# Department of Energy <br> Strategic Petroleum Reserve Project Management Office 900 Commerce East <br> New Orleans, Louisiana 70123 

NOTICE OF SALE<br>DE-NS96-11PO97000

Pursuant to Presidential authorization a decision that a drawdown and sale of crude oil from the Strategic Petroleum Reserve is required by U.S. participation in the International Energy Program implemented by the International Energy Agency (IEA), the Secretary of Energy has directed the drawdown and distribution of the Strategic Petroleum Reserve (SPR) through a sale of SPR oil. You are invited to submit offers for the purchase of crude oil from the United States Department of Energy, SPR. Contracts resulting from this sale shall be subject to contract price adjustment as set forth in the Supplements and Amendments to the Standard Sales Provisions. The terms and conditions of the sale and specific instructions for preparation and submittal of offers are contained in this Notice of Sale.

As stated in this Notice of Sale, you are required to submit your offer using the Crude Oil Sales Offer Program. Manual offers will NOT be accepted.

Offers are due at 1:00 p.m. Central Daylight Time, June 29, 2011.
Please read this solicitation carefully. Questions regarding this Notice of Sale should be addressed to:

| Contact | Telephone | E-Mail |
| :--- | :--- | :--- |
| Kelly Gee | $(504) 734-4343$ | Kelly.Gele@ spr.doe.gov |
| (Contracting Officer) | $(504) 734-4228$ | $\underline{\text { Anne.Quern@ spr.doe.gov }}$ |
| Anne Quern |  |  |

Collect calls will not be accepted.


Date: June 24, 2011
Gary C. Landry
Director, Acquisition and
Sales Division

# NOTICE OF SALE <br> DE-NS96-11PO97000 

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## NOTICE OF SALE <br> DE-NS96-11PO97000

## INSTRUCTIONS

## GENERAL REQUIREMENTS

1. Offer must be submitted via the Crude Oil Sales Offer Program (COSOP) by the date/time specified in the Notice of Sale. Manual offers will NOT be accepted.
2. Offers are required to submit an Offer Guarantee (See SSP B.12).

Failure to submit the above document or to comply with material requirements of the Notice of Sale may be cause for rejection of the offer.

## SALE-SPECIFIC REQUIREMENTS

The following sales requirements are established for this sale:

1. The sale will be by price competition and shall be conducted pursuant to the Standard Sales Provisions (SSPs), except as may be modified by this Notice of Sale.
2. The quantity of SPR crude oil offered for sale is 30 million barrels for delivery to successful offerors over a 31-day delivery period commencing August 1, 2011, and ending August 31, 2011. Due to the collective International Energy Agency response action, requests for early delivery in July in accordance with SSP C. 5 (c) are encouraged and will be accommodated to the maximum extent possible.
3. The crude oil streams, delivery modes and periods, and the quantities offered in this sale, as well as minimum contract quantities, are shown on Attachment A .
4. Offers MUST be received by 1:00 p.m., Central Daylight Time, June 29, 2011; any offers received after 1:00 p.m. will be determined to be late and will be rejected, except as provided in SSP B.11, "Late offers, modifications of offers, and withdrawals of offers." Fully Executed Offer Guarantee shall be faxed to (504) 818-5343 or may be scanned and emailed to Kelly.Gele@spr.doe.gov and MUST be received not later than the time/date for receipt of offers. The original hardcopy must be received within 24 hours of the closing date for receipt of offers.

The mailing address for the original offer Guarantee is:
U.S. Department of Energy

Strategic Petroleum Reserve
900 Commerce Road East
New Orleans, LA 70123
Attn: Kelly Gele
5. Pursuant to SSP B.7, by submission of a binding offer, the State of Hawaii, for this sale, is entitled to purchase up to 900,000 barrels of SPR petroleum.
6. Pursuant to SSP B. 9 (e), DOE will inform simultaneously all offerors and other interested parties of the successful and unsuccessful offerors and their offer data by means of a public 'offer posting.' This offer posting will occur within one week after receipt of offers. This information will be provided by a posting on the Internet at the following address: http://www.spr.doe.gov/

NOTICE OF SALE<br>DE-NS96-11PO97000<br>SUPPLEMENTS AND AMENDMENTS TO THE STANDARD SALES PROVISIONS

For this sale only, the Standard Sales Provisions (SSPs) are supplemented or amended as follows:

1. SSP C.7(a) is modified to provide the following address for submission of a Jones Act waiver request.

U. S. Customs and Border Protection<br>Office of Regulations and Rulings<br>Chief, Cargo Security<br>Carriers and Immigration Branch<br>U.S. Department of Homeland Security<br>1300 Pennsylvania Avenue, NW<br>Mint Annex<br>Washington, D.C. 20229<br>Telephone No. (202) 572-8724<br>Fax: (202) 572-8727

2. SSP B.5, "Superfund" Tax on SPR Petroleum-Caution to Offerors, is supplemented as follows: The "Superfund" taxes are currently not imposed; however, purchasers are liable for Oil Spill Liability Trust Fund taxes of $\$ 0.08 / b a r r e l$ for all SPR crude oil streams. Additionally, purchasers are liable for state and local environmental fees, including the Federal Harbor Maintenance Fund fees, if applicable.
3. SSP B.17, SPR Crude Oil Streams and Delivery Points, is supplemented with the following information:

Minimum delivery lot sizes are 100,000 barrels for pipelines, 350,000 barrels for vessels, and 40,000 barrels for barges. Offerors are reminded, however, of their responsibility to comply with (1) any minimum tender provision of any pipelines by which they take delivery from an SPR terminal, and (2) the vessel usage and load rate restrictions specified in SSP C.8(c), "Vessel loading procedures."
4. SSP B.17, SPR Crude Oil Streams and Delivery Points, Paragraph (a) has been amended as follows:

- Delivery points (from Winnie, Texas): Change from "Shell 20-Inch Meter Station" to "Shell 20-Inch Pipeline."

5. SSP B. 18 (h), Notice of Sale Line Item Schedule - Petroleum Quantity, Quality, and Delivery Method, is supplemented with the following information.

The quality characteristics of the crude oil streams offered for sale are those cited in the Strategic Petroleum Reserve Crude Oil Assays.
6. SSP B. 27, Contract Documents, is amended as follows:

The $3{ }^{\text {rd }}$ sentence is deleted in its entirety.
The $4^{\text {th }}$ sentence shall read "The NS and the Provisions of the SSPs will be made applicable through incorporation by reference in the NA." The last sentence is deleted in its entirety.
7. SSP C.5, Delivery and transportation scheduling, is supplemented with the following information:
(a) Crude Oil Scheduling:

DM Petroleum Operations Company
New Orleans, Louisiana
Chuck Costanza, (504) 734-4733 (Primary)
Ned Scheppegrell (504) 734-4604 (Secondary)
DMCOL@spr.doe.gov
(b) Pipeline and Terminal contacts:
(i) Enterprise Products (Seaway) Freeport, TX Jeremy Head, (405) 239-5777
(ii) Enterprise Products (Seaway) Texas City, TX Ron Brown, (713) 393-1112
(iii) Enterprise Products (Jones Creek Tank Farm) Jones Creek, TX John Hazley, (979) 237-6756
Jimmy Neely, (979) 237-6751
(iv) Sun Marine Terminal, Nederland, TX

Glenda Davalos, (409) 721-4863
Control Room (409) 721-4845
Bill Wheeler, Marine Scheduler (409) 721-4812
Jona Newton, Pipeline Scheduler (409) 721-4823
(v) Unocal (Beaumont Terminal) Nederland, TX

Edward Whitten, Terminal Manager (409) 724-3311
Anita McGowin, Scheduler (409) 724-3215
Mark Maxwell, Scheduler (409) 724-3209
Jan Tomlin, Supervisor Accounting and Scheduling (409) 724-3226
(vi) ExxonMobil (Bryan Mound Pipeline to Texas City and Jones Creek) Cliff Clark, (713) 656-1590
Donny Pitts (backup), (713) 656-6063, or (713) 201-2540 (cell)
(vii) Shell Pipeline Company (Shell tie-in @ LCMS and Big Hill to East Houston) Jamie Hedrick, Scheduler (713) 241-8742
8. SSP C.5, Delivery and transportation scheduling, is amended as follows:

In the fourth sentence of paragraph (a), change "highest offered price" to "highest Price Adjustment Factor (PAF)".

In the fourth sentence of paragraph (c), change "highest-priced offer" to "highest PAF".
9. SSP C.12, Pipeline and Delivery Procedures, Paragraph (d) is deleted in its entirety and replaced with the following:
"The date of delivery, which will be recorded on the CODR (see Provision C.19), is the date delivery completed at the custody transfer point, as identified in the NS."
10. SSP C.13, Title and risk of loss, is supplemented as follows:

Enterprise Products (Seaway) Texas City - Title and risk of loss pass to the purchaser when the petroleum passes through the SPR Bryan Mound meter station.

Enterprise Products (Seaway) Freeport Terminal - Title and risk of loss pass to the purchaser when the petroleum passes through the Seaway Freeport dock meters.

Enterprise Products Jones Creek - Title and risk of loss pass to the purchaser when the petroleum passes into the SPR Bryan Mound meter station.

DOE Lake Charles Meter Station (Shell 22-inch Pipeline) - Title and risk of loss pass to the purchaser when the petroleum passes through the DOE Lake Charles (Shell 22) meter station.

SPR Site to purchaser's tank at SUN -Title and risk of loss pass to the purchaser at the purchaser's receiving tank flange at SUN.

Shell 20-inch (Port Arthur to East Houston)/ DOE 36-inch Big Hill connection Title and risk of loss pass to the purchaser when the petroleum passes through the SPR Big Hill Meter Station.

Unocal Terminal to Pipeline - Title and risk of loss pass to the purchaser when the petroleum passes from the Unocal shore tank flange.

Unocal Terminal to Vessel - Title and risk of loss pass to the purchaser when the petroleum passes through the Unocal dock meters.
11. SSP C.16, Price Adjustments for Quality Differentials, is deleted in its entirety and replaced with the following:
"(a) The NS will specify quality price adjustments applicable to the crude oil streams offered for sale. Unless otherwise specified by the NS, quality price adjustments will be applied to the amount of variation by which the API gravity of the SPR crude oil delivered differs by more than plus or minus five-tenths of one degree API ( $+/-0.5^{\circ}$ API) from the API gravity of the SPR crude oil stream contracted for as published in the NS.
(b) Unless otherwise specified by the NS, quality price adjustments will be applied to the amount of variation by which the Sulfur mass percent of the SPR crude oil delivered differs by more than plus or minus one-tenth of one percent of total Sulfur ( $+/-0.10$ mass, \%) from the total Sulfur of the SPR crude oil stream contracted for as published in the NS.
(c) Price adjustments for the SPR crude oil are expected to be similar to commercial crude oil quality price adjustment methodologies for equivalent quality crude oil, taking into account the amount by which the actual values exceed the allowable variations set forth in paragraphs (a) and (b) above."
12. SSP C.16, Price Adjustments for Quality Differentials, is supplemented with the following information:

Price adjustments for SPR crude oil streams offered for sale will be calculated using the GravCap tables at Attachment C.

Note: For calculation purposes the following will apply:
(a) API Gravity for each cargo reported in API Gravity $0.01^{\circ}$ increments shall be rounded to the nearest tenth $\left(0.1^{\circ}\right)$ of one degree API.
(b) Total Sulfur mass $\%$ for each cargo reported in 0.001 mass $\%$ increments shall be rounded to the nearest one-hundredth of one percent $(0.01 \%)$ of total Sulfur.
13. SSP C. 19 - Delivery Documentation, Appendix A to Part 625 - Standard Sales Provisions, Exhibits, and Exhibit E, are amended as follows:

The Strategic Petroleum Reserve Crude Oil Delivery Report Number is changed to SPRPMO F-416.1-3.
14. SSP C.22, Billing and Payment, paragraph (d) is deleted in its entirety and replaced with the following:
" (d) In the event that the bank refuses to honor the draft against the letter of credit, the purchaser shall be responsible for paying the principal and any interest, administrative costs and penalties due (see Provision C.24) from the due date."
15. SSP C.23, Method of Payments, Paragraphs (a) and (d) are deleted in their entirety and replaced with the following:
"(a) All amounts payable by the purchaser shall be paid by deposit to the account of the U.S. Treasury by wire transfer of funds over the Fedwire Deposit System Network. The information to be included in each wire transfer will be provided in the NS. All wire deposit electronic funds transfer costs will be borne by the purchaser."
(d) Notwithstanding any other contract provision, DOE may via a draft message request a wire transfer of funds against the standby letter of credit at any time for payment of monies due under the contract and remaining unpaid in violation of the terms of the contract. These would include but not be limited to interest, administrative costs, penalties, liquidated damages, demurrage, amounts owing for any services provided under the contract, and the difference between the contract price and price received on the resale of undelivered petroleum as defined in Provision C.25."
16. SSP C.24, Interest, is deleted in its entirety and replaced with the following:
"C. 24 Interest, Administrative Costs and Penalties
(a) Amounts due and payable by the purchaser or its bank that are not paid in accordance with the provisions governing such payments shall bear interest from the day the invoice is mailed or transmitted to the purchaser until the date payment is received by the Government.
(b) Administrative Costs will be charged to cover the expense of collecting delinquent debt. The current rate is $\$ 7.25$.
(c) A penalty will be assessed at the rate of $6 \%$ per year. The penalty charge accrues from the day the invoice is mailed or transmitted to the purchaser, and is assessed on any portion of the debt that is outstanding for more than 90 days, including any interest and administrative costs.
17. SSP C.32, Disputes, is amended as follows:

Paragraph (c) " $\$ 50,000 "$ is changed to " $\$ 100,000 "$, and the following language is added to the certification "; and that I am duly authorized to certify the claim on behalf of the purchaser."

## 18. Exhibit C - SAMPLE OFFER GUARNTEE STANDBY LETTER OF CREDIT is

 amended as follows:- In the paragraph beginning with "Upon receipt of the U.S. Department...", in the first sentence, delete "either" and ", or by electronic funds transfer through the Automated Clearing House Network, using the Federal Remittance Express Program."
- In the paragraph beginning with "This Letter of Credit is subject to the Uniform..", replace " 1993 " with " 2007 " and replace " 500 " with " 600 ".
- In the paragraph beginning with "We hereby agree with the drawers, ..." delete "the drawers, endorsers and bona fide holders" and replace with "you".
- After the paragraph beginning with "We hereby agree with the drawers...", insert the following paragraph:
- "In the event of a bankruptcy filing by the applicant prior to the expiration date of this letter of credit, the expiration date of this letter of credit will automatically be extended by one hundred twenty (120) calendar days from the expiration date."

Exhibit C - Instructions for Offer Letter of Credit, is amended as follows:

- Item 3. "Banks shall fill in blanks except those in the drawing statement (Exhibit C). The drawing statement is in all capital letters. Do not fill in underlined blanks."
- Item 4. "The information to be included and format to be used for a wire transfer as a deposit over the Fedwire Deposit System Network is included in the Notice of Sale. (See Attachment B)"

19. Exhibit D - SAMPLE PAYMENT AND PEFORMANCE LETTER OF CREDIT is amended as follows:

- In the paragraph beginning with "Upon receipt of the U.S. Department...", in the first sentence, delete "either" and ", or by electronic funds transfer through the Automated Clearing House Network, using the Federal Remittance Express Program"
- In the paragraph beginning with "This Letter of Credit is subject to the Uniform..", replace " 1993 " with " 2007 " and replace " 500 " with " 600 ".
- In the paragraph beginning with "We hereby agree with the drawers, ..." delete "the drawers, endorsers and bona fide holders" and replace with "you".
- After the paragraph beginning with "We hereby agree with the drawers...", insert the following paragraph:
- "In the event of a bankruptcy filing by the applicant prior to the expiration date of this letter of credit, the expiration date of this letter of credit will automatically be extended by one hundred twenty (120) calendar days from the expiration date."

Exhibit D - Instructions for Payment and Performance Letter of Credit, is amended as follows:

- Item 3. "Banks shall fill in blanks except those in the drawing statements (Exhibit D, a. and b.). The drawing statements are in all capital letters. Do not fill in underlined blanks."
- Item 4. "The information to be included and format to be used for a wire transfer as a deposit over the Fedwire Deposit System Network is included in the Notice of Sale. (See Attachment B)"


## 20. Contract Price Adjustment

(a) The unit price for crude oil under the contract shall be the Delivery Reference Price (DRP) adjusted by the Price Adjustment Factor (PAF) as
provided in this provision, subject to any additional adjustments provided for elsewhere in the contract.
(b) The terms used in this provision are defined as follows:

## Base Reference Price (BRP)

(1) The BRP for all SPR crude oil streams offered for sale is the average (to the $\$ 0.0001$ ) of the Daily Index Prices as computed by the Government from prices for the most recent five days on which trading activity occurred, ending two days before the date of the Notice of Sale.
(2) For this Notice of Sale, the BRP is $\$ 112.7800$ for all SPR crude oil streams.

## Daily Index Price (DIP)

The DIP applicable to all SPR sweet crude oil streams offered for sale is the volume-weighted average (to the $\$ 0.001$ ) of all trading day transactions assessed for the near month for Light Louisiana Sweet crude oil at St. James, LA, as published for the date by Petroleum Argus.

Delivery Reference Price (DRP) - The DRP is the average (to the \$0.0001) of the Daily Index Prices for the five days surrounding the delivery "price date" as stated in Block 7, "PRICE DATE", on the Strategic Petroleum Reserve Crude Oil Delivery Report: SPRPMO F-416.1-3.
(1) For pipeline deliveries, the "price date" shall be the date the shipment completed at the custody transfer point, in accordance with SSP C.12, as amended by the Notice of Sale.
(2) For vessel deliveries, the "price date" shall be the date vessel loading completed in accordance with SSP C.19.
(3) The "five days surrounding the price date" means the following five days: The midday, day three, is the price date as determined above (unless such day is a day on which trading activity did not occur, in which case the midday shall be the succeeding day on which trading activity did occur), the two days preceding the midday of the five day period on which trading activity occurred and the two days succeeding the midday on which trading activity occurred.

Price Adjustment Factor (PAF) - The PAF is the purchaser's offered price minus the Base Reference Price (BRP). The PAF may be either positive or negative.

## GENERIC EXAMPLES:

Delivery Reference Price + Price Adjustment Factor = Unit Price per Barrel (subject to any additional adjustments provided for elsewhere in the contract):

Example 1:
Assume: Offered Price = \$101.2534
BRP $=\$ 101.0015$ (5-day average specified in Notice of Sale)
PAF $=+\$ 0.2519$
DRP $=\$ 101.5055$ (5-day average surrounding price date)
Unit Price/bbl = \$101.5055 + \$0.2519, or \$101.7574
Example 2:
Assume: Offered Price = \$100.7564
BRP $=\$ 101.0015$ (5-day average specified in Notice of Sale)
PAF $=-\$ 0.2451$
DRP $=\$ 101.5055$ (5-day average surrounding price date)
Unit Price/bbl = \$101.5055+ (-\$0.2451), or \$101.2604
21. The West Hackberry Sweet stream may be treated with $\mathrm{H}_{2} \mathrm{~S}$ scavenger. One of the following approved scavengers would be utilized for this purpose:

- EC9085A SULFA-CHECK $\circledR^{\circledR} \mathrm{H}_{2}$ S Scavenger - Mfg. NALCO
- MC MX 8-1519 - Mfg. MULTI CHEM
- ENVIRO SCRUB LM - Mfg. QUAKER
- GAS TREAT 157 - Mfg. CHAMPION TECHNOLOGIES, INC.
- GAS TREAT 159- Mfg. CHAMPION TECHNOLOGIES, INC.


## ATTACHMENT A

## CRUDE OIL QUANTITIES OFFERED FOR SALE

 U. S. DEPARTMENT OF ENERGY - STRATEGIC PETROLEUM RESERVEThe crude oil streams, delivery mode and periods, daily maximum delivery capability, and quantities of crude oil offered in this sale are as follows:

MLI $=\quad$ Master Line Item/Crude Oil Stream
DLI $=\quad$ Delivery Line Item/Maximum Quantity per Delivery Mode and Period
MINQ $=\quad$ Minimum Contract Quantity Per DLI
$\mathrm{MB}=\quad$ Thousand of Barrels
$\mathrm{MBD}=\quad$ SPR's estimated daily maximum delivery limit capability for each delivery line item, consistent with current capabilities.

| Crude Oil <br> Stream <br> MLI | DLI - Mode of Delivery | Delivery Period Days | MLI Qty <br> (MB) | MBD <br> Limit | DLI Qty <br> (MB) | MIN Qty <br> (MB) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bryan Mound Sweet 001 |  |  | 10000 |  |  |  |
|  | DLI-A Pipeline <br> @ Jones Creek Tank Farm | 01-31 |  | 400 | 10000 | 200 |
|  | DLI-B Vessel <br> @ Freeport | 01-31 |  | 400 | 10000 | 350 |
|  | DLI-H Pipeline <br> @ Texas City | 01-31 |  | 1000 | 10000 | 200 |
|  | DLI-I Vessel <br> @ Texas City | 01-31 |  | 300 | 9300 | 350 |


| Crude Oil | DLI - Mode <br> Stream | Delivery <br> of Delivery | MLI Qty <br> Period <br> MLI | $\underline{(M B)}$ | MBD | Limit |
| :--- | :--- | :---: | :---: | :--- | :---: | :---: | | DLI Qty |
| :---: |
| (MB) |$\quad$| MIN Qty |
| :---: |
| (MB) |

Sweet 004

| DLI-A Pipeline <br> @ Sun | 01-31 | 775 | 10000 | 200 |
| :---: | :---: | :---: | :---: | :---: |
| DLI-B Vessel | 01-31 | 1085 | 10000 | 350 |
| @ Sun |  |  |  |  |
| DLI-E Barge | 01-15 | 90 | 1350 | 120 |
| @ Sun |  |  |  |  |
| DLI-H Pipeline | 01-31 | 520 | 10000 | 200 |
| @ Lake Charles |  |  |  |  |
| Meter Station |  |  |  |  |

> A-1

| Crude Oil Stream MLI | DLI - Mode of Delivery | Delivery Period Days | MLI Qty (MB) | MBD <br> $\underline{\text { Limit }}$ | $\begin{aligned} & \text { DLI Qty } \\ & (\mathrm{MB}) \end{aligned}$ | MIN Qty (MB) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Big Hill |  |  | 10000 |  |  |  |
| Sweet 009 |  |  |  |  |  |  |
|  | DLI-A Pipeline | 01-31 |  | 775 | 10000 | 200 |
|  | @ Sun |  |  |  |  |  |
|  | DLI-B Vessel | 01-31 |  | 1085 | 10000 | 350 |
|  | @ Sun |  |  |  |  |  |
|  | DLI-E Barge | 16-31 |  | 90 | 1440 | 120 |
|  | @ Sun |  |  |  |  |  |
|  | DLI-H Pipeline | 01-31 |  | 30 | 1550 | 200 |
|  | @ Unocal |  |  |  |  |  |
|  | DLI-I Vessel | 01-31 |  | 200 | 6200 | 350 |
|  | @ Unocal |  |  |  |  |  |
|  | DLI-L Pipeline | 01-31 |  | 180 | 5580 | 200 |
|  | @ Shell 20-inch |  |  |  |  |  |
|  | Pipeline |  |  |  |  |  |

## Attachment B

## INSTRUCTIONS FOR WIRE TRANSFER OF FUNDS

Purchasers shall pay invoices by wire transfer of funds over the Fedwire Deposit System Network (FDS). Purchasers will provide the information in items 5, 7, and 8 to the sending bank, and the sending bank will provide the information in items 3, 4, and 6. All items MUST appear on all transfers as they appear below.

|  | FIELD NAME | LENGTH | VALUE |
| :--- | :--- | :--- | :--- |
| Item 1 | Treasury Department Code | 9 | 021030004 |
| Item 2 | Type-subtype-code | 4 | 1000 |
| Item 3 | Sender-dfi\# | 9 | Sender ABA-number |
| Item 4 | Sender-ref-\# | 16 | Filled by sender |
| Item 5 | Amount | 18 | use dollar sign, commas, <br> and decimal point |
| Item 6 | Sender-dfi-info | 80 | Filled by sender |
| Item 7 | Receiver-dfi-info | 80 | TREAS <br> NYC/CTR/BNF=/AC- <br> 89000001 |

THE RECEIVER-DFI-INFO FIELD IS OF CRITICAL IMPORTANCE. IT MUST APPEAR IN THE PRECISE MANNER SHOWN TO ALLOW FOR THE AUTOMATED PROCESSING AND CLASSIFICATION OF THE FUNDS TRANSFER MESSAGE

| Item 8 | Free-text-line-1 | 80 | (Contract No.) |
| :--- | :--- | :--- | :--- |
|  | Free-text-line-1 | 80 | (Invoice No.) |
|  | Free-text-line-1 | 80 | (SPRCODR No.) |

## GRAVCAP, INC. <br> ADJUSTMENT AUTHORIZATION

TABLES OF DIFFERENTIALS FOR USE IN DETERMINING ADJUSTMENTS FOR DIFFERENCE IN GRAVITY OF CRUDE PETROLEUM

WHITE CAP SYSTEM - BONITO PIPE LINE COMPANY - SHIP SHOAL SYSTEM - CAPLINE SYSTEM

| $\begin{gathered} \text { API } \\ \text { GRAVITY } \end{gathered}$ | $\begin{gathered} \hline \text { DIFF. } \\ \text { PER BBL } \end{gathered}$ | API GRAVITY | $\begin{gathered} \hline \text { DIFF. } \\ \text { PER BBL } \end{gathered}$ | API GRAVITY | $\begin{gathered} \hline \text { DIFF. } \\ \text { PER BBL } \end{gathered}$ | API GRAVITY | $\begin{gathered} \hline \text { DIFF. } \\ \text { PER BBL } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 |

Attachment C
GRAVCAP TABLES
DE-NS96-11PO97000
Amendment 001

| API GRAVITY | DIFF. PER BBL | API GRAVITY | DIFF. PER BBL | API GRAVITY | DIFF. PER BBL | API GRAVITY | DIFF. PER BBL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 |

GRAVCAP, INC.
ADJUSTMENT AUTHORIZATION

TABLES OF DIFFERENTIALS FOR USE IN DETERMINING ADJUSTMENTS FOR DIFFERENCE IN GRAVITY OF CRUDE PETROLEUM

WHITE CAP SYSTEM - BONITO PIPE LINE COMPANY - SHIP SHOAL SYSTEM - CAPLINE SYSTEM

| 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 |

GRAVCAP TABLES Amendment 001

| API GRAVITY | DIFF. PER BBL | API GRAVITY | DIFF. PER BBL | API GRAVITY | DIFF. PER BBL | API DIFF. <br> GRAVITY PER BBL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 37.0 | 5.040 | 43.0 | 5.100 | 49.0 | 4.500 | 55.03 .600 |
| 37.1 | 5.040 | 43.1 | 5.100 | 49.1 | 4.485 |  |
| 37.2 | 5.040 | 43.2 | 5.100 | 49.2 | 4.470 | For API GRAVITY values above $55.0^{\circ} \mathrm{API}$ the differential continues to decline $0.015 / \mathrm{bbl}$. per $0.1^{\circ} \mathrm{API}$ GRAVITY. |
| 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 |  |

ADJUSTMENT AUTHORIZATION
TABLES OF DIFFERENTIALS FOR USE IN DETERMINING ADJUSTMENTS FOR
DIFFERENCE IN SULFUR CONTENT FOR CRUDE PETROLEUM
WHITE CAP SYSTEM - BONITO PIPE LINE COMPANY - SHIP SHOAL SYSTEM - CAPLINE SYSTEM

| PERCENT SULFUR | $\begin{aligned} & \hline \text { DIFF. } \\ & \text { PER } \\ & \text { BBL } \end{aligned}$ | PERCENT SULFUR | $\begin{aligned} & \hline \text { DIFF. } \\ & \text { PER } \\ & \text { BBL } \end{aligned}$ | PERCENT SULFUR | $\begin{aligned} & \hline \text { DIFF. } \\ & \text { PER } \\ & \text { BBL } \end{aligned}$ | PERCENT SULFUR | DIFF. <br> PER BBL | PERCENT SULFUR | $\begin{aligned} & \hline \text { DIFF. } \\ & \text { PER } \\ & \text { BBL } \end{aligned}$ | PERCENT SULFUR | $\begin{gathered} \text { DIFF. } \\ \text { PER BBL } \end{gathered}$ | PERCENT SULFUR | $\begin{gathered} \text { DIFF. } \\ \text { PER BBL } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.00 | 1.000 | 0.60 | 1.600 | 1.20 | 2.200 | 1.80 | 2.800 | 2.40 | 3.400 | 3.00 | 4.000 | 3.60 | 4.600 |
| 0.01 | 1.010 | 0.61 | 1.610 | 1.21 | 2.210 | 1.81 | 2.810 | 2.41 | 3.410 | 3.01 | 4.010 | 3.61 | 4.610 |
| 0.02 | 1.020 | 0.62 | 1.620 | 1.22 | 2.220 | 1.82 | 2.820 | 2.42 | 3.420 | 3.02 | 4.020 | 3.62 | 4.620 |
| 0.03 | 1.030 | 0.63 | 1.630 | 1.23 | 2.230 | 1.83 | 2.830 | 2.43 | 3.430 | 3.03 | 4.030 | 3.63 | 4.630 |
| 0.04 | 1.040 | 0.64 | 1.640 | 1.24 | 2.240 | 1.84 | 2.840 | 2.44 | 3.440 | 3.04 | 4.040 | 3.64 | 4.640 |
| 0.05 | 1.050 | 0.65 | 1.650 | 1.25 | 2.250 | 1.85 | 2.850 | 2.45 | 3.450 | 3.05 | 4.050 | 3.65 | 4.650 |
| 0.06 | 1.060 | 0.66 | 1.660 | 1.26 | 2.260 | 1.86 | 2.860 | 2.46 | 3.460 | 3.06 | 4.060 | 3.66 | 4.660 |
| 0.07 | 1.070 | 0.67 | 1.670 | 1.27 | 2.270 | 1.87 | 2.870 | 2.47 | 3.470 | 3.07 | 4.070 | 3.67 | 4.670 |
| 0.08 | 1.080 | 0.68 | 1.680 | 1.28 | 2.280 | 1.88 | 2.880 | 2.48 | 3.480 | 3.08 | 4.080 | 3.68 | 4.680 |
| 0.09 | 1.090 | 0.69 | 1.690 | 1.29 | 2.290 | 1.89 | 2.890 | 2.49 | 3.490 | 3.09 | 4.090 | 3.69 | 4.690 |
| 0.10 | 1.100 | 0.70 | 1.700 | 1.30 | 2.300 | 1.90 | 2.900 | 2.50 | 3.500 | 3.10 | 4.100 | 3.70 | 4.700 |
| 0.11 | 1.110 | 0.71 | 1.710 | 1.31 | 2.310 | 1.91 | 2.910 | 2.51 | 3.510 | 3.11 | 4.110 | 3.71 | 4.710 |
| 0.12 | 1.120 | 0.72 | 1.720 | 1.32 | 2.320 | 1.92 | 2.920 | 2.52 | 3.520 | 3.12 | 4.120 | 3.72 | 4.720 |
| 0.13 | 1.130 | 0.73 | 1.730 | 1.33 | 2.330 | 1.93 | 2.930 | 2.53 | 3.530 | 3.13 | 4.130 | 3.73 | 4.730 |
| 0.14 | 1.140 | 0.74 | 1.740 | 1.34 | 2.340 | 1.94 | 2.940 | 2.54 | 3.540 | 3.14 | 4.140 | 3.74 | 4.740 |
| 0.15 | 1.150 | 0.75 | 1.750 | 1.35 | 2.350 | 1.95 | 2.950 | 2.55 | 3.550 | 3.15 | 4.150 | 3.75 | 4.750 |
| 0.16 | 1.160 | 0.76 | 1.760 | 1.36 | 2.360 | 1.96 | 2.960 | 2.56 | 3.560 | 3.16 | 4.160 | 3.76 | 4.760 |
| 0.17 | 1.170 | 0.77 | 1.770 | 1.37 | 2.370 | 1.97 | 2.970 | 2.57 | 3.570 | 3.17 | 4.170 | 3.77 | 4.770 |
| 0.18 | 1.180 | 0.78 | 1.780 | 1.38 | 2.380 | 1.98 | 2.980 | 2.58 | 3.580 | 3.18 | 4.180 | 3.78 | 4.780 |
| 0.19 | 1.190 | 0.79 | 1.790 | 1.39 | 2.390 | 1.99 | 2.990 | 2.59 | 3.590 | 3.19 | 4.190 | 3.79 | 4.790 |
| 0.20 | 1.200 | 0.80 | 1.800 | 1.40 | 2.400 | 2.00 | 3.000 | 2.60 | 3.600 | 3.20 | 4.200 | 3.80 | 4.800 |
| 0.21 | 1.210 | 0.81 | 1.810 | 1.41 | 2.410 | 2.01 | 3.010 | 2.61 | 3.610 | 3.21 | 4.210 | 3.81 | 4.810 |
| 0.22 | 1.220 | 0.82 | 1.820 | 1.42 | 2.420 | 2.02 | 3.020 | 2.62 | 3.620 | 3.22 | 4.220 | 3.82 | 4.820 |
| 0.23 | 1.230 | 0.83 | 1.830 | 1.43 | 2.430 | 2.03 | 3.030 | 2.63 | 3.630 | 3.23 | 4.230 | 3.83 | 4.830 |
| 0.24 | 1.240 | 0.84 | 1.840 | 1.44 | 2.440 | 2.04 | 3.040 | 2.64 | 3.640 | 3.24 | 4.240 | 3.84 | 4.840 |
| 0.25 | 1.250 | 0.85 | 1.850 | 1.45 | 2.450 | 2.05 | 3.050 | 2.65 | 3.650 | 3.25 | 4.250 | 3.85 | 4.850 |
| 0.26 | 1.260 | 0.86 | 1.860 | 1.46 | 2.460 | 2.06 | 3.060 | 2.66 | 3.660 | 3.26 | 4.260 | 3.86 | 4.860 |
| 0.27 | 1.270 | 0.87 | 1.870 | 1.47 | 2.470 | 2.07 | 3.070 | 2.67 | 3.670 | 3.27 | 4.270 | 3.87 | 4.870 |
| 0.28 | 1.280 | 0.88 | 1.880 | 1.48 | 2.480 | 2.08 | 3.080 | 2.68 | 3.680 | 3.28 | 4.280 | 3.88 | 4.880 |
| 0.29 | 1.290 | 0.89 | 1.890 | 1.49 | 2.490 | 2.09 | 3.090 | 2.69 | 3.690 | 3.29 | 4.290 | 3.89 | 4.890 |


| PERCENT <br> SULFUR | $\begin{aligned} & \text { DIFF. } \\ & \text { PER } \\ & \text { BBL } \end{aligned}$ | PERCENT SULFUR | $\begin{aligned} & \text { DIFF. } \\ & \text { PER } \\ & \text { BBL } \end{aligned}$ | PERCENT SULFUR | $\begin{aligned} & \text { DIFF. } \\ & \text { PER } \\ & \text { BBL } \end{aligned}$ | PERCENT SULFUR | DIFF. <br> PER BBL | PERCENT SULFUR | $\begin{aligned} & \text { DIFF. } \\ & \text { PER } \\ & \text { BBL } \end{aligned}$ | PERCENT <br> SULFUR | $\begin{gathered} \text { DIFF. } \\ \text { PER BBL } \end{gathered}$ | PERCENT <br> SULFUR | DIFF. <br> PER BBL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.30 | 1.300 | 0.90 | 1.900 | 1.50 | 2.500 | 2.10 | 3.100 | 2.70 | 3.700 | 3.30 | 4.300 | 3.90 | 4.900 |
| 0.31 | 1.310 | 0.91 | 1.910 | 1.51 | 2.510 | 2.11 | 3.110 | 2.71 | 3.710 | 3.31 | 4.310 | 3.91 | 4.910 |
| 0.32 | 1.320 | 0.92 | 1.920 | 1.52 | 2.520 | 2.12 | 3.120 | 2.72 | 3.720 | 3.32 | 4.320 | 3.92 | 4.920 |
| 0.33 | 1.330 | 0.93 | 1.930 | 1.53 | 2.530 | 2.13 | 3.130 | 2.73 | 3.730 | 3.33 | 4.330 | 3.93 | 4.930 |
| 0.34 | 1.340 | 0.94 | 1.940 | 1.54 | 2.540 | 2.14 | 3.140 | 2.74 | 3.740 | 3.34 | 4.340 | 3.94 | 4.940 |
| 0.35 | 1.350 | 0.95 | 1.950 | 1.55 | 2.550 | 2.15 | 3.150 | 2.75 | 3.750 | 3.35 | 4.350 | 3.95 | 4.950 |
| 0.36 | 1.360 | 0.96 | 1.960 | 1.56 | 2.560 | 2.16 | 3.160 | 2.76 | 3.760 | 3.36 | 4.360 | 3.96 | 4.960 |
| 0.37 | 1.370 | 0.97 | 1.970 | 1.57 | 2.570 | 2.17 | 3.170 | 2.77 | 3.770 | 3.37 | 4.370 | 3.97 | 4.970 |
| 0.38 | 1.380 | 0.98 | 1.980 | 1.58 | 2.580 | 2.18 | 3.180 | 2.78 | 3.780 | 3.38 | 4.380 | 3.98 | 4.980 |
| 0.39 | 1.390 | 0.99 | 1.990 | 1.59 | 2.590 | 2.19 | 3.190 | 2.79 | 3.790 | 3.39 | 4.390 | 3.99 | 4.990 |
| 0.40 | 1.400 | 1.00 | 2.000 | 1.60 | 2.600 | 2.20 | 3.200 | 2.80 | 3.800 | 3.40 | 4.400 | 4.00 | 5.000 |
| 0.41 | 1.410 | 1.01 | 2.010 | 1.61 | 2.610 | 2.21 | 3.210 | 2.81 | 3.810 | 3.41 | 4.410 |  |  |
| 0.42 | 1.420 | 1.02 | 2.020 | 1.62 | 2.620 | 2.22 | 3.220 | 2.82 | 3.820 | 3.42 | 4.420 | For Sulfur Values above $4.00 \%$, the differential continues to increase 0.01/BBL per 0.01 Percent Sulfur |  |
| 0.43 | 1.430 | 1.03 | 2.030 | 1.63 | 2.630 | 2.23 | 3.230 | 2.83 | 3.830 | 3.43 | 4.430 |  |  |  |
| 0.44 | 1.440 | 1.04 | 2.040 | 1.64 | 2.640 | 2.24 | 3.240 | 2.84 | 3.840 | 3.44 | 4.440 |  |  |  |
| 0.45 | 1.450 | 1.05 | 2.050 | 1.65 | 2.650 | 2.25 | 3.250 | 2.85 | 3.850 | 3.45 | 4.450 |  |  |  |
| 0.46 | 1.460 | 1.06 | 2.060 | 1.66 | 2.660 | 2.26 | 3.260 | 2.86 | 3.860 | 3.46 | 4.460 |  |  |  |
| 0.47 | 1.470 | 1.07 | 2.070 | 1.67 | 2.670 | 2.27 | 3.270 | 2.87 | 3.870 | 3.47 | 4.470 |  |  |  |
| 0.48 | 1.480 | 1.08 | 2.080 | 1.68 | 2.680 | 2.28 | 3.280 | 2.88 | 3.880 | 3.48 | 4.480 |  |  |  |
| 0.49 | 1.490 | 1.09 | 2.090 | 1.69 | 2.690 | 2.29 | 3.290 | 2.89 | 3.890 | 3.49 | 4.490 |  |  |  |
| 0.50 | 1.500 | 1.10 | 2.100 | 1.70 | 2.700 | 2.30 | 3.300 | 2.90 | 3.900 | 3.50 | 4.500 |  |  |  |
| 0.51 | 1.510 | 1.11 | 2.110 | 1.71 | 2.710 | 2.31 | 3.310 | 2.91 | 3.910 | 3.51 | 4.510 |  |  |  |
| 0.52 | 1.520 | 1.12 | 2.120 | 1.72 | 2.720 | 2.32 | 3.320 | 2.92 | 3.920 | 3.52 | 4.520 |  |  |  |
| 0.53 | 1.530 | 1.13 | 2.130 | 1.73 | 2.730 | 2.33 | 3.330 | 2.93 | 3.930 | 3.53 | 4.530 |  |  |  |
| 0.54 | 1.540 | 1.14 | 2.140 | 1.74 | 2.740 | 2.34 | 3.340 | 2.94 | 3.940 | 3.54 | 4.540 |  |  |  |
| 0.55 | 1.550 | 1.15 | 2.150 | 1.75 | 2.750 | 2.35 | 3.350 | 2.95 | 3.950 | 3.55 | 4.550 |  |  |  |
| 0.56 | 1.560 | 1.16 | 2.160 | 1.76 | 2.760 | 2.36 | 3.360 | 2.96 | 3.960 | 3.56 | 4.560 |  |  |  |
| 0.57 | 1.570 | 1.17 | 2.170 | 1.77 | 2.770 | 2.37 | 3.370 | 2.97 | 3.970 | 3.57 | 4.570 |  |  |  |
| 0.58 | 1.580 | 1.18 | 2.180 | 1.78 | 2.780 | 2.38 | 3.380 | 2.98 | 3.980 | 3.58 | 4.580 |  |  |  |
| 0.59 | 1.590 | 1.19 | 2.190 | 1.79 | 2.790 | 2.39 | 3.390 | 2.99 | 3.990 | 3.59 | 4.590 |  |  |  |

