

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE	PAGE OF PAGES 1 5
2. AMENDMENT/MODIFICATION NUMBER 0003		3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQUISITION NUMBER	5. PROJECT NUMBER (If applicable)	
6. ISSUED BY U.S. Department of Energy SPRPMO 900 Commerce Road East New Orleans, LA 70123		CODE 01601	7. ADMINISTERED BY (If other than Item 6)		CODE
8. NAME AND ADDRESS OF CONTRACTOR (Number, street, county, State and ZIP Code) Shell Trading (US) Company 1000 Main St. 11 th Floor Houston, TX 77010			<input checked="" type="checkbox"/>	9A. AMENDMENT OF SOLICITATION NUMBER	
			<input type="checkbox"/>	9B. DATED (SEE ITEM 11)	
			<input checked="" type="checkbox"/>	10A. MODIFICATION OF CONTRACT/ORDER NUMBER 22PO0006	
				10B. DATED (SEE ITEM 13) 01/21/2022	
CODE		FACILITY CODE			

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
(a) By completing items 8 and 15, and returning copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted;
or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.
If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)


**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS.
IT MODIFIES THE CONTRACT/ORDER NUMBER AS DESCRIBED IN ITEM 14.**

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NUMBER IN ITEM 10A.
<input type="checkbox"/>	
<input type="checkbox"/>	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
<input checked="" type="checkbox"/>	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Section 10, "Changes"
<input type="checkbox"/>	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Exchange Agreement No. 22PO0006 is modified as shown on the attached pages.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.	
15A. NAME AND TITLE OF SIGNER (Type or print) Sean Spansel, Crude Oil Trading Manager	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Mary C. Roark
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED 15 Nov 2023
16B. UNITED STATES OF AMERICA Digitally signed by MARY ROARK Date: 2023.11.15 17:00:44 -06'00'	16C. DATE SIGNED 11/15/2023

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Section 2 – Custody Transfer – The following return sites are added. All other provisions of the section remain the same.

Sun Tank to Big Hill

Custody transfer quantity and quality measurements will be the DOE meter skid and inline sampler located at the Sun Marine Terminal. Secondary measurement for quantity will be on the Sun shore tank and quality based on manual grab samples taken at the Sun/DOE inline sampler. The API Gravity, Sediment and Water, and Sulfur content will be performed by the DOE M&O contracted third party inspector. Contractor shall have the right to have a representative present to witness all sampling, measurements and testing analysis. The DOE M&O contracted third party inspection company will witness all measurement and testing and perform testing.

Phillips 66 Tanks to Big Hill

Custody transfer quantity and quality measurements will be the P66 tank gauge. Secondary custody transfer quantity and quality measurements will be the Big Hill site meter and inline sampler for deliveries into the Big Hill pipeline. The API Gravity, Sediment and Water, and Sulfur content will be performed by the DOE M&O contracted third party inspector lab. Contractor shall have the right to have a representative present to witness all sampling, measurements and testing analysis. The DOE M&O contracted third party inspection company will witness all measurement and testing and perform testing. Customers are also liable for \$0.13 per barrel charge for use of the P66 connection into the Big Hill site. The SPR will rebill charges if incurred from the terminal operator.

Section 5 – Payment -

Contractor agrees to pay a fixed rate of (b) (4) against all actual (NSV) barrels delivered in the (b) (4) November 14 – December 31, 2023 delivery period. The premium barrels and deferred premium barrels are due to the SPR when the exchange balance is returned in this period. All other provisions and prior modifications to this section remain unchanged.

Basis Volume	Modified Premium Rate	Modified Premium Barrels	Basis + Modified Premium
(b) (4)			

Section 17 – Oil Quality: The following is added to the first paragraph:

The Crude Oil offered for return to the DOE shall meet the specifications in Exhibit A. Acceptance of any Crude Oil offered for delivery will be subject to the Contracting Officer’s approval. The Contractor is required to supply: 1) a completed Sour Quality Statement Exhibit A of Crude Oil nominated for return into the SPR, 2) Certificate(s) of Analysis for the stream(s) identified on the Exhibit A will be recent (no older than 12 months) from the start of the return period (Generic domestic sour crude blends would need to have component streams identified and supported by COAs). An applicable Comprehensive Assay ([link to SPR Comprehensive Assays for example](#)) which supports data Contractors supply in Sour Quality Statement Exhibit A and submitted COAs, must be submitted to the SPR 30 days prior to delivery of Crude Oil to the SPR. Crudes which consist of blended market crude streams will require tank blend schedule with associated test results to be submitted at the same time with associated Comprehensive Assay 30 days prior to the return period. See table below for example of blend schedule. The SPR seeks to store crude oil with the widest range of application in the domestic market. To preserve SPR cavern homogeneity and maintain overall integrity of its respective crude streams, only crude oils of similar composition are commingled in storage. Please note that if a blended crude is to be submitted for

consideration, then all component streams offered for blend must not exceed 45°API gravity or fall below 27.0° API gravity to be considered suitable for injection into SPR caverns. Any component(s) exceeding these thresholds will be cause for rejection. Due to natural geothermic heating, crude oils that demonstrate high bubble point pressures (BPP) and high gas-oil ratios (GOR) produce increased vapor pressure at standard cavern storage temperatures. High BPP-GOR oils have the potential to impact the existing SPR oil inventory, increasing levels of light end gases (C1-C3) and greatly restricting immediate deliverability which is the critical mission of the SPR. Light ends may not be immediately observed through analysis at ambient temperatures, but are entrained in certain crude types and released during underground storage. Lighter ends, Methane, Ethane and Propane are the single largest contributor to vapor pressure increase. Crude oils displaying C1-C3 volume percent outside of the required specifications and determined by the allowed methods listed in Exhibit A, will be considered outside of the SPR's acceptance criteria and deemed incompatible with existing SPR stocks. Blending heavier crudes with light end crudes may cause separation of the blend at higher temperature, thus rendering the stream undeliverable. SPR reserves the right to reject any crude oil in order to ensure the quality of the crude oil received, stored, and maintained within the SPR.

Crude Type	WTI	Mars	Total
%	10%	90%	100%
Barrels	30,000	270,000	300,000

tank blend schedule example table – values are for illusory purposes only. All components must be within thresholds in Exhibit C-1 and B.1(c).

Attachment A – Attachment A is deleted in its entirety and replaced with the following Attachment A. This item will set quality parameters and serve as a document to be submitted to DOE for crude oil quality approval before delivery as noted in Section 17 modification.

ATTACHMENT A

(MUST BE FILLED OUT IN ITS ENTIRETY TO BE CONSIDERED FOR APPROVAL)

Sour Statement of Quality Data Product Specifications						
Full name of crude and or define any acronyms:						
Company:						
Date:						
Crude Stream ^a (define any acronyms):						
Crude Components (define acronyms):						
Product Parameter	Test Method ^b	Units	Sour Specification		Result	Method of Analysis
			Min	Max		
1 API Gravity	D287, D1298 or D5002	[°API]	28.5	35		
2 Total Sulfur	D4294, D2622	[Mass %]	0.51	2.5		
3 Pour Point	D97	[°C]		-12		
4 Salt Content	D6470 or D3230	[mg/kg %]		500		
5 Viscosity @ 15.6°C	D445, D7042	[cSt]		32		
6 Viscosity @ 37.8°C	D445, D7042	[cSt]		13		
7 Vapor Pressure [VPCR4 (100°F)]	D6377	psia (kPa)		9.0(62.1)		
8 Vapor Pressure [VPCR 0.2 (100°F)] @900 sec.	D6377	psia (kPa)		Report		
9 Total Acid Number	D664, D8045	[mg KOH/g]		1		
10 Water	D4928 or D4006	[Vol. %]		Report		
11 Sediment	D473, D4087	[Mass. %]		Report		
12 Water/Sediment Combined Value		[Vol. %]		1		
13 Asphaltenes	D6560, IP143	[Mass%]		6.00%		
14 Stability	D4740	ASTM Ref.		2		
15 Hydrogen Sulfide	UOP163	mg/kg		Report		
16 Mercaptan	UOP163	mg/kg		Report		
Yields [Vol. %]^γ						
17 Naphtha [28-191°C]	D7169, D7900	[Vol. %]	-	30		
18 Distillate [191-327°C]	D7169, D7900	[Vol. %]	17	31		
19 Gas Oil [327-566°C]	D7169, D7900	[Vol. %]	26	38		
20 Residuum [>566°C]	D7169, D7900	[Vol. %]	-	19		
Light Ends [Liquid Vol. %]^δ						
21 Methane (C ₁)	D7900 or ITM6008	[Liquid Vol.%]		0.01		

22	Ethane (C ₂)	D7900 or ITM6008	[Liquid Vol.%]		0.1		
23	Propane (C ₃)	D7900 or ITM6008	[Liquid Vol.%]		1		
24	Normal Butane (NC ₄)	D7900 or ITM6008	[Liquid Vol.%]		3		
25	Isobutane (iC ₄)	D7900 or ITM6008	[Liquid Vol.%]		4		
Distillation							
26	IBP - 25°C	D7169, D7900	Wt.%		3.00%		
27	IBP - 79°C	D7169, D7900	Wt.%		10.00%		
Contaminants							
28	Organic Chlorides	D4929 B or C	mg/kg		1		
29	Vanadium	D5708 (B), D5863, D8252	mg/kg		75		
30	Nickel	D5708 (B), D5863, D8252	mg/kg		25		
31	Iron	D5708 (B), D5863, D8252	mg/kg		10		
32	Methanol	D7059	mg/kg		30		
33	Total Nitrogen	D4629/D5762	Wt. %		Report		
34	Basic Nitrogen	UOP269	Wt. %		Report		

- α** Commonly traded crude petroleum suitable for normal refinery processing and free of foreign contaminants or chemicals including, but not limited to, pour point depressants, chlorinated and oxygenated hydrocarbons, and lead.
- β** Alternate methods may be used if approved by the contracting officer.
- γ** D7169 and D7900 data may be provided in requesting conditional acceptance of a Crude Oil. Distillation data according to D2892 and D5236 will still be necessary for final qualification of a Crude Oil's acceptance.
- δ** Light ends content specifications are interim and will be superseded if and when industry standards for light ends evaluation are implemented.

NOTE 1: The Strategic Petroleum Reserve reserves the right to refuse to accept any Crude Oil which meets these specifications but is deemed to be incompatible with existing stocks, or which has the potential for adversely affecting handling.

NOTE 2: The acceptability of any Crude Oil depends upon any assay, or certificates of analysis for each blend component, typical of current production quality of the stream. Any Crude Oil offered to the Strategic Petroleum Reserve that meets these specifications may be subject to additional testing for acceptance.

NOTE 3: All Crude Oil shipments received by the SPR are tested to ensure they meet specifications.

NOTE 4: All Crude Oil shipments received by the SPR pursuant to this solicitation must be sourced from U.S. production.