No. 77.21.0
(Cancels F.E.R.C. No. 77.20.0)****NuStar Logistics, L.P.**

Containing the Rates, Rules, and Regulations
Governing the Transportation by Pipeline of
CRUDE PETROLEUM
East Leg – South Texas Crude

| Origin | Destination | Rate in Dollars per Barrel of 42 United States Gallons | |
|-------------------------------------------------|--------------------------------------------------|--------------------------------------------------------|--------------------------------|
| | | Base Rate | Incentive Rate |
| Oakville Junction, Live Oak County, Texas | Corpus Christi North Beach, Nueces County, Texas | [U] \$1.4278 | [U] \$0.4250 ¹ |
| | | [U] \$1.8681 | [U] \$1.8681 |
| Pawnee Station, Live Oak County, Texas | Corpus Christi North Beach, Nueces County, Texas | [U] \$0.4250 ^{1, [N] 2} | [C] \$1.1340- [C] ³ |
| | | [U] \$1.7962 | [U] \$0.4250 ¹ |
| Koch Pipeline Pettus Station, Bee County, Texas | Corpus Christi North Beach, Nueces County, Texas | [U] \$0.5748 | [U] \$0.1000 ¹ |
| | | [U] \$0.5748 | [U] \$0.1000 ¹ |

Issued under authority of 18 CFR § 341.3 (Form of Tariff)

Issued on one (1) days' notice under authority of 18 CFR § 341.14. This tariff publication is conditionally accepted subject to refund pending a 30 day review period.

Note:

¹ The Incentive Rate is applicable to an Incentive Shipper contracting for transportation of a minimum guaranteed volume of [W] 20,000 ~~25,000~~ barrels per day for a multi-year term for transportation on the East Leg- South Texas Crude.

[C] ² [C] ~~Reserved for future use.~~

[W] ² The Incentive Rate is applicable to an Incentive Shipper contracting under a combined [C] ~~multi-year minimum~~ commitment of at least [W] 25,000 ~~50,000~~ Barrels per day for transportation under the following tariffs: This East Leg – South Texas Crude and the West Leg -South Texas Crude. Product receipts are limited to Segregated Batches of Common Stream of Light Crude Oil as defined in Rule 22.

³ [N] ~~Reserved for future use.~~

⁴ Carrier may offer this temporary, as-available bi-directional service in a given month, and such service shall only be provided in accordance with Rule 24 of these Rules and Regulations.

Subject to the rates, rules and regulations set forth herein.

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

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SYMBOLS: [D] Decrease [W] Change in wording only [C] Cancel [N] New [U] Unchanged rate [I] Increase

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Rules and Regulations

Rule 1 Definitions

“Affiliate” means a Person that directly or indirectly through one or more intermediaries, controls, is controlled by or is under common control with another Person. For purposes of this definition, a Person shall be deemed to have “control” when such Person possesses the power, directly or indirectly, to direct, or cause the direction of, the management and policies of another Person, whether through the ownership of voting securities, by contract or otherwise, including acting as a general partner of a partnership.

“API” means American Petroleum Institute.

“API Gravity” means gravity determined in accordance with ASTM designation and expressed in degrees.

“Assay” means a laboratory analysis of Crude Petroleum to include API Gravity, Reid vapor pressure, pour point, sediment and water content, sulfur content, viscosity at 60 degrees Fahrenheit, and other characteristics as may be required by Carrier.

“ASTM” means American Society for Testing Materials.

“Base Period” has the meaning as set forth in Rule 15 Section 1.4.

“Base Rate” means the rate paid by an Uncommitted Shipper as published herein.

“Base Shipment Percentage” has the meaning as set forth in Rule 15 Section 1.5.

“CCNB” means Corpus Christi North Beach.

“Calculation Month” has the meaning as set forth in Rule 15 Section 1.6.

“Capacity” means the quantity of Crude Petroleum the Pipeline Segment at issue is capable of transporting under the current operating conditions.

“Carrier” means NuStar Logistics, L.P.

“Collateral” means: (a) all Crude Petroleum accepted by Carrier for transportation, terminalling, or otherwise while in the possession of Carrier in the System; (b) all other property of Shipper now in the possession of and at any time and from time to time hereafter delivered to Carrier but only while in the possession of Carrier in the System; (c) all of Shipper’s pre-payments, deposits, balances, and credits with, and any of its claims against, Carrier, at any time existing with regard to the transportation services provided under this Tariff; and (d) the proceeds from any of the foregoing, excluding the proceeds from any sale by Shipper of Crude Petroleum redelivered by Carrier to Shipper pursuant to the Tariff.

“Common Stream” means Crude Petroleum moved through the pipeline and pipeline facilities which is commingled or intermixed with crude petroleum of like quality and characteristics as may be determined by Carrier based on an analysis of a sample of such Crude Petroleum Assays and /or other pertinent analytical data.

“Connecting Carrier” means a pipeline company connected to Carrier.

Compliance Costs has the meaning as set forth in Rule 25.

“Consignee” means the party to whom a Shipper has ordered the delivery of Crude Petroleum.

“Crude Petroleum” means (a) The direct liquid product of oil wells (b) a mixture of the direct product of oil wells and the indirect petroleum products resulting either from refining Crude Petroleum or the operation of gasoline recovery plants, gas recycling plants or distillate recovery equipment in gas and distillate fields, or broken out during the normal production or processing of natural gas, or (c) Processed Condensate and in each case meeting the specifications referenced in Rule 2 and 22.

“Current Nomination Basis” has the meaning set forth in Rule 15 Section 1.3.

“Destination” means a point named in the Tariff at which point Carrier will deliver Crude Petroleum to Shipper or its Consignee after transportation from an Origin.

“Event of Force Majeure” means any foreseeable or unforeseeable event or occurrence beyond the reasonable control of a Party (the “Affected Party”) which by the exercise of due diligence and reasonable care such Affected Party is unable to prevent or overcome that delays or prevents such Affected Party from performing its obligations under this Tariff and a Throughput and Deficiency Agreement (if applicable), including the following: (a) natural phenomena and acts of God such as earthquakes, extreme heat, fires, floods, freezes, hurricanes, landslides, lightening, storms, washouts, wind, and/or any other natural occurrence; (b) strikes, lockouts, boycotts, picketing, labor or other industrial disturbance; (c) epidemics, pandemics, acts of public enemy, wars, acts of terrorism, cyberattacks, acts of drug cartels, theft by third parties, blockades, insurrections, civil unrest or disturbances, sabotage, or riots; (d) acts of any Governmental Authority, including, but not limited to: (i) an order; (ii) modifications to Applicable Law, (iii) the delay or failure to issue a permit; and (iv) the cancellation of a permit (but excluding any such resulting from the failure of the Affected Party to comply with Applicable Law); (e) explosions, shortage of power or other utilities, and/or breakdown, malfunction, failure or accidental damage to lines of pipe, machinery, equipment or storage tanks or failure or interruption of production or transportation facilities; (f) the inability to obtain or unforeseen delays in obtaining materials, equipment, third party services and/or labor (provided that the event that gave rise to such delays would have also been an Event of Force Majeure under this definition had it occurred to one of the Parties); (g) the inability to obtain or unforeseen delays in obtaining (after the exercise of reasonable diligence) land rights, easements, rights of way, and required licenses and permits (including environmental permits, maritime/water crossing permits, road crossing/road hauling permits, railroad licenses and agreements) or any other irrevocable approvals, consents, spatial development plan or zoning variances or amendments, and planning permissions required to construct and to operate the System from any third party property owner and any Governmental Authority; and (h) events of force majeure declared by a third party that interfere with performance under this Tariff and a Throughput and Deficiency Agreement (if applicable), provided that such events of force majeure would otherwise qualify as an Event of Force Majeure under this Tariff and a Throughput and Deficiency Agreement (if applicable) if such events directly occurred with respect to the Affected Party claiming force majeure under this Tariff and a Throughput and Deficiency Agreement (if applicable); *provided, however*, the following acts or events shall not constitute an Event of Force Majeure: (i) changes in costs of materials or Crude Petroleum, (ii) shortage or other failure to obtain Crude Petroleum, (iii) absence of a market for Crude Petroleum; (iv) availability of more attractive markets for Crude Petroleum or alternative Crude Petroleum transportation systems, or (v) the Affected Party’s inability to economically perform its obligations under this Tariff and a Throughput and Deficiency Agreement (if applicable), including the Affected Party’s inability or failure to pay amounts accruing under this Tariff and a Throughput and Deficiency Agreement (if applicable) and its indemnification obligations thereunder.

“F.E.R.C.” means the Federal Energy Regulatory Commission.

“Gravity & Sulphur Bank” means that certain bank managed to ensure that Shippers are not materially damaged or allowed to benefit from changes in quality and sulfur of Crude Petroleum in the Common Stream.

“Governmental Authority” means any and all applicable federal, state, or local government or other political subdivision thereof, any entity exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to government or any other government authority, agency, department, board, commission or instrumentality of the United States of America, any state of the United States of America or any political subdivision thereof, any court, tribunal or arbitrator(s) of competent jurisdiction, and any governmental or non-governmental self-regulatory organization, agency or authority, including, but not limited to, a port authority. The term Governmental Authority also means any successor agency with the same or similar functions as those conducted by the enumerated agencies.

“Incentive Rate” means the rate paid by an Incentive Shipper as published in this Tariff.

“Incentive Shipper” means a Shipper that is a party to a Throughput and Deficiency Agreement.

“Law” means any and all applicable federal, state, local, and municipal authorizations, codes, constitutions, decrees, directives, injunctions, laws, licenses, orders, ordinances, permits, regulations, requirements, rules and statutes issued or promulgated by a Governmental Authority.

“Liability(ies)” means any and all actual and threatened actions, causes of action, claims, damages, demands, expenses or fines, costs (including court costs, reasonable defense costs and attorneys’ fees), lawsuits, liabilities, losses, obligations, and penalties.

“New Shipper” has the meaning set forth in Rule 15 Section 1.1.

“Origin” means a point named in the Tariff at which point Carrier will accept Crude Petroleum for transportation.

“Party” means either Shipper or Carrier, and “Parties” means collectively Shipper and Carrier.

“Nomination” means a request by a Shipper to Carrier of a stated quantity and grade of Crude Petroleum for transportation from a specified Origin or Origins to a specified Destination or Destinations in accordance with these rules and regulations.

“Obligations” means: (a) all antecedent, current, and future charges, fees, or expenses for transportation, terminalling, demurrage, storage, preservation, deficiency payments, special, ancillary, interest, and other lawful charges arising under or related to this Tariff or the contracts entered into in connection with this Tariff (including any Throughput and Deficiency Agreement, invoices, or Nominations); (b) all amounts owed under any modifications, renewals or extensions of any of the foregoing obligations; (c) all other amounts now or in the future owed by Shipper to Carrier, whether or not of the same kind or class as the other obligations owed by Shipper to Carrier arising under or related to this Tariff or the contracts entered into in connection with this Tariff (including any Throughput and Deficiency Agreement, invoices, or Nominations); (d) all costs and expenses of Carrier in exercising any of its rights detailed herein, including, but not limited to, reasonable attorney fees, storage charges, and settlement of conflicting liens; and (e) all charges or expenses described in Tex. Bus. & Com. Code § 7.307(a).

“Pawnee – Pettus Segment” has the meaning set forth in Rule 24 Section (B).

“Permit” means any and all approvals, consents, easements, licenses, permits, and/or other requirements from any Governmental Authority required to construct and/or operate the System.

“Person” means any individual, corporation, limited liability company, partnership, trust or other entity.

“Pettus – CCNB Segment” has the meaning set forth in Rule 24 Section (A).

“Pipeline Segment” means the section of Carrier’s common carrier facilities, the limits of which are defined by two geographically identifiable points, that, because of the way that section of Carrier’s common carrier facilities is designed and operated, must be treated as a unit for purposes of determining Capacity.

“Processed Condensate” means liquid-hydrocarbons that have been processed through a distillation tower or similar process or equipment.

“Regular Shipper” has the meaning set forth in Rule 15 Section 1.2.

“Representatives” means officers, directors, employees, and other representatives of the referenced entity.

“Segregated Batch” means a tender of Crude Petroleum in a batch having specific identifiable characteristics which is moved through the pipeline and pipeline facilities as a unit so as to maintain its quality and characteristics as may be determined based on analysis of a sample of such Crude Petroleum.

“Shipper” means a party who contracts with Carrier for transportation of Crude Petroleum, as defined herein and under the terms of this Tariff.

“System” means Carrier’s pipeline system, including all appurtenances thereto, related to the provision of transportation services provided by Carrier pursuant to this Tariff.

“Tariff” means this F.E.R.C. tariff.

“Throughput and Deficiency Agreement” means an effective Throughput and Deficiency Agreement executed between Carrier and an Incentive Shipper for the provision of service under this Tariff.

“Uncommitted Shipper” means any Shipper that is not an Incentive Shipper.

Rule 2 Crude Petroleum, Acceptance of

(A) Carrier will reject Crude Petroleum containing more than one percent (1%) of basic sediment, water, and other impurities, except that:

1. If required by operating conditions, Carrier will reject Crude Petroleum containing less than one percent (1 %) of basic sediment, water and other impurities.
2. Sediment and water limitations of a Connecting Carrier shall be imposed upon Carrier when such limits are less than that of the Carrier, in which case the limitations of the Connecting Carrier will be applied.

(B) If required by operating conditions, Carrier will reject any and all of the following shipments:

1. Crude Petroleum having Reid vapor pressure in excess of 10 pounds above a temperature of 100 degrees Fahrenheit.
2. Crude Petroleum where the Shipper or Consignee has failed to comply with all applicable laws, rules and regulations made by any governmental authority regulating shipments of Crude Petroleum.
3. Crude Petroleum where sulfur content is greater than 0.50% by weight.

(C) Shipper shall be responsible for all reasonable expenses incurred by Carrier resulting from Carrier's receipt of any Crude Petroleum which does not comply with the requirements of Rule 2.

(D) Carrier shall have the right to change or modify any provisions in Rule 2 as required to meet the quality specifications of upstream or downstream connecting facilities.

Rule 3 Additives

Crude Petroleum shall be free of any additives and inhibitors, including drag reducing agents, unless approved by Carrier.

Rule 4 Storage

Carrier will only provide working tankage for such storage that is incidental and necessary to the transportation of Crude Petroleum pursuant to this Tariff. Any additional storage in Carrier's tankage, i.e., storage beyond what is incidental and necessary to transportation pursuant to this Tariff, will be subject to the terms and conditions of Carrier's standard storage agreement and is a non-jurisdictional service.

Rule 5 Receipt Facilities Required

Carrier will refuse to accept Crude Petroleum for transportation, unless satisfactory evidence is furnished that the Shipper or Consignee has provided the necessary tankage facilities at the Origin.

Rule 6 Destination Facilities Required

Carrier will refuse to accept Crude Petroleum for transportation unless satisfactory evidence is furnished that the Shipper or Consignee has provided the necessary facilities for the prompt receiving of Crude Petroleum at the Destination e.g. written confirmation by the operator of the terminal at the Destination. If the Shipper or Consignee is unable or refuses to receive said Crude Petroleum as it arrives at Destination, Carrier, if required by operating conditions, will make arrangement for disposition of the Crude Petroleum it deems appropriate in order to clear the Carrier's pipeline. Any additional expenses incurred by Carrier in making such arrangements shall be borne by the Shipper or Consignee.

Rule 7 Acceptance Free From Liens and Charges

Carrier will reject any Crude Petroleum which, when nominated for transportation, is involved in litigation, or the title of is in dispute, of which is encumbered by lien or charge of any kind, and Carrier shall require of the Shipper satisfactory evidence of the Shipper's perfect and unencumbered title or satisfactory indemnity bond to protect Carrier. By nominating Crude Petroleum, the Shipper warrants and guarantees that it owns or controls, has the right to deliver or have delivered for its account, such Crude Petroleum, and agrees to hold Carrier harmless for any and all loss, cost, liability, damage and/or expense resulting from failure of ownership or control thereto, provided, that acceptance for transportation shall not be deemed a representation by Carrier as to ownership or control.

Rule 8 Gauging, Measurement

No charge shall be made by Carrier for metering Crude Petroleum upon receipt or delivery. Crude Petroleum tendered to Carrier for transportation shall be measured by meter prior to its receipt from Shipper. Quantities shall be determined by dynamic or static measurement methods in accordance with appropriate American Petroleum Institute (API) standards, latest revision and adjusted to base (reference or standard) conditions. Quantities shall be metered on a one hundred percent (100%) volume basis at the observed fluid temperature. Carrier will correct this one hundred percent volume basis for temperatures from observed degrees Fahrenheit to 60 degrees Fahrenheit. (60°F.) The temperature corrected volume or Total Calculated Volume (TCV) shall be the quantity upon which transportation charges will be assessed.

Measurement by the Carrier shall be conclusive and binding absent fraud or manifest error of amount tendered, regardless if Shipper or their Representative is present.

Carrier will adjust any overage or shortage of Crude Petroleum with Shippers to allow for inherent losses or gains, including but not limited to shrinkage, evaporation, interface mixture, product measurements and other physical losses not due to negligence of Carrier. The adjustments for losses or gains will be allocated by grade by month, among the Shippers in the proportion that the total number of barrels of a given grade delivered out of the System, by grade, for each Shipper bears to the total number of barrels of that grade delivered out of the System for all Shippers.

Rule 9 Evidence of Receipts and Deliveries

Crude Petroleum received from Shipper and Crude Petroleum delivered to Consignee shall, in each instance, be evidenced by tickets or Carrier's statements containing data essential to the determination of quantity.

Rule 10 Operation

(A) General. Carrier will operate the pipeline both as a Common Stream operation and as a Segregated Batch operation.

(B) Common Stream Operation. Shippers will be required, as a condition of nominating Crude Petroleum to be transported as a Common Stream, to participate in a Gravity and Sulfur Bank set forth in this Rule 10 and Exhibits A-D (collectively, the "Rules"). The tables of gravity and sulfur differential values per barrel as attached hereto as Exhibits B and C are incorporated herein and made a part of this Rule.

The weighted average gravity differential value per barrel (for two or more gravities of) Crude Petroleum, as hereinafter referred to, shall be obtained in the following manner: Multiply the gravity differential values per barrel by the number of barrels to which such gravity differential values are applicable and then divide the total of the resultant gravity differential values in dollars and cents by the total of the applicable barrels.

Applicable barrels and gravities shall be the net barrels at 60° Fahrenheit (with no deduction for loss allowance) and the gravities recorded by the operator at points where it customarily records gravities and quantities.

The weighted average sulfur differential value per barrel (for two or more sulfur contents of crude petroleum), as hereinafter referred to, shall be obtained in the following manner: Multiply the sulfur differential values per barrel by the number of barrels to which such sulfur differential values are applicable and then divide the total of the resultant sulfur differential values in dollars and cents by the total of the applicable barrels.

Applicable barrels and sulfur content shall be the net barrels at 60° Fahrenheit (with no deduction for loss allowance) and the sulfur content recorded by a competent laboratory for samples obtained by the operator at points where it customarily measures and samples receipts for custody transfer.

Sulfur content as furnished by the laboratory at the true gravity shall be adjusted to reflect its comparison to the reference crude at 35.5° gravity. The adjustment to the test sulfur content shall be made by establishing a ratio of weight per gallon for the gravity of the sample to weight per gallon for the gravity of the reference crude of 35.5° gravity. The Table of Ratio Factors for Sulfur Adjustments is attached hereto as Exhibit D and made a part of these Rules.

The ratio thus obtained will be applied against the tested sulfur content of the sample to obtain the adjusted sulfur content (gravity ratio x tested sulfur content= adjusted sulfur content). The adjusted sulfur content will then be used to obtain the sulfur differential value per barrel from the table of sulfur differential

values per barrel (Exhibit C).

Adjustment between Shippers shall be computed as follows:

- I. Compute the weighted average gravity differential value per barrel of the barrels received from each Shipper. Compute the weighted average sulfur differential value per barrel of the barrels received from each Shipper.
- II. Compute the weighted average gravity differential value per barrel of the composite Common Stream receipts.
- III. Determine the following:
 - A. If the weighted average gravity differential value per barrel of a Shipper as so determined under Paragraph I above shall be greater than the weighted average gravity differential value per barrel of the aforementioned Common Stream Crude Petroleum as determined under Paragraph II, the difference in cents per barrel shall be calculated and Shipper shall be credited an amount calculated by multiplying said difference in gravity differential value per barrel by the applicable barrels.
 - B. If the weighted average gravity differential value per barrel of a Shipper is less than the weighted average gravity differential value per barrel of the aforementioned Common Stream Crude Petroleum, the difference shall be calculated as above outlined and Shipper debited for such difference.
- IV. Compute the weighted average sulfur differential value per barrel of the composite Common Stream receipts.
 - A. If the weighted average sulfur differential value per barrel of a Shipper as so determined under Paragraph I above shall be greater than the weighted average sulfur differential value per barrel of the aforementioned Common Stream Crude Petroleum as determined under Paragraph II, the difference in cents per barrel shall be calculated and Shipper shall be debited an amount calculated by multiplying said difference in sulfur differential value per barrel by the applicable barrels.
 - B. If the weighted average sulfur differential value per barrel of a Shipper is less than the weighted average sulfur differential value per barrel of the aforementioned Common Stream Crude Petroleum, the difference shall be calculated as above outlined and Shipper shall be credited for such difference.

A sample calculation is attached as Exhibit A.

These calculations shall be made for each calendar month and the algebraic sum of the adjustments for the System shall be zero \pm one dollar. If a Shipper shall have a net debit balance in combining the two adjustments made above, the balance shall be remitted to the clearinghouse within twenty (20) days from receipt of statement of such debit. If Shipper shall have a credit, the clearinghouse shall remit the amount thereof after receipt by the clearinghouse of the sums from those Shippers having debits as calculated above.

Carrier will only be liable to Shipper for any errors to the Gravity and Sulfur Bank to the extent resulting from fraud, Carrier's gross negligence, or willful misconduct. Shipper must make any claims for such errors by written notice to Carrier within ninety (90) days of the date of the Gravity and Sulfur Bank invoice and Shipper irrevocably waives any claim for which the required notice is not provided within the required time. Any Shipper receiving a windfall from an error in Gravity and Sulfur Bank calculation agrees to refund such windfall, with the adjustment reflected on a future invoice. If the error cannot be reasonably determined, all

Shippers agree to a settlement reallocation, and adjustments will be reflected on a future invoice.

(C) Segregated Batch. Shippers will be required, as a condition of nominating Crude Petroleum to be transported as a Segregated Batch, to be able to receive the Segregated Batch. Carrier will operate the pipeline as a batched system maintaining the integrity of each Segregated Batch to the extent possible and in accordance with its policies.

Rule 11 Duty of Carrier

- (A) Carrier shall not be required to transport Crude Petroleum except with reasonable diligence, considering the quality of the Crude Petroleum, the distance of transportation and other material elements, and will not accept Crude Petroleum to be transported in time for any particular market.
- (B) For Segregated Batch movements, Carrier will use reasonable care to transport Crude Petroleum received to the Destination with a minimum contamination and mixing, and will attempt to maintain the identity of each shipment.
- (C) For Common Stream movements, Carrier will not be required to deliver the identical Crude Petroleum received, and Carrier will not be liable for damage or loss, including but not limited to consequential, incidental, direct or indirect damages or damage or lost profits, caused by contamination, discoloration, deterioration, a change in density, or other change in quality of a Shipper's Crude Petroleum resulting from Carrier's transportation of the Crude Petroleum.
- (D) Carrier may suspend transportation services on the Pipeline Segment in order to comply with applicable Laws of any Governmental Authority, to perform maintenance, testing, inspections, or repairs, or to prevent injuries to persons, damage to property, or harm to the environment, without incurring any obligation for any liabilities.

Rule 12 Claims

Notice of claims for loss or damage in connection with shipments must be made to Carrier in writing within nine (9) months and one day after same shall have accrued, or, in case of failure to make delivery, within nine (9) months and one day after a reasonable time for delivery shall have elapsed. Such claims, fully amplified, must be filed with Carrier within nine (9) months and one day thereafter, and unless so made and filed, Carrier shall be wholly released and discharged therefrom and shall not be liable therefore in any court of justice. No suit at law or in equity shall be maintained upon any claim unless instituted within two (2) years and one (1) day after the cause of action accrued. Any such loss or damage shall be determined solely on the basis of volumetric loss and not on the monetary value of the Crude Petroleum.

Rule 13 Application of Rates from and to Intermediate Points

For Crude Petroleum accepted for transportation from any point on Carrier's lines not named in a particular tariff which is intermediate to a point from which rates are published there, through such unnamed point, Carrier will apply from such unnamed point the rates published therein from the next more distant point specified in such tariff. For Crude Petroleum accepted for transportation to any point not named in a particular tariff which is intermediate to a point to which rates are published in said tariffs, through such named point, the rate published therein to the next more distant point specified in the tariff will apply. Carrier will file a tariff publication applicable to the transportation movements within 30 days of the start of the service if the intermediate point is to be used on a continuous basis for more than 30 days.

Rule 14 Line Fill and Tank Bottom Inventory Requirements

Carrier will require each Shipper to supply a pro rata share of Crude Petroleum necessary for pipeline and tankage fill to ensure efficient operation of the pipeline System prior to delivery. Crude Petroleum provided by Shippers for this purpose may be withdrawn only after: (1) shipments have ceased and Shippers have notified Carrier in writing, on no less than thirty (30) days' notice, to discontinue shipments in Carrier's system; and (2) Shipper balances have been reconciled between Shippers and Carrier. Carrier shall require advance payment of transportation charges on the volumes to be cleared from Carrier's System, and any unpaid accounts receivable, before final delivery will be made. Carrier shall have a reasonable period of time, not to exceed ninety (90) days from the receipt of sold notice to complete administrative and operational requirements incidental to Shipper withdrawal.

If Shipper's inventory balance drops below its pro rata portion of the volume of Crude Petroleum necessary for the efficient operation of Carrier's pipeline System, Carrier will require Shipper to provide the necessary volume to meet its pro rata portion of such volume of Crude Petroleum.

Rule 15 Proration of Pipeline Capacity

When a quantity of Crude Petroleum is nominated by Shippers to Carrier which exceeds the Capacity of any Pipeline Segment from an Origin to a Destination, Crude Petroleum nominated by each Shipper for transportation from that Origin to that Destination will be transported in such quantities and at such times to the limit of Carrier's Capacity in a manner determined by Carrier to be equitable to all Shippers. The details of Rule 15 are set out in the following paragraphs 1.0 through 2.9:

1.0 Definitions

- 1.1 "New Shipper" means a Shipper that has not delivered Crude Petroleum to any Destination on the Pipeline Segment to be prorationed within the Base Period. A Shipper that becomes a New Shipper shall remain one for the following 12 consecutive months.
- 1.2 "Regular Shipper" means a Shipper that is not a New Shipper.
- 1.3 "Current Nomination Basis" means that the portion of Capacity available pursuant to paragraph 2.2 contained in Rule 15 to New Shippers will be allocated among all New Shippers in proportion to the volumes of Crude Petroleum nominated by each New Shipper for that month in accordance with Rule 16.
- 1.4 "Base Period" is the 12-calendar-month period just preceding the Calculation Month. Individual months within the Base Period are designated by Nos. 1 through 12, with "Month 1" being the most recent Base Period month and "Month 12" being the oldest Base Period month.
- 1.5 "Base Shipment Percentage" for each Regular Shipper is the total deliveries of Crude Petroleum to all Destinations on the Pipeline Segment to be prorationed by the Regular Shipper during the Base Period divided by the lesser of (a) twelve or (b) the number of Base Period month within which the Regular Shipper first delivered Crude Petroleum to a Destination on the Pipeline Segment to be prorationed.
- 1.6 "Calculation Month" is the calendar month immediately preceding the month for which Capacity is being prorationed.

2.0 Prorationing of Capacity

- 2.1 When Capacity will be prorated. Carrier will allocate Capacity among all Shippers for any month for which the Carrier reasonably determines that the aggregate volume of Crude Petroleum that all Shippers nominate to all Destinations in a Pipeline Segment exceeds Capacity. Proration will be applied separately to each Pipeline Segment where a need for prorating shall arise.
- 2.2 Availability and Allocation of Capacity to New Shippers. Up to ten (10) percent of Capacity shall be made available to New Shippers and will be prorated among them on a Current Nomination Basis.
- 2.3 Availability of Capacity to Regular Shippers. After the allocation of the portion of Capacity to New Shippers that is required by paragraph 2.2, the remaining portion of Capacity for that month shall be available to Regular Shippers who have nominated volumes for that month.
- 2.4 Allocation to each Regular Shipper. Such remaining portion of Capacity shall be allocated among Regular Shippers in proportion to their Base Shipment Percentages. In the event that the volume of Crude Petroleum that would be allocated to a Shipper on the basis of its Base Shipment Percentage is greater than the volume it nominates, the difference between its volume calculated on the basis of its Base Shipment Percentage and its volume nominated will be reallocated among all other Regular Shippers in proportion to their Base Shipment Percentages. Any remaining prorated allocation of Capacity after this reallocation among all Regular Shippers in proportion to their Base Shipment Percentages shall be made available to New Shippers and will be prorated among them on a Current Nomination Basis.
- 2.5 Basis of allocation: notification. When prorating of Capacity is in effect, Capacity shall be allocated among eligible Shippers on a monthly basis and Carrier shall use reasonable efforts to notify each Shipper entitled to an allocation of a portion of Capacity of the amount of its allocation no later than the 25th day of the month proceeding the month for which the allocation is made.
- 2.6 Good Faith Nominations. Carrier will accept only good faith Nominations from Shippers and Carrier shall use whatever reasonable means necessary to determine whether Nominations are made in good faith. Shipper has an obligation to cooperate with Carrier inquiries regarding Good Faith Nominations. Good Faith means the non-contingent ability and willingness of Shipper to deliver to Carrier at the Origins specified in the Nomination all of the Barrels tendered during the month for which the Nomination is made.
- 2.7 Failure to use allocated portion of Capacity. If a New Shipper making a Good Faith Nomination fails to deliver, at the Origins specified by it in its Nomination, Crude Petroleum sufficient to fill the portion of Capacity allocated to it and such failure has not been caused by force majeure, Carrier will reduce such Shipper's allocation for the next proration period after the end of the month during which such failure occurred for which such Shipper nominates as a New Shipper by the allocated portion of Capacity not utilized.
- 2.8 Transfer of Base Shipment Percentage or allocated portion of Capacity; use of Affiliates. Neither a Shipper's Base Shipment Percentage nor volumes allocated to it during a period when prorating is in effect shall be assigned, conveyed, loaned, transferred to, or used in any manner by, another Shipper. However, a Shipper's Base Shipment Percentage or its allocation may be transferred as an incident of the bona fide transfer if the Shipper's business or to a successor to the Shipper's business by the operation of law, such as an executor or trustee in bankruptcy. A Shipper may not use an affiliated or cooperating entity

to increase its Base Shipment Percentage or its allocated portion of Capacity. All transfers made pursuant to this section shall be irrevocable.

- 2.9 Enhancement of Allocation. In no event will an allocation to a Shipper be used in such a manner that will enhance the allocation of another Shipper beyond the allocation that such Shipper would be entitled to under this policy. Carrier may require written assurances from a responsible officer of Shipper regarding its use of its allocated portion of Capacity stating that Shipper has not violated this policy. In the event any Shipper shall, by any device, scheme or arrangement whatsoever, attempt to transfer all or any part of its allocated portion of Capacity to any other Shipper in violation of this policy, or in the event any Shipper shall attempt to receive and use such portion of Capacity, the portion of Capacity allocated to such Shipper will be reduced in the next month that is subject to prorationing after the date that the violation is discovered by a volume equal to such attempted transfer.

Rule 16 Nominations; Minimum Quantity

Crude Petroleum will be transported by Carrier only under a Nomination accepted by Carrier. Any Shipper desiring to tender Crude Petroleum for transportation shall make such Nomination to Carrier in writing on or before 4:15 PM central standard time, the last working day prior to 22nd day of the month preceding the month during which the transportation under the tender is to begin; except that, if space is available for current movement and at the sole discretion of Carrier, a Shipper may tender Crude Petroleum for transportation after 4:15 PM central standard time on the 22nd day of the month preceding the month during which the transportation under the tender is to begin. A "working day" shall be a Monday, Tuesday, Wednesday, Thursday or Friday of a calendar week, except when a Federal holiday falls on such day of the week.

Nominations for the transportation of Crude Petroleum for which Carrier has facilities will be accepted into the pipeline under the Tariff in quantities of not less than the following from one Shipper to one Consignee and Destination as operations permit and provided, with respect to Nominations for Common Stream transportation, such Crude Petroleum is of similar quality and characteristics as is being transported from Origin to Destination:

| | Minimum Aggregate Nomination |
|------------------|------------------------------|
| Common Stream | 5,000 barrels per day |
| Segregated Batch | 50,000 barrels |

Before Carrier will accept a Nomination from a new Shipper, such Shipper (i) will comply with Rule 18(a); (ii) will demonstrate to Carrier the adequacy of such Shipper's facilities as referenced in Rule 5 and Rule 6; and (iii) will provide any other information reasonably requested by Carrier.

Rule 17 Application of Rates

Crude Petroleum accepted for gathering and/or transportation shall be subject to the rates in effect on the date of delivery by Carrier, irrespective of the date of the tender.

Rule 18 Financial Assurances; Payment of Carrier Charges

- (A) Prior to becoming a Shipper, a prospective Shipper must submit to Carrier financial information to establish creditworthiness. The type of information from a prospective Shipper requests include but are not limited to: most recent year end financials, 10K reports or other filings with regulatory agencies and

bank references. If, in the reasonable opinion of Carrier: (i) Shipper is not creditworthy, or (ii) if an existing Shipper's credit deteriorates, Carrier shall require such Shipper to prepay all transportation and other fees and lawful charges accruing on Crude Petroleum delivered and accepted by Carrier or supply an irrevocable letter of credit from a bank acceptable to Carrier, with terms in a form acceptable to Carrier.

- (B) The Shipper shall pay all transportation and other fees and lawful charges accruing on Crude Petroleum delivered to and accepted by Carrier for shipment by the due date stated in Carrier's invoice.
- (C) If charges are not paid by the due date stated on the invoice, Carrier reserves the right to assess finance charges on the entire past due balance (including principal and accumulated but unpaid finance charges) until paid in full, at a rate equal to 125% of the prime rate of interest as reported in the Wall Street Journal as of first of the month in which the charges are due or the maximum finance rate allowed by applicable law, whichever is less.
- (D) Carrier reserves the right to withhold an amount of Crude Petroleum belonging to Shipper from delivery that would be sufficient to cover all unpaid charges due to Carrier from Shipper until all such unpaid charges have been paid. Furthermore, Carrier shall retain a perfected possessory lien under Chapter 9 of the Uniform Commercial Code, as applicable, on an amount of a Shipper's Crude Petroleum in Carrier's possession sufficient to secure payment of any and all amounts owed by such Shipper to Carrier. Carrier reserves the right to set-off any such charges against any monies owed to Shipper by Carrier or any Crude Petroleum of Shipper in Carrier's custody. If said charges remain unpaid ten (10) days after the due date therefor, Carrier shall have the right, through an agent, to sell such Crude Petroleum at public auction, on any day not a legal holiday, in not less than forty-eight (48) hours after publication of notice of such sale in a daily newspaper of general circulation published in the town or city where the sale is to be held, stating the time, place of sale, and the quantity and location of Crude Petroleum to be sold. At said sale, Carrier shall have the right to bid, and if the highest bidder, to become the purchaser. From the proceeds of said sale, Carrier will pay itself the transportation and all other lawful charges, including expenses incident to said sale, and the balance remaining, if any, shall be held for Shipper or whomsoever may be lawfully entitled thereto.
- (E) Unless otherwise agreed to between Shipper and Carrier, Carrier shall have a first priority, continuous, and continuing security interest in all Collateral to secure the payment of all Obligations from Shipper to Carrier. Such security interest shall survive delivery of any Collateral to Shipper. Shipper shall execute all such agreements and do all such things as Carrier shall reasonably request in connection with the creation or perfection of such security interest. Shipper authorizes Carrier to file such financing statements or other documents necessary to perfect and maintain the security interest herein granted.

The security interest provided herein shall be in addition to any lien provided by statute or common law, including, without limitation, a statutory carrier's lien pursuant to Tex. Bus. & Com. Code § 7.307.

In the event Shipper fails to satisfy when due any Obligation to Carrier, Carrier shall have all of the rights and remedies under applicable Law (including the rights of a secured creditor, without limitation, under the security interest described in this Tariff or the rights under a statutory carrier's lien pursuant to Tex. Bus. & Com. Code § 7.307) and in addition may in its sole discretion and without notice take any or all of the following actions:

- (1) withhold and refuse to deliver Collateral in its possession until all such Obligations have been paid;
- (2) proceed to sell such Collateral, in accordance with the applicable provisions of state law, and apply the proceeds to such Obligations;
- (3) store such Collateral or contract for storage of such Collateral pending sale or other disposition;

(4) set-off any such Obligations against any monies owed to Shipper by Carrier on any Crude Petroleum of Shipper in Carrier's custody in the System; or

(5) take any other action it deems necessary for the proper protection and sale of such Collateral. Provided, Carrier may only waive its security interest by written document delivered to Shipper and signed by Carrier.

In the event of a sale of any Collateral, such sale shall be after any reasonable notice required by Law and such a sale shall be a commercially reasonable sale. From the proceeds of said sale, Carrier will pay itself for the Obligations, including expenses incident to said sale, holding the balance of such proceeds, if any, for delivery on demand to any person to which Carrier would have been bound to deliver the Collateral.

If a bill of lading is required under applicable Law for any lien in favor of Carrier to arise or be enforced, acceptance of the Nomination will be deemed to be the bill of lading for all Crude Petroleum subject to such Nomination.

Rule 19 Liability of Carrier

- (A) Carrier shall not be liable for any delay in delivery of or any loss of Crude Petroleum caused by acts of God, acts of government, acts of terrorists, storm, flood, extreme weather, fire, explosion, by acts of war, terrorism, quarantine, authority of law, by breakdown or accident to machinery or equipment, or by act of default of Shipper or Consignee resulting from any other cause reasonably beyond the control of Carrier and not due to the negligence of Carrier, whether similar or dissimilar to the causes herein enumerated. Any such loss shall be apportioned by Carrier to each Shipper of Crude Petroleum in the proportion to Shipper's total volume transported in the calendar month in which such loss occurs. Shipper shall be entitled to receive only that portion of its Crude Petroleum remaining after deducting such Shipper's proportion of such loss, as above determined. Carrier shall prepare and submit a statement to each Shipper showing the apportionment of any such loss of Crude Petroleum.
- (B) To the maximum extent permitted by law, Shipper shall release, indemnify, defend and hold harmless Carrier, its Affiliates and its Representatives from and against all Liabilities arising from or related to: (1) the negligent or willful acts or omissions on the part of Shipper, its employees, agents or contractors (including, but not limited to, any contractors transporting products(s) to or from any location on Carrier's System); and/or (2) Liability arising from the chemical characteristics of Crude Petroleum, except to the extent such liability arises from Carrier's negligence.

Rule 20 Scheduling of Delivery

When Shippers request delivery from the pipeline at a Destination of a volume of Crude Petroleum greater than can be immediately delivered, Carrier shall schedule delivery. Carrier shall not be liable for any delay in delivery resulting from such scheduling of delivery.

Rule 21 Pipeline Agreement

Separate agreements in accordance with this tariff and these regulations covering further details will be required by Carrier before any duty for transportation shall arise.

Rule 22 Establishment of Grades

Carrier will from time to time determine which grades of Crude Petroleum it will regularly transport as a Common Stream and as a Segregated Batch between particular Origins and Destinations on its pipelines.

Common Stream Grades are:

| Grade | Minimum API Gravity | Maximum API Gravity |
|---------------------------|------------------------------------|---------------------------------------------|
| [C] Crude Oil | [C] Greater than 25 API | [C] Less than or equal to 45 API |
| Light Crude Oil | Greater than 45 API | Less than or equal to 55 API |
| [C] Condensate | [C] Greater than 55 API | [C] Less than or equal to 75 API |

Segregated grades are:

| Grade | Minimum API Gravity | Maximum API Gravity |
|------------------|---------------------|------------------------------|
| Shipper Specific | Greater than 25 API | Less than or equal to 75 API |

Rule 23 Processed Condensate Export

For avoidance of doubt, Carrier is not the exporter of Processed Condensate transported through the pipeline and is not responsible for compliance with any applicable law with respect to the export of Processed Condensate.

Rule 24 Bi-Directional Routing

(A) Carrier's system is designed and intended to provide transportation service in a westward direction from Koch Pipeline Pettus Station, Bee County, Texas to Corpus Christi North Beach, Nueces County, Texas ("Pettus – CCNB Segment"). The terms of service and rate transportation movement are set forth in this Tariff.

(B) Carrier does, however, have the capability to temporarily reverse the flow to offer transportation service in an eastwards direction using a section of its pipeline extending between Pawnee Station, Live Oak County, Texas and Koch Pipeline Pettus Station ("Pawnee – Pettus Segment").

(C) A Shipper desiring to make a westward shipment on the Pettus – CCNB Segment in a month should submit a Nomination for such service in accordance with Rule 16 of this Tariff. A Shipper desiring to make an eastward shipment on the Pawnee – Pettus Segment in a month should submit a Nomination for such service in accordance with Rule 16, and specify that the requested shipment will need bi-directional service under this Rule 24.

(D) Following the receipt of all such Nomination for service, Carrier will make a determination as to whether it can temporarily reverse part of the Pettus – CCNB Segment during the requested month in order to offer eastward transportation services on the Pawnee – Pettus Segment, in addition to offering the primary

westward transportation services on the Pettus – CCNB Segment. Carrier will consider, among other things, the following factors when determining whether to reverse part of the Pettus – CCNB Segment: the level of Nominations received for westward transportation service on the Pettus – CCNB Segment, the level of Nominations received for eastward transportation service on the Pawnee – Pettus Segment, and the expense that will be required to perform the reversal of part of the Pettus – CCNB Segment. Carrier will reverse part of the Pettus – CCNB Segment in a given month only when and to the extent that all volumes of Crude Petroleum nominated for westward transportation service on the Pettus - CCNB Segment can be accepted by Carrier without prorationing and there is sufficient remaining Capacity to provide temporary eastward transportation service on the Pawnee – Pettus Segment.

(E) Carrier will notify all interested parties no later than the 27th day of the month preceding the month of transportation as to whether Carrier will temporarily reverse part of the Pettus - CCNB Segment during the requested month and offer transportation service in an eastward direction on the Pawnee – Pettus Segment, in addition to offering the primary westward transportation services on the Pettus - CCNB Segment.

Rule 25 Compliance Costs

If there is an enactment of, or change in, Law which (i) necessitates or otherwise results in an increase in Carrier's operating expenses, (ii) requires additions or modifications to Carrier's equipment or facilities, (iii) levies a tax or similar assessment related to the System and/or Shipper's Crude Petroleum, or (iv) requires Carrier or any of its Affiliates to hold or acquire emission allowances or their equivalent related to the System and/or Shipper's Crude Petroleum (collectively, "Compliance Costs"), then Carrier may seek recovery of such costs from Shippers through rates or the establishment of a surcharge, provided, however, that with respect to clause (iv) above, in lieu of paying Shipper's pro rata share of the costs for Carrier or its Affiliate to acquire emission allowances or their equivalent, to the extent allowed by Law and subject to and in accordance with regulatory requirements and industry standards with respect to the manner of obtaining the allowances or their equivalent, Shipper may elect to provide those allowances to Carrier or its Affiliates, as appropriate, in a timely manner or indemnify such entities for any consequences of providing them late.

Rule 26 Event of Force Majeure

If an Event of Force Majeure renders a party unable, in whole or in part, to carry out its Obligations under this Tariff and a Throughput and Deficiency Agreement (if applicable), such party must give the other party notice in writing as soon as practicable after the occurrence, or give notice by telephone and follow such notice with a written confirmation.

The party providing notice of the Event of Force Majeure shall use commercially reasonable efforts to: (a) correct the events or conditions resulting in the Event of Force Majeure; (b) resume the continuation of its performance under this Tariff and a Throughput and Deficiency Agreement (if applicable); and (c) minimize the impact of such Event of Force Majeure; provided, however, a Party shall not be compelled to resolve any strikes, lockouts or other industrial disputes other than as it shall determine to be in its best interests. An Event of Force Majeure will not excuse either Party's failure to perform any release, indemnity, defense, hold harmless, or payment obligations under this Tariff or a Throughput and Deficiency Agreement.

Rule 27 Carrier Discretion

Carrier will operate its System and implement the rules, regulations and rates contained in this Tariff, including those provisions providing for Carrier's discretion, in a manner that is not unduly discriminatory or unduly preferential, and not inconsistent with the terms and conditions of any Throughput and Deficiency Agreement(s).

Rule 28 Survival

All Rules of this Tariff that survive the termination of the transportation services by their nature shall survive, including, but not limited to, all payment obligations and indemnification obligations.

Rule 29 Governing Law and Jurisdiction

Subject to applicable Law, this Tariff and all of the rights and duties of the Shipper and Carrier arising from this Tariff will be governed, construed and enforced in accordance with the substantive and procedural laws of the State of Texas, without reference to the choice of law principles thereof. Except for disputes that fall within the jurisdiction of the Federal Energy Regulatory Commission, any disputes arising out of this Tariff, including but not limited to tort claims, will be subject to the exclusive jurisdiction of the U.S. District Court located in Harris County, Texas if federal jurisdiction is available and to the courts of the State of Texas located in Harris County, Texas if federal jurisdiction is not available. To the maximum extent permitted by Law, and in any legal action or proceeding relating to, arising out of, or in connection with this Tariff, each of Shipper and Carrier hereby voluntarily, irrevocably and unconditionally (1) submits to the exclusive jurisdiction of the U.S. District Court located in Harris County, Texas if federal jurisdiction is available and to the courts of the State of Texas located in Harris County, Texas if federal jurisdiction is not available, and waives any objection which it may now or hereafter have (a) to the jurisdiction and laying of venue of any suit, action or proceeding arising out of or relating to this Tariff, in the courts referenced in this paragraph and/or (b) to the choice of applying the substantive and procedural laws of the State of Texas, without reference to the choice of law principles thereof, (2) waives, the defense of an inconvenient forum to the maintenance of such action or proceeding in any such court, with the express intent that such provision shall apply, and (3) WAIVES ITS RIGHT TO A TRIAL BY JURY. To the extent that Shipper has or hereafter may acquire any immunity from jurisdiction of any court or from any legal process, Shipper hereby waives such immunity and agrees not to assert, by way of motion, as a defense or otherwise, in any suit, action or proceeding the defense of sovereign immunity to either attachment or jurisdiction or any claim that it is not personally subject to the jurisdiction of the above-named courts by reason of sovereign immunity or otherwise, or that it is immune from any legal process (whether through service of notice, attachment prior to judgment, attachment in aid of execution, execution or otherwise) with respect to itself, the Crude Petroleum, or its property or from attachment either prior to judgment or in aid of execution by reason of sovereign immunity. Each Party agrees that the State of Texas has a substantial relationship to Shipper and Carrier and to the matters made the basis of this Tariff. Each Party agrees that to the knowledge of Shipper and Carrier, the application of the laws of the State of Texas would not be contrary to a fundamental policy of a state, if any, having a materially greater interest than the State of Texas in the determination of any dispute that may arise out of this Tariff and which such state would be the state of applicable Law in the absence of an effective choice of the laws of the State of Texas by Shipper and Carrier.

EXHIBIT A

GRAVITY BANKS AND SULFUR BANKS EXAMPLE CALCULATION

| LOCATION | SHIPPER | BBL'D RECEIVED | Tested % SULFUR | API GRAV | EXHIBIT D RATIO TO 35.5 WT. | Adjusted % SULFUR | EXHIBIT C SULFUR DIFF | EXHIBIT B GRAVITY DIFF | BBLS REC'D x SULFUR DIFF | BBLS REC'D x GRAV DIFF |
|---------------|---------|-------------------|-----------------------|-------------|-----------------------------------|-------------------------|-----------------------------|------------------------------|-----------------------------------|---------------------------------|
| JONES LEASE | A | 155,000.00 | 0.20 | 45.0 | 0.94614 | 0.19 | 1.19 | \$5.10 | 184,450.00 | 790,500.00 |
| ABC TRUCK ACT | B | 165,341.60 | 0.30 | 36.0 | 0.99702 | 0.30 | 1.30 | \$5.02 | 214,944.08 | 830,014.83 |
| SMITH LEASE | C | 82,658.40 | 0.40 | 30.0 | 1.03416 | 0.41 | 1.41 | \$4.25 | 116,548.34 | 351,298.20 |
| | | 403,000.00 | | | | | | | 515,942.42 | 1,971,813.03 |

COMMON STREAM WEIGHTED AVERAGE GRAVITY VALUE: $1,971,813.03/403,000 =$ 4.892836308
COMMON STREAM WEIGHTED AVERAGE SULFUR VALUE: $515,942.42/403,000 =$ 1.280254154

JONES LEASE SHIPPER A
WEIGHTED AVERAGE GRAVITY VALUE: $790,500.00/155,000 =$ 5.10
CALCULATION: $(4.892836308 - 5.10) \times 155,000 =$ (\$32,110.37)
WEIGHTED AVERAGE SULFUR VALUE: $184,450.00/155,000 =$ 1.19
CALCULATION: $(1.19 - 1.280254154) \times 155,000 =$ (\$13,989.39)
CURRENT MONTH QUALITY BANK AMOUNT: (\$46,099.77)

ABC TRUCK ACT SHIPPER B
WEIGHTED AVERAGE GRAVITY VALUE: $830,014.83/165,341.6 =$ 5.02
CALCULATION: $(4.892836308 - 5.02) \times 165,341.6 =$ (\$21,025.45)
WEIGHTED AVERAGE SULFUR VALUE: $214,944.08/165,341.6 =$ 1.30
CALCULATION: $(1.30 - 1.280254154) \times 165,341.6 =$ \$3,264.81
CURRENT MONTH QUALITY BANK AMOUNT: (\$17,760.64)

SMITH LEASE SHIPPER C
WEIGHTED AVERAGE GRAVITY VALUE: $351,298.20/82,658.4 =$ 4.25
CALCULATION: $(4.892836308 - 4.25) \times 82,658.4 =$ \$53,135.82
WEIGHTED AVERAGE SULFUR VALUE: $116,548.34/82,658.4 =$ 1.41
CALCULATION: $(1.41 - 1.280254154) \times 82,658.4 =$ \$10,724.58
CURRENT MONTH QUALITY BANK AMOUNT: \$63,860.40

BANK SUM \$0.00

EXHIBIT B
ADJUSTMENT AUTHORIZATION TABLES OF DIFFERENTIALS FOR USE IN DETERMINING ADJUSTMENTS FOR
DIFFERENCE IN GRAVITY OF CRUDE PETROLEUM

| API GRAVITY | DIFF. PER BBL | API GRAVITY | DIFF. PER BBL | API GRAVITY | DIFF. PER BBL | API GRAVITY | DIFF. PER BBL |
|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|
| 10.0 | 1.250 | 16.0 | 2.150 | 22.0 | 3.050 | 28.0 | 3.950 |
| 10.1 | 1.265 | 16.1 | 2.165 | 22.1 | 3.065 | 28.1 | 3.965 |
| 10.2 | 1.280 | 16.2 | 2.180 | 22.2 | 3.080 | 28.2 | 3.980 |
| 10.3 | 1.295 | 16.3 | 2.195 | 22.3 | 3.095 | 28.3 | 3.995 |
| 10.4 | 1.310 | 16.4 | 2.210 | 22.4 | 3.110 | 28.4 | 4.010 |
| 10.5 | 1.325 | 16.5 | 2.225 | 22.5 | 3.125 | 28.5 | 4.025 |
| 10.6 | 1.340 | 16.6 | 2.240 | 22.6 | 3.140 | 28.6 | 4.040 |
| 10.7 | 1.355 | 16.7 | 2.255 | 22.7 | 3.155 | 28.7 | 4.055 |
| 10.8 | 1.370 | 16.8 | 2.270 | 22.8 | 3.170 | 28.8 | 4.070 |
| 10.9 | 1.385 | 16.9 | 2.285 | 22.9 | 3.185 | 28.9 | 4.085 |
| 11.0 | 1.400 | 17.0 | 2.300 | 23.0 | 3.200 | 29.0 | 4.100 |
| 11.1 | 1.415 | 17.1 | 2.315 | 23.1 | 3.215 | 29.1 | 4.115 |
| 11.2 | 1.430 | 17.2 | 2.330 | 23.2 | 3.230 | 29.2 | 4.130 |
| 11.3 | 1.445 | 17.3 | 2.345 | 23.3 | 3.245 | 29.3 | 4.145 |
| 11.4 | 1.460 | 17.4 | 2.360 | 23.4 | 3.260 | 29.4 | 4.160 |
| 11.5 | 1.475 | 17.5 | 2.375 | 23.5 | 3.275 | 29.5 | 4.175 |
| 11.6 | 1.490 | 17.6 | 2.390 | 23.6 | 3.290 | 29.6 | 4.190 |
| 11.7 | 1.505 | 17.7 | 2.405 | 23.7 | 3.305 | 29.7 | 4.205 |
| 11.8 | 1.520 | 17.8 | 2.420 | 23.8 | 3.320 | 29.8 | 4.220 |
| 11.9 | 1.535 | 17.9 | 2.435 | 23.9 | 3.335 | 29.9 | 4.235 |
| 12.0 | 1.550 | 18.0 | 2.450 | 24.0 | 3.350 | 30.0 | 4.250 |
| 12.1 | 1.565 | 18.1 | 2.465 | 24.1 | 3.365 | 30.1 | 4.265 |
| 12.2 | 1.580 | 18.2 | 2.480 | 24.2 | 3.380 | 30.2 | 4.280 |
| 12.3 | 1.595 | 18.3 | 2.495 | 24.3 | 3.395 | 30.3 | 4.295 |
| 12.4 | 1.610 | 18.4 | 2.510 | 24.4 | 3.410 | 30.4 | 4.310 |
| 12.5 | 1.625 | 18.5 | 2.525 | 24.5 | 3.425 | 30.5 | 4.325 |
| 12.6 | 1.640 | 18.6 | 2.540 | 24.6 | 3.440 | 30.6 | 4.340 |
| 12.7 | 1.655 | 18.7 | 2.555 | 24.7 | 3.455 | 30.7 | 4.355 |
| 12.8 | 1.670 | 18.8 | 2.570 | 24.8 | 3.470 | 30.8 | 4.370 |
| 12.9 | 1.685 | 18.9 | 2.585 | 24.9 | 3.485 | 30.9 | 4.385 |
| 13.0 | 1.700 | 19.0 | 2.600 | 25.0 | 3.500 | 31.0 | 4.400 |
| 13.1 | 1.715 | 19.1 | 2.615 | 25.1 | 3.515 | 31.1 | 4.415 |
| 13.2 | 1.730 | 19.2 | 2.630 | 25.2 | 3.530 | 31.2 | 4.430 |
| 13.3 | 1.745 | 19.3 | 2.645 | 25.3 | 3.545 | 31.3 | 4.445 |
| 13.4 | 1.760 | 19.4 | 2.660 | 25.4 | 3.560 | 31.4 | 4.460 |
| 13.5 | 1.775 | 19.5 | 2.675 | 25.5 | 3.575 | 31.5 | 4.475 |
| 13.6 | 1.790 | 19.6 | 2.690 | 25.6 | 3.590 | 31.6 | 4.490 |
| 13.7 | 1.805 | 19.7 | 2.705 | 25.7 | 3.605 | 31.7 | 4.505 |
| 13.8 | 1.820 | 19.8 | 2.720 | 25.8 | 3.620 | 31.8 | 4.520 |
| 13.9 | 1.835 | 19.9 | 2.735 | 25.9 | 3.635 | 31.9 | 4.535 |
| 14.0 | 1.850 | 20.0 | 2.750 | 26.0 | 3.650 | 32.0 | 4.550 |
| 14.1 | 1.865 | 20.1 | 2.765 | 26.1 | 3.665 | 32.1 | 4.565 |
| 14.2 | 1.880 | 20.2 | 2.780 | 26.2 | 3.680 | 32.2 | 4.580 |
| 14.3 | 1.895 | 20.3 | 2.795 | 26.3 | 3.695 | 32.3 | 4.595 |
| 14.4 | 1.910 | 20.4 | 2.810 | 26.4 | 3.710 | 32.4 | 4.610 |
| 14.5 | 1.925 | 20.5 | 2.825 | 26.5 | 3.725 | 32.5 | 4.625 |
| 14.6 | 1.940 | 20.6 | 2.840 | 26.6 | 3.740 | 32.6 | 4.640 |
| 14.7 | 1.955 | 20.7 | 2.855 | 26.7 | 3.755 | 32.7 | 4.655 |
| 14.8 | 1.970 | 20.8 | 2.870 | 26.8 | 3.770 | 32.8 | 4.670 |
| 14.9 | 1.985 | 20.9 | 2.885 | 26.9 | 3.785 | 32.9 | 4.685 |
| 15.0 | 2.000 | 21.0 | 2.900 | 27.0 | 3.800 | 33.0 | 4.700 |
| 15.1 | 2.015 | 21.1 | 2.915 | 27.1 | 3.815 | 33.1 | 4.715 |
| 15.2 | 2.030 | 21.2 | 2.930 | 27.2 | 3.830 | 33.2 | 4.730 |
| 15.3 | 2.045 | 21.3 | 2.945 | 27.3 | 3.845 | 33.3 | 4.745 |
| 15.4 | 2.060 | 21.4 | 2.960 | 27.4 | 3.860 | 33.4 | 4.760 |
| 15.5 | 2.075 | 21.5 | 2.975 | 27.5 | 3.875 | 33.5 | 4.775 |
| 15.6 | 2.090 | 21.6 | 2.990 | 27.6 | 3.890 | 33.6 | 4.790 |
| 15.7 | 2.105 | 21.7 | 3.005 | 27.7 | 3.905 | 33.7 | 4.805 |
| 15.8 | 2.120 | 21.8 | 3.020 | 27.8 | 3.920 | 33.8 | 4.820 |
| 15.9 | 2.135 | 21.9 | 3.035 | 27.9 | 3.935 | 33.9 | 4.835 |

EXHIBIT B (CONTINUED)
ADJUSTMENT AUTHORIZATION TABLES OF DIFFERENTIALS FOR USE IN DETERMINING ADJUSTMENTS FOR
DIFFERENCE IN GRAVITY OF CRUDE PETROLEUM

| API GRAVITY | DIFF. PER BBL | API GRAVITY | DIFF. PER BBL | API GRAVITY | DIFF. PER BBL | API GRAVITY | DIFF. PER BBL |
|-------------|---------------|-------------|---------------|-------------|---------------|----------------------------------------------------------------------------------------------------------------|---------------|
| 34.0 | 4.850 | 40.0 | 5.100 | 46.0 | 4.950 | 52.0 | 4.050 |
| 34.1 | 4.865 | 40.1 | 5.100 | 46.1 | 4.935 | 52.1 | 4.035 |
| 34.2 | 4.880 | 40.2 | 5.100 | 46.2 | 4.920 | 52.2 | 4.020 |
| 34.3 | 4.895 | 40.3 | 5.100 | 46.3 | 4.905 | 52.3 | 4.005 |
| 34.4 | 4.910 | 40.4 | 5.100 | 46.4 | 4.890 | 52.4 | 3.990 |
| 34.5 | 4.925 | 40.5 | 5.100 | 46.5 | 4.875 | 52.5 | 3.975 |
| 34.6 | 4.940 | 40.6 | 5.100 | 46.6 | 4.860 | 52.6 | 3.960 |
| 34.7 | 4.955 | 40.7 | 5.100 | 46.7 | 4.845 | 52.7 | 3.945 |
| 34.8 | 4.970 | 40.8 | 5.100 | 46.8 | 4.830 | 52.8 | 3.930 |
| 34.9 | 4.985 | 40.9 | 5.100 | 46.9 | 4.815 | 52.9 | 3.915 |
| 35.0 | 5.000 | 41.0 | 5.100 | 47.0 | 4.800 | 53.0 | 3.900 |
| 35.1 | 5.000 | 41.1 | 5.100 | 47.1 | 4.785 | 53.1 | 3.885 |
| 35.2 | 5.000 | 41.2 | 5.100 | 47.2 | 4.770 | 53.2 | 3.870 |
| 35.3 | 5.000 | 41.3 | 5.100 | 47.3 | 4.755 | 53.3 | 3.855 |
| 35.4 | 5.000 | 41.4 | 5.100 | 47.4 | 4.740 | 53.4 | 3.840 |
| 35.5 | 5.000 | 41.5 | 5.100 | 47.5 | 4.725 | 53.5 | 3.825 |
| 35.6 | 5.000 | 41.6 | 5.100 | 47.6 | 4.710 | 53.6 | 3.810 |
| 35.7 | 5.000 | 41.7 | 5.100 | 47.7 | 4.695 | 53.7 | 3.795 |
| 35.8 | 5.000 | 41.8 | 5.100 | 47.8 | 4.680 | 53.8 | 3.780 |
| 35.9 | 5.000 | 41.9 | 5.100 | 47.9 | 4.665 | 53.9 | 3.765 |
| 36.0 | 5.020 | 42.0 | 5.100 | 48.0 | 4.650 | 54.0 | 3.750 |
| 36.1 | 5.020 | 42.1 | 5.100 | 48.1 | 4.635 | 54.1 | 3.735 |
| 36.2 | 5.020 | 42.2 | 5.100 | 48.2 | 4.620 | 54.2 | 3.720 |
| 36.3 | 5.020 | 42.3 | 5.100 | 48.3 | 4.605 | 54.3 | 3.705 |
| 36.4 | 5.020 | 42.4 | 5.100 | 48.4 | 4.590 | 54.4 | 3.690 |
| 36.5 | 5.020 | 42.5 | 5.100 | 48.5 | 4.575 | 54.5 | 3.675 |
| 36.6 | 5.020 | 42.6 | 5.100 | 48.6 | 4.560 | 54.6 | 3.660 |
| 36.7 | 5.020 | 42.7 | 5.100 | 48.7 | 4.545 | 54.7 | 3.645 |
| 36.8 | 5.020 | 42.8 | 5.100 | 48.8 | 4.530 | 54.8 | 3.630 |
| 36.9 | 5.020 | 42.9 | 5.100 | 48.9 | 4.515 | 54.9 | 3.615 |
| 37.0 | 5.040 | 43.0 | 5.100 | 49.0 | 4.500 | 55.0 | 3.600 |
| 37.1 | 5.040 | 43.1 | 5.100 | 49.1 | 4.485 | For API GRAVITY values above 55.0° API the differential continues to decline 0.015/bbl. per 0.1° API GRAVITY . | |
| 37.2 | 5.040 | 43.2 | 5.100 | 49.2 | 4.470 | | |
| 37.3 | 5.040 | 43.3 | 5.100 | 49.3 | 4.455 | | |
| 37.4 | 5.040 | 43.4 | 5.100 | 49.4 | 4.440 | | |
| 37.5 | 5.040 | 43.5 | 5.100 | 49.5 | 4.425 | | |
| 37.6 | 5.040 | 43.6 | 5.100 | 49.6 | 4.410 | | |
| 37.7 | 5.040 | 43.7 | 5.100 | 49.7 | 4.395 | | |
| 37.8 | 5.040 | 43.8 | 5.100 | 49.8 | 4.380 | | |
| 37.9 | 5.040 | 43.9 | 5.100 | 49.9 | 4.365 | | |
| 38.0 | 5.060 | 44.0 | 5.100 | 50.0 | 4.350 | | |
| 38.1 | 5.060 | 44.1 | 5.100 | 50.1 | 4.335 | | |
| 38.2 | 5.060 | 44.2 | 5.100 | 50.2 | 4.320 | | |
| 38.3 | 5.060 | 44.3 | 5.100 | 50.3 | 4.305 | | |
| 38.4 | 5.060 | 44.4 | 5.100 | 50.4 | 4.290 | | |
| 38.5 | 5.060 | 44.5 | 5.100 | 50.5 | 4.275 | | |
| 38.6 | 5.060 | 44.6 | 5.100 | 50.6 | 4.260 | | |
| 38.7 | 5.060 | 44.7 | 5.100 | 50.7 | 4.245 | | |
| 38.8 | 5.060 | 44.8 | 5.100 | 50.8 | 4.230 | | |
| 38.9 | 5.060 | 44.9 | 5.100 | 50.9 | 4.215 | | |
| 39.0 | 5.080 | 45.0 | 5.100 | 51.0 | 4.200 | | |
| 39.1 | 5.080 | 45.1 | 5.085 | 51.1 | 4.185 | | |
| 39.2 | 5.080 | 45.2 | 5.070 | 51.2 | 4.170 | | |
| 39.3 | 5.080 | 45.3 | 5.055 | 51.3 | 4.155 | | |
| 39.4 | 5.080 | 45.4 | 5.040 | 51.4 | 4.140 | | |
| 39.5 | 5.080 | 45.5 | 5.025 | 51.5 | 4.125 | | |
| 39.6 | 5.080 | 45.6 | 5.010 | 51.6 | 4.110 | | |
| 39.7 | 5.080 | 45.7 | 4.995 | 51.7 | 4.095 | | |
| 39.8 | 5.080 | 45.8 | 4.980 | 51.8 | 4.080 | | |
| 39.9 | 5.080 | 45.9 | 4.965 | 51.9 | 4.065 | | |

EXHIBIT C
ADJUSTMENT AUTHORIZATION TABLES OF DIFFERENTIALS FOR USE IN DETERMINING ADJUSTMENTS FOR
DIFFERENCE IN SULFUR CONTENT OF CRUDE PETROLEUM

| PERCENT SULFUR | DIFF. PER BBL | PERCENT SULFUR | DIFF. PER BBL | PERCENT SULFUR | DIFF. PER BBL | PERCENT SULFUR | DIFF. PER BBL | PERCENT SULFUR | DIFF. PER BBL |
|-------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|
| 0.00 | 1.000 | 0.60 | 1.600 | 1.20 | 2.200 | 1.80 | 2.800 | 2.40 | 3.400 |
| 0.01 | 1.010 | 0.61 | 1.610 | 1.21 | 2.210 | 1.81 | 2.810 | 2.41 | 3.410 |
| 0.02 | 1.020 | 0.62 | 1.620 | 1.22 | 2.220 | 1.82 | 2.820 | 2.42 | 3.420 |
| 0.03 | 1.030 | 0.63 | 1.630 | 1.23 | 2.230 | 1.83 | 2.830 | 2.43 | 3.430 |
| 0.04 | 1.040 | 0.64 | 1.640 | 1.24 | 2.240 | 1.84 | 2.840 | 2.44 | 3.440 |
| 0.05 | 1.050 | 0.65 | 1.650 | 1.25 | 2.250 | 1.85 | 2.850 | 2.45 | 3.450 |
| 0.06 | 1.060 | 0.66 | 1.660 | 1.26 | 2.260 | 1.86 | 2.860 | 2.46 | 3.460 |
| 0.07 | 1.070 | 0.67 | 1.670 | 1.27 | 2.270 | 1.87 | 2.870 | 2.47 | 3.470 |
| 0.08 | 1.080 | 0.68 | 1.680 | 1.28 | 2.280 | 1.88 | 2.880 | 2.48 | 3.480 |
| 0.09 | 1.090 | 0.69 | 1.690 | 1.29 | 2.290 | 1.89 | 2.890 | 2.49 | 3.490 |
| 0.10 | 1.100 | 0.70 | 1.700 | 1.30 | 2.300 | 1.90 | 2.900 | 2.50 | 3.500 |
| 0.11 | 1.110 | 0.71 | 1.710 | 1.31 | 2.310 | 1.91 | 2.910 | 2.51 | 3.510 |
| 0.12 | 1.120 | 0.72 | 1.720 | 1.32 | 2.320 | 1.92 | 2.920 | 2.52 | 3.520 |
| 0.13 | 1.130 | 0.73 | 1.730 | 1.33 | 2.330 | 1.93 | 2.930 | 2.53 | 3.530 |
| 0.14 | 1.140 | 0.74 | 1.740 | 1.34 | 2.340 | 1.94 | 2.940 | 2.54 | 3.540 |
| 0.15 | 1.150 | 0.75 | 1.750 | 1.35 | 2.350 | 1.95 | 2.950 | 2.55 | 3.550 |
| 0.16 | 1.160 | 0.76 | 1.760 | 1.36 | 2.360 | 1.96 | 2.960 | 2.56 | 3.560 |
| 0.17 | 1.170 | 0.77 | 1.770 | 1.37 | 2.370 | 1.97 | 2.970 | 2.57 | 3.570 |
| 0.18 | 1.180 | 0.78 | 1.780 | 1.38 | 2.380 | 1.98 | 2.980 | 2.58 | 3.580 |
| 0.19 | 1.190 | 0.79 | 1.790 | 1.39 | 2.390 | 1.99 | 2.990 | 2.59 | 3.590 |
| 0.20 | 1.200 | 0.80 | 1.800 | 1.40 | 2.400 | 2.00 | 3.000 | 2.60 | 3.600 |
| 0.21 | 1.210 | 0.81 | 1.810 | 1.41 | 2.410 | 2.01 | 3.010 | 2.61 | 3.610 |
| 0.22 | 1.220 | 0.82 | 1.820 | 1.42 | 2.420 | 2.02 | 3.020 | 2.62 | 3.620 |
| 0.23 | 1.230 | 0.83 | 1.830 | 1.43 | 2.430 | 2.03 | 3.030 | 2.63 | 3.630 |
| 0.24 | 1.240 | 0.84 | 1.840 | 1.44 | 2.440 | 2.04 | 3.040 | 2.64 | 3.640 |
| 0.25 | 1.250 | 0.85 | 1.850 | 1.45 | 2.450 | 2.05 | 3.050 | 2.65 | 3.650 |
| 0.26 | 1.260 | 0.86 | 1.860 | 1.46 | 2.460 | 2.06 | 3.060 | 2.66 | 3.660 |
| 0.27 | 1.270 | 0.87 | 1.870 | 1.47 | 2.470 | 2.07 | 3.070 | 2.67 | 3.670 |
| 0.28 | 1.280 | 0.88 | 1.880 | 1.48 | 2.480 | 2.08 | 3.080 | 2.68 | 3.680 |
| 0.29 | 1.290 | 0.89 | 1.890 | 1.49 | 2.490 | 2.09 | 3.090 | 2.69 | 3.690 |
| 0.30 | 1.300 | 0.90 | 1.900 | 1.50 | 2.500 | 2.10 | 3.100 | 2.70 | 3.700 |
| 0.31 | 1.310 | 0.91 | 1.910 | 1.51 | 2.510 | 2.11 | 3.110 | 2.71 | 3.710 |
| 0.32 | 1.320 | 0.92 | 1.920 | 1.52 | 2.520 | 2.12 | 3.120 | 2.72 | 3.720 |
| 0.33 | 1.330 | 0.93 | 1.930 | 1.53 | 2.530 | 2.13 | 3.130 | 2.73 | 3.730 |
| 0.34 | 1.340 | 0.94 | 1.940 | 1.54 | 2.540 | 2.14 | 3.140 | 2.74 | 3.740 |
| 0.35 | 1.350 | 0.95 | 1.950 | 1.55 | 2.550 | 2.15 | 3.150 | 2.75 | 3.750 |
| 0.36 | 1.360 | 0.96 | 1.960 | 1.56 | 2.560 | 2.16 | 3.160 | 2.76 | 3.760 |
| 0.37 | 1.370 | 0.97 | 1.970 | 1.57 | 2.570 | 2.17 | 3.170 | 2.77 | 3.770 |
| 0.38 | 1.380 | 0.98 | 1.980 | 1.58 | 2.580 | 2.18 | 3.180 | 2.78 | 3.780 |
| 0.39 | 1.390 | 0.99 | 1.990 | 1.59 | 2.590 | 2.19 | 3.190 | 2.79 | 3.790 |
| 0.40 | 1.400 | 1.00 | 2.000 | 1.60 | 2.600 | 2.20 | 3.200 | 2.80 | 3.800 |
| 0.41 | 1.410 | 1.01 | 2.010 | 1.61 | 2.610 | 2.21 | 3.210 | 2.81 | 3.810 |
| 0.42 | 1.420 | 1.02 | 2.020 | 1.62 | 2.620 | 2.22 | 3.220 | 2.82 | 3.820 |
| 0.43 | 1.430 | 1.03 | 2.030 | 1.63 | 2.630 | 2.23 | 3.230 | 2.83 | 3.830 |
| 0.44 | 1.440 | 1.04 | 2.040 | 1.64 | 2.640 | 2.24 | 3.240 | 2.84 | 3.840 |
| 0.45 | 1.450 | 1.05 | 2.050 | 1.65 | 2.650 | 2.25 | 3.250 | 2.85 | 3.850 |
| 0.46 | 1.460 | 1.06 | 2.060 | 1.66 | 2.660 | 2.26 | 3.260 | 2.86 | 3.860 |
| 0.47 | 1.470 | 1.07 | 2.070 | 1.67 | 2.670 | 2.27 | 3.270 | 2.87 | 3.870 |
| 0.48 | 1.480 | 1.08 | 2.080 | 1.68 | 2.680 | 2.28 | 3.280 | 2.88 | 3.880 |
| 0.49 | 1.490 | 1.09 | 2.090 | 1.69 | 2.690 | 2.29 | 3.290 | 2.89 | 3.890 |
| 0.50 | 1.500 | 1.10 | 2.100 | 1.70 | 2.700 | 2.30 | 3.300 | 2.90 | 3.900 |
| 0.51 | 1.510 | 1.11 | 2.110 | 1.71 | 2.710 | 2.31 | 3.310 | 2.91 | 3.910 |
| 0.52 | 1.520 | 1.12 | 2.120 | 1.72 | 2.720 | 2.32 | 3.320 | 2.92 | 3.920 |
| 0.53 | 1.530 | 1.13 | 2.130 | 1.73 | 2.730 | 2.33 | 3.330 | 2.93 | 3.930 |
| 0.54 | 1.540 | 1.14 | 2.140 | 1.74 | 2.740 | 2.34 | 3.340 | 2.94 | 3.940 |
| 0.55 | 1.550 | 1.15 | 2.150 | 1.75 | 2.750 | 2.35 | 3.350 | 2.95 | 3.950 |
| 0.56 | 1.560 | 1.16 | 2.160 | 1.76 | 2.760 | 2.36 | 3.360 | 2.96 | 3.960 |
| 0.57 | 1.570 | 1.17 | 2.170 | 1.77 | 2.770 | 2.37 | 3.370 | 2.97 | 3.970 |
| 0.58 | 1.580 | 1.18 | 2.180 | 1.78 | 2.780 | 2.38 | 3.380 | 2.98 | 3.980 |
| 0.59 | 1.590 | 1.19 | 2.190 | 1.79 | 2.790 | 2.39 | 3.390 | 2.99 | 3.990 |

EXHIBIT D

RATIO FACTORS FOR SULFUR ADJUSTMENT WEIGHT OF CRUDE BY GRAVITY TO REFERENCE BASE OF
35.5° API GRAVITY ADJUSTMENT AUTHORIZATION

| API GRAVITY | RATIO TO 35.5° WT. | API GRAVITY | RATIO TO 35.5° WT. | API GRAVITY | RATIO TO 35.5° WT. | API GRAVITY | RATIO TO 35.5° WT. | API GRAVITY | RATIO TO 35.5° WT. | API GRAVITY | RATIO TO 35.5° WT. |
|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|
| 10.0 | 1.18044 | 16.0 | 1.13239 | 22.0 | 1.08802 | 28.0 | 1.04706 | 34.0 | 1.00907 | 40.0 | 0.97378 |
| 10.1 | 1.17959 | 16.1 | 1.13168 | 22.1 | 1.08731 | 28.1 | 1.04649 | 34.1 | 1.00850 | 40.1 | 0.97321 |
| 10.2 | 1.17888 | 16.2 | 1.13083 | 22.2 | 1.08661 | 28.2 | 1.04578 | 34.2 | 1.00780 | 40.2 | 0.97264 |
| 10.3 | 1.17803 | 16.3 | 1.13012 | 22.3 | 1.08590 | 28.3 | 1.04507 | 34.3 | 1.00723 | 40.3 | 0.97208 |
| 10.4 | 1.17718 | 16.4 | 1.12927 | 22.4 | 1.08519 | 28.4 | 1.04451 | 34.4 | 1.00666 | 40.4 | 0.97151 |
| 10.5 | 1.17633 | 16.5 | 1.12856 | 22.5 | 1.08448 | 28.5 | 1.04380 | 34.5 | 1.00609 | 40.5 | 0.97094 |
| 10.6 | 1.17548 | 16.6 | 1.12785 | 22.6 | 1.08377 | 28.6 | 1.04323 | 34.6 | 1.00539 | 40.6 | 0.97038 |
| 10.7 | 1.17463 | 16.7 | 1.12700 | 22.7 | 1.08320 | 28.7 | 1.04252 | 34.7 | 1.00482 | 40.7 | 0.96981 |
| 10.8 | 1.17378 | 16.8 | 1.12629 | 22.8 | 1.08249 | 28.8 | 1.04181 | 34.8 | 1.00425 | 40.8 | 0.96924 |
| 10.9 | 1.17307 | 16.9 | 1.12558 | 22.9 | 1.08179 | 28.9 | 1.04125 | 34.9 | 1.00369 | 40.9 | 0.96867 |
| 11.0 | 1.17222 | 17.0 | 1.12473 | 23.0 | 1.08108 | 29.0 | 1.04054 | 35.0 | 1.00298 | 41.0 | 0.96811 |
| 11.1 | 1.17137 | 17.1 | 1.12403 | 23.1 | 1.08037 | 29.1 | 1.03997 | 35.1 | 1.00241 | 41.1 | 0.96754 |
| 11.2 | 1.17052 | 17.2 | 1.12332 | 23.2 | 1.07966 | 29.2 | 1.03926 | 35.2 | 1.00184 | 41.2 | 0.96697 |
| 11.3 | 1.16967 | 17.3 | 1.12247 | 23.3 | 1.07895 | 29.3 | 1.03855 | 35.3 | 1.00128 | 41.3 | 0.96641 |
| 11.4 | 1.16886 | 17.4 | 1.12176 | 23.4 | 1.07824 | 29.4 | 1.03799 | 35.4 | 1.00057 | 41.4 | 0.96584 |
| 11.5 | 1.16811 | 17.5 | 1.12105 | 23.5 | 1.07753 | 29.5 | 1.03728 | 35.5 | 1.00000 | 41.5 | 0.96527 |
| 11.6 | 1.16726 | 17.6 | 1.12020 | 23.6 | 1.07682 | 29.6 | 1.03671 | 35.6 | 0.99943 | 41.6 | 0.96471 |
| 11.7 | 1.16641 | 17.7 | 1.11949 | 23.7 | 1.07612 | 29.7 | 1.03600 | 35.7 | 0.99887 | 41.7 | 0.96414 |
| 11.8 | 1.16570 | 17.8 | 1.11878 | 23.8 | 1.07541 | 29.8 | 1.03544 | 35.8 | 0.99816 | 41.8 | 0.96357 |
| 11.9 | 1.16485 | 17.9 | 1.11793 | 23.9 | 1.07470 | 29.9 | 1.03473 | 35.9 | 0.99759 | 41.9 | 0.96300 |
| 12.0 | 1.16400 | 18.0 | 1.11722 | 24.0 | 1.07413 | 30.0 | 1.03416 | 36.0 | 0.99702 | 42.0 | 0.96244 |
| 12.1 | 1.16315 | 18.1 | 1.11651 | 24.1 | 1.07342 | 30.1 | 1.03345 | 36.1 | 0.99646 | 42.1 | 0.96187 |
| 12.2 | 1.16244 | 18.2 | 1.11580 | 24.2 | 1.07271 | 30.2 | 1.03288 | 36.2 | 0.99589 | 42.2 | 0.96145 |
| 12.3 | 1.16159 | 18.3 | 1.11495 | 24.3 | 1.07201 | 30.3 | 1.03218 | 36.3 | 0.99518 | 42.3 | 0.96088 |
| 12.4 | 1.16074 | 18.4 | 1.11425 | 24.4 | 1.07130 | 30.4 | 1.03161 | 36.4 | 0.99461 | 42.4 | 0.96031 |
| 12.5 | 1.16003 | 18.5 | 1.11354 | 24.5 | 1.07059 | 30.5 | 1.03090 | 36.5 | 0.99405 | 42.5 | 0.95974 |
| 12.6 | 1.15918 | 18.6 | 1.11283 | 24.6 | 1.06988 | 30.6 | 1.03033 | 36.6 | 0.99348 | 42.6 | 0.95918 |
| 12.7 | 1.15833 | 18.7 | 1.11198 | 24.7 | 1.06931 | 30.7 | 1.02962 | 36.7 | 0.99291 | 42.7 | 0.95861 |
| 12.8 | 1.15748 | 18.8 | 1.11127 | 24.8 | 1.06860 | 30.8 | 1.02906 | 36.8 | 0.99220 | 42.8 | 0.95804 |
| 12.9 | 1.15677 | 18.9 | 1.11056 | 24.9 | 1.06790 | 30.9 | 1.02835 | 36.9 | 0.99164 | 42.9 | 0.95748 |
| 13.0 | 1.15592 | 19.0 | 1.10985 | 25.0 | 1.06719 | 31.0 | 1.02778 | 37.0 | 0.99107 | 43.0 | 0.95691 |
| 13.1 | 1.15521 | 19.1 | 1.10900 | 25.1 | 1.06648 | 31.1 | 1.02707 | 37.1 | 0.99050 | 43.1 | 0.95648 |
| 13.2 | 1.15436 | 19.2 | 1.10829 | 25.2 | 1.06577 | 31.2 | 1.02651 | 37.2 | 0.98994 | 43.2 | 0.95592 |
| 13.3 | 1.15351 | 19.3 | 1.10758 | 25.3 | 1.06520 | 31.3 | 1.02580 | 37.3 | 0.98937 | 43.3 | 0.95535 |
| 13.4 | 1.15280 | 19.4 | 1.10687 | 25.4 | 1.06449 | 31.4 | 1.02523 | 37.4 | 0.98880 | 43.4 | 0.95478 |
| 13.5 | 1.15195 | 19.5 | 1.10617 | 25.5 | 1.06378 | 31.5 | 1.02452 | 37.5 | 0.98809 | 43.5 | 0.95422 |
| 13.6 | 1.15110 | 19.6 | 1.10532 | 25.6 | 1.06308 | 31.6 | 1.02395 | 37.6 | 0.98753 | 43.6 | 0.95365 |
| 13.7 | 1.15039 | 19.7 | 1.10461 | 25.7 | 1.06251 | 31.7 | 1.02339 | 37.7 | 0.98696 | 43.7 | 0.95308 |
| 13.8 | 1.14954 | 19.8 | 1.10390 | 25.8 | 1.06180 | 31.8 | 1.02268 | 37.8 | 0.98639 | 43.8 | 0.95266 |
| 13.9 | 1.14883 | 19.9 | 1.10319 | 25.9 | 1.06109 | 31.9 | 1.02211 | 37.9 | 0.98583 | 43.9 | 0.95209 |
| 14.0 | 1.14798 | 20.0 | 1.10248 | 26.0 | 1.06038 | 32.0 | 1.02140 | 38.0 | 0.98526 | 44.0 | 0.95152 |
| 14.1 | 1.14713 | 20.1 | 1.10177 | 26.1 | 1.05967 | 32.1 | 1.02084 | 38.1 | 0.98469 | 44.1 | 0.95096 |
| 14.2 | 1.14642 | 20.2 | 1.10106 | 26.2 | 1.05911 | 32.2 | 1.02013 | 38.2 | 0.98412 | 44.2 | 0.95039 |
| 14.3 | 1.14557 | 20.3 | 1.10021 | 26.3 | 1.05840 | 32.3 | 1.01956 | 38.3 | 0.98356 | 44.3 | 0.94982 |
| 14.4 | 1.14486 | 20.4 | 1.09950 | 26.4 | 1.05769 | 32.4 | 1.01899 | 38.4 | 0.98285 | 44.4 | 0.94940 |
| 14.5 | 1.14401 | 20.5 | 1.09880 | 26.5 | 1.05698 | 32.5 | 1.01828 | 38.5 | 0.98228 | 44.5 | 0.94883 |
| 14.6 | 1.14330 | 20.6 | 1.09809 | 26.6 | 1.05641 | 32.6 | 1.01772 | 38.6 | 0.98172 | 44.6 | 0.94826 |
| 14.7 | 1.14245 | 20.7 | 1.09738 | 26.7 | 1.05571 | 32.7 | 1.01715 | 38.7 | 0.98115 | 44.7 | 0.94770 |
| 14.8 | 1.14174 | 20.8 | 1.09667 | 26.8 | 1.05500 | 32.8 | 1.01644 | 38.8 | 0.98058 | 44.8 | 0.94713 |
| 14.9 | 1.14089 | 20.9 | 1.09596 | 26.9 | 1.05443 | 32.9 | 1.01588 | 38.9 | 0.98001 | 44.9 | 0.94670 |
| 15.0 | 1.14018 | 21.0 | 1.09525 | 27.0 | 1.05372 | 33.0 | 1.01517 | 39.0 | 0.97945 | 45.0 | 0.94614 |
| 15.1 | 1.13933 | 21.1 | 1.09454 | 27.1 | 1.05301 | 33.1 | 1.01460 | 39.1 | 0.97888 | 45.1 | 0.94557 |
| 15.2 | 1.13863 | 21.2 | 1.09383 | 27.2 | 1.05245 | 33.2 | 1.01403 | 39.2 | 0.97831 | 45.2 | 0.94500 |
| 15.3 | 1.13777 | 21.3 | 1.09313 | 27.3 | 1.05174 | 33.3 | 1.01332 | 39.3 | 0.97775 | 45.3 | 0.94444 |
| 15.4 | 1.13707 | 21.4 | 1.09242 | 27.4 | 1.05103 | 33.4 | 1.01276 | 39.4 | 0.97718 | 45.4 | 0.94401 |
| 15.5 | 1.13622 | 21.5 | 1.09171 | 27.5 | 1.05046 | 33.5 | 1.01219 | 39.5 | 0.97661 | 45.5 | 0.94344 |
| 15.6 | 1.13551 | 21.6 | 1.09086 | 27.6 | 1.04975 | 33.6 | 1.01148 | 39.6 | 0.97605 | 45.6 | 0.94288 |
| 15.7 | 1.13466 | 21.7 | 1.09015 | 27.7 | 1.04904 | 33.7 | 1.01091 | 39.7 | 0.97548 | 45.7 | 0.94231 |
| 15.8 | 1.13395 | 21.8 | 1.08944 | 27.8 | 1.04848 | 33.8 | 1.01035 | 39.8 | 0.97491 | 45.8 | 0.94189 |
| 15.9 | 1.13324 | 21.9 | 1.08873 | 27.9 | 1.04777 | 33.9 | 1.00964 | 39.9 | 0.97434 | 45.9 | 0.94132 |

EXHIBIT D (CONTINUED)
RATIO FACTORS FOR SULFUR ADJUSTMENT WEIGHT OF CRUDE BY GRAVITY TO REFERENCE BASE OF
35.5° API GRAVITY ADJUSTMENT AUTHORIZATION

| API GRAVITY | RATIO TO 35.5° WT. | API GRAVITY | RATIO TO 35.5° WT. | API GRAVITY | RATIO TO 35.5° WT. | API GRAVITY | RATIO TO 35.5° WT. | API GRAVITY | RATIO TO 35.5° WT. |
|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|
| 46.0 | 0.94075 | 52.0 | 0.90999 | 58.0 | 0.88108 | 64.0 | 0.85400 | 70.0 | 0.82849 |
| 46.1 | 0.94018 | 52.1 | 0.90943 | 58.1 | 0.88085 | 64.1 | 0.85358 | 70.1 | 0.82807 |
| 46.2 | 0.93976 | 52.2 | 0.90900 | 58.2 | 0.88009 | 64.2 | 0.85315 | 70.2 | 0.82764 |
| 46.3 | 0.93919 | 52.3 | 0.90843 | 58.3 | 0.87966 | 64.3 | 0.85273 | 70.3 | 0.82721 |
| 46.4 | 0.93863 | 52.4 | 0.90801 | 58.4 | 0.87923 | 64.4 | 0.85230 | 70.4 | 0.82679 |
| 46.5 | 0.93806 | 52.5 | 0.90744 | 58.5 | 0.87867 | 64.5 | 0.85188 | 70.5 | 0.82651 |
| 46.6 | 0.93763 | 52.6 | 0.90702 | 58.6 | 0.87824 | 64.6 | 0.85145 | 70.6 | 0.82608 |
| 46.7 | 0.93707 | 52.7 | 0.90645 | 58.7 | 0.87782 | 64.7 | 0.85103 | 70.7 | 0.82566 |
| 46.8 | 0.93650 | 52.8 | 0.90602 | 58.8 | 0.87739 | 64.8 | 0.85046 | 70.8 | 0.82537 |
| 46.9 | 0.93607 | 52.9 | 0.90546 | 58.9 | 0.87697 | 64.9 | 0.85004 | 70.9 | 0.82495 |
| 47.0 | 0.93551 | 53.0 | 0.90503 | 59.0 | 0.87654 | 65.0 | 0.84961 | 71.0 | 0.82452 |
| 47.1 | 0.93494 | 53.1 | 0.90446 | 59.1 | 0.87597 | 65.1 | 0.84918 | 71.1 | 0.82410 |
| 47.2 | 0.93437 | 53.2 | 0.90404 | 59.2 | 0.87555 | 65.2 | 0.84876 | 71.2 | 0.82367 |
| 47.3 | 0.93395 | 53.3 | 0.90361 | 59.3 | 0.87512 | 65.3 | 0.84833 | 71.3 | 0.82325 |
| 47.4 | 0.93338 | 53.4 | 0.90305 | 59.4 | 0.87456 | 65.4 | 0.84791 | 71.4 | 0.82282 |
| 47.5 | 0.93281 | 53.5 | 0.90262 | 59.5 | 0.87413 | 65.5 | 0.84746 | 71.5 | 0.82240 |
| 47.6 | 0.93239 | 53.6 | 0.90206 | 59.6 | 0.87371 | 65.6 | 0.84706 | 71.6 | 0.82197 |
| 47.7 | 0.93182 | 53.7 | 0.90163 | 59.7 | 0.87328 | 65.7 | 0.84663 | 71.7 | 0.82155 |
| 47.8 | 0.93125 | 53.8 | 0.90106 | 59.8 | 0.87286 | 65.8 | 0.84621 | 71.8 | 0.82112 |
| 47.9 | 0.93083 | 53.9 | 0.90064 | 59.9 | 0.87229 | 65.9 | 0.84578 | 71.9 | 0.82084 |
| 48.0 | 0.93026 | 54.0 | 0.90007 | 60.0 | 0.87186 | 66.0 | 0.84536 | 72.0 | 0.82041 |
| 48.1 | 0.92970 | 54.1 | 0.89965 | 60.1 | 0.87144 | 66.1 | 0.84493 | 72.1 | 0.81999 |
| 48.2 | 0.92927 | 54.2 | 0.89922 | 60.2 | 0.87087 | 66.2 | 0.84451 | 72.2 | 0.81956 |
| 48.3 | 0.92870 | 54.3 | 0.89865 | 60.3 | 0.87045 | 66.3 | 0.84408 | 72.3 | 0.81914 |
| 48.4 | 0.92814 | 54.4 | 0.89823 | 60.4 | 0.87002 | 66.4 | 0.84366 | 72.4 | 0.81871 |
| 48.5 | 0.92771 | 54.5 | 0.89766 | 60.5 | 0.86960 | 66.5 | 0.84323 | 72.5 | 0.81828 |
| 48.6 | 0.92714 | 54.6 | 0.89724 | 60.6 | 0.86917 | 66.6 | 0.84281 | 72.6 | 0.81800 |
| 48.7 | 0.92672 | 54.7 | 0.89681 | 60.7 | 0.86875 | 66.7 | 0.84238 | 72.7 | 0.81758 |
| 48.8 | 0.92615 | 54.8 | 0.89624 | 60.8 | 0.86818 | 66.8 | 0.84196 | 72.8 | 0.81715 |
| 48.9 | 0.92558 | 54.9 | 0.89582 | 60.9 | 0.86775 | 66.9 | 0.84153 | 72.9 | 0.81673 |
| 49.0 | 0.92516 | 55.0 | 0.89525 | 61.0 | 0.86733 | 67.0 | 0.84111 | 73.0 | 0.81630 |
| 49.1 | 0.92459 | 55.1 | 0.89483 | 61.1 | 0.86690 | 67.1 | 0.84068 | 73.1 | 0.81602 |
| 49.2 | 0.92403 | 55.2 | 0.89440 | 61.2 | 0.86648 | 67.2 | 0.84026 | 73.2 | 0.81559 |
| 49.3 | 0.92360 | 55.3 | 0.89383 | 61.3 | 0.86591 | 67.3 | 0.83983 | 73.3 | 0.81517 |
| 49.4 | 0.92303 | 55.4 | 0.89341 | 61.4 | 0.86549 | 67.4 | 0.83940 | 73.4 | 0.81474 |
| 49.5 | 0.92261 | 55.5 | 0.89525 | 61.5 | 0.86506 | 67.5 | 0.83898 | 73.5 | 0.81432 |
| 49.6 | 0.92204 | 55.6 | 0.89242 | 61.6 | 0.86464 | 67.6 | 0.83855 | 73.6 | 0.81403 |
| 49.7 | 0.92147 | 55.7 | 0.89199 | 61.7 | 0.86421 | 67.7 | 0.83813 | 73.7 | 0.81361 |
| 49.8 | 0.92105 | 55.8 | 0.89157 | 61.8 | 0.86378 | 67.8 | 0.83770 | 73.8 | 0.81318 |
| 49.9 | 0.92048 | 55.9 | 0.89114 | 61.9 | 0.86322 | 67.9 | 0.83728 | 73.9 | 0.81276 |
| 50.0 | 0.92006 | 56.0 | 0.89057 | 62.0 | 0.86279 | 68.0 | 0.83685 | 74.0 | 0.81233 |
| 50.1 | 0.91949 | 56.1 | 0.89015 | 62.1 | 0.86237 | 68.1 | 0.83643 | 74.1 | 0.81191 |
| 50.2 | 0.91892 | 56.2 | 0.88958 | 62.2 | 0.86194 | 68.2 | 0.83600 | 74.2 | 0.81162 |
| 50.3 | 0.91850 | 56.3 | 0.88916 | 62.3 | 0.86152 | 68.3 | 0.83558 | 74.3 | 0.81120 |
| 50.4 | 0.91793 | 56.4 | 0.88873 | 62.4 | 0.86109 | 68.4 | 0.83515 | 74.4 | 0.81077 |
| 50.5 | 0.91751 | 56.5 | 0.88816 | 62.5 | 0.86067 | 68.5 | 0.83473 | 74.5 | 0.81049 |
| 50.6 | 0.91694 | 56.6 | 0.88774 | 62.6 | 0.86010 | 68.6 | 0.83430 | 74.6 | 0.81006 |
| 50.7 | 0.91651 | 56.7 | 0.88717 | 62.7 | 0.85967 | 68.7 | 0.83388 | 74.7 | 0.80964 |
| 50.8 | 0.91595 | 56.8 | 0.88675 | 62.8 | 0.85925 | 68.8 | 0.83345 | 74.8 | 0.80921 |
| 50.9 | 0.91552 | 56.9 | 0.88632 | 62.9 | 0.85882 | 68.9 | 0.83303 | 74.9 | 0.80879 |
| 51.0 | 0.91495 | 57.0 | 0.88575 | 63.0 | 0.85840 | 69.0 | 0.83260 | | |
| 51.1 | 0.91439 | 57.1 | 0.88533 | 63.1 | 0.85797 | 69.1 | 0.83218 | | |
| 51.2 | 0.91396 | 57.2 | 0.88490 | 63.2 | 0.85755 | 69.2 | 0.83175 | | |
| 51.3 | 0.91339 | 57.3 | 0.88448 | 63.3 | 0.85712 | 69.3 | 0.83147 | | |
| 51.4 | 0.91297 | 57.4 | 0.88391 | 63.4 | 0.85670 | 69.4 | 0.83104 | | |
| 51.5 | 0.91240 | 57.5 | 0.88349 | 63.5 | 0.85613 | 69.5 | 0.83062 | | |
| 51.6 | 0.91198 | 57.6 | 0.88292 | 63.6 | 0.85571 | 69.6 | 0.83019 | | |
| 51.7 | 0.91141 | 57.7 | 0.88249 | 63.7 | 0.85528 | 69.7 | 0.82977 | | |
| 51.8 | 0.91099 | 57.8 | 0.88207 | 63.8 | 0.85485 | 69.8 | 0.82934 | | |
| 51.9 | 0.91042 | 57.9 | 0.88150 | 63.9 | 0.85443 | 69.9 | 0.82892 | | |