Couvillion Group, LLC

MC 20 Hydrocarbon Pump-Off #6 Results Report

Document #: Couv-MC20-O&M-RPT-DOC-00015

8/29/19

Revision	Date	By	Check	Approve	Remarks
0	8/29/19	[redacted]			Initial Document

Summary:

Couvillion Group's Rapid Response Collection System initiated its sixth collection cycle on 6/13/2019 and completed the cycle on 8/18/2019 resulting in a collection duration of 28.6 days. Using the OSV Chloe Candies the collected hydrocarbon fluid recovered from the subsea oil containment vessels was taken to the Couvillion Dock in Venice, Louisiana. Dockside Transfer commenced on 8/19/2019, with 874.6 bbl of hydrocarbon fluids transferred to an onshore frac tank which had residuals from prior pump off, and according to strap measurements the tanks then had a total of 898.8 bbl. Over the next 7-day period water separated from the oil and was collected in the bottom of the frac tank. On the morning of 8/26/2019 Couvillion Group reconfirmed that 898.8 plus 4.7 bbl of sea water used to flush the hoses after transfer measurements were taken for a total of 903.5 bbl of hydrocarbon fluids that remained in the tanks via strap measurements. Transfer of fluids from the frac tank to transport trucks beganafter quantities were confirmed. A total of 762.5 bbl of fluid was transferred from the Venice Yard to the Acadiana Oil Company in Berwick, Louisiana using six tank trucks. A total of 57.9 bbl of residual fluid remained in the frac tank. Total fluids reconciliation was within –2.3%.

After measuring the BS&W content and taking specific gravity and temperature into account at the Acadiana Oil Company site, the net crude oil collected during this collection cycle was 757.2 bbl.

Procedures Followed:

Couvillion Group and the associated companies participating in the collection and transportation of hydrocarbon fluids from the MC-20 site to the Acadiana Oil Company site have compiled a set of procedures that are followed throughout the process. The MC20 Response Disposal Plan with associated documentation pertaining to custody transfer and hydrocarbon fluids measurements for this report are in Appendix I. Appendix II includes the NRC waste handling documentation.

Execution:

Offshore Collection of Hydrocarbon Fluids at MC 20 Site:

The Chloe Candies OSV moved in place on location at MC20 on 8/15/2019 at 02:45 hrs. An as-found ROV survey was conducted prior to commencement of pump off operations. To begin pump off operations ROV's were launched and thereafter the hydraulic subsea pump and hoses were over boarded. The inlet hose to the hydraulic subsea pump was connected to the offload outlet on the subsea oil storage containers. Pumping commenced at 05:35 hrs on 8/16/2019 and ended at 03:15 on 8/18/19. Pump off 6 took longer than expected due to very high surface currents that cause the operation to go down on weather watch from 1100 on 8/16/19 to 1800 on 8/17/19. Fluid was sampled on the vessel every 20 minutes for field analysis to determine the estimated oil to water ratios until water breakthrough occurred and collection operations were then stopped. **A total of 848.0 bbl of hydrocarbon fluid was collected.** Upon pump off completion the hoses and pump were surfaced and flushed with saltwater that was sent to a filtration system for treatment and over boarding.

Vessel to Dockside Transfer

Upon arrival at the Couvillion Dock in Venice, Louisiana on 8/19/2019 hoses were run from the tanks on the vessel through a diaphragm pump which was on a Couvillion provided barge and then run to a 500 bbl frac tank onshore. The pump-off process was begun and continued until all MPT tanks aboard the OSV Chloe Candies were empty. Tankermen from Team Services verified that the MPT tanks onboard the vessel was empty and then an NRC representative strapped the dockside frac tank to determine **the total quantity**

transferred which was 874.6. With dockside transfer complete, the fluid was allowed to settle out water from the oil over a period of 7 days before transfer of the oil from the frac tanks to tank trucks.

Dockside Frac Tanks to Truck Transfers

On the morning of 8/26/2019 at 10:00 hrs the first round of frac tanks to tank truck transfers commenced. An initial measurement was taken to verify that 903.5 bbl of hydrocarbon fluids remained in the tank. A hose was then attached to the frac tanks and ran through a diaphragm pump into a tank truck. Pumping commenced and the first truck received 141.7 bbl of hydrocarbon fluids. The second tank truck was loaded with 140.3 bbl. The third truck was loaded with 141.5. The second day of frac tank to tank truck transfers began on 8/27/19 at 06:00. The first truck was loaded with 140.5 bbl, the second truck was loaded with 137.2 The third truck was loaded with 61.3 bbl. At this time an NRC representative and a Couvillion Representative double checked all strap measurements in the trucks, and residual left in the frac tank (57.9 bbl). All values were recorded in the appropriate forms in the MC-20 Response Disposal Plan (see report Appendix I). Trucks were then released and began transport to the Acadiana Oil Company site in Berwick, Louisiana.

Truck to Facility Transfer

Upon arrival at the Acadiana Oil Company site each truck enters a loading bay. Before any fluids are transferred an Acadiana Oil Representative straps their tank for an initial measurement and then transfer of fluid begins. While the pump off is underway an Acadiana Oil Company Representative takes three fluid samples during the transfer process from the pump outlet from which hydrocarbon fluid is flowing. These samples are taken at the beginning of the transfer, mid-way through the transfer, and at the end of the transfer process. In other words when the tank truck volume is full, half-full and nearly empty. These readings are referred to as top, middle and bottom readings, respectively. These (3) samples are mixed together and then shaken vigorously to ensure a full mixture. The sample is then taken to their testing area where tests are run to determine: % BS&W content, temperature, and specific gravity. Temperature and specific gravity are recorded via the use of a hydrometer, while BS&W content is determined via the use of a centrifuge with a 50/50 mixture of the sample with mineral spirits. Once all sampling is completed and recorded (see copy in Appendix I) the Acadiana Oil Company Representative again straps their tank in order to obtain a post transfer level. The gross fluids that are recorded is determined by subtracting the initial pump off tank strap level from the post transfer tank strap level. This gross fluid value is corrected for temperature, specific gravity and BS&W content to determine the net oil value that is recorded. This process is repeated for each truck offload.

Summary Tally and Running Totals:

The tables below show an oil tally, a total fluid reconciliation and a flow rate calculation. In total 874.6 bbl of hydrocarbon fluid was transferred from the Chloe Candies into an onshore frac tank. Tank trucks transported 781.8 bbl to the Acadiana Oil Company site which netted out 757.2 bbl of crude oil. From a total fluid reconciliation standpoint measurement at different site locations were within 0.3%. The calculated flow rate during the 28.6-day collection cycle offshore was 26.5 bbl/day or 1112.0 gallon/day. **As of the end of this pump off campaign 136,739.4 gallons of salvaged crude oil has been contained from the MC-20 site.**

Oil Tally

					Truck 1				Truck 2				Truck 3				Truck 4					Running
Oil Tally	Date	Total Fluid Transfer by Cypress (bbl)	Total Fluid Frac Tank Strap by NRC (bbl)	% Diff	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluid at Acadiana by strap (bbl)	% Diff	Net Oil (bbl)	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluid at Acadiana by strap (bbl)	% Diff	Net Oil (bbl)	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluid at Acadiana by strap (bbl)	% Diff	Net Oil (bbl)	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluid at Acadiana by strap (bbl)	% Diff	Net Oil (bbl)	Total Net Oil (bbl)	Total Net Oil (bbl)
Pump Off #1	4/26/2019	220.0	215.7	-2.0																		
	5/6/2019				113.7	110.0	3.3	108.8	97.0	87.4	9.9	78.6									187.4	187.4
Pump Off #2	5/3/2019	246.3	223.5	-10.2																		
	5/8/2019				101.3	102.0	-0.7	99.7	82.8	83.8	-1.2	81.9									181.6	369.0
Pump Off #3	5/13/2019	335.0	331.2	-1.1																		
	5/16/2019				103.2	89.1	13.7	82.9	126.4	136.4	-7.9	132.1	108.5	99.5	8.3	80.7					295.7	664.8
Pump Off #4	6/19/2019	901.7	905.5	0.4	139.4	145.8	-4.6	143.0	138.7	139.4	-0.5	137.4										
	6/20/2019				137.7	136.2	1.1	113.0	140.7	141.4	-0.5	139.4	140.6	141.4	-0.6	134.2	144.1	141.4	1.9	138.4		
	6/21/2019				48.5	47.1	2.8	44.6													850.0	1514.8
Pump Off #5	7/31/2019	1200.2	1196.6	-0.3	139.2	138.3	0.6	133.7	142.7	150.0	-5.1	146.5										
	8/1/2019				139.1	145.7	-4.7	135.1	140.7	138.4	1.6	131.9	146	142.0	2.7	81.3	138	142.0	-2.9	140.0		
	8/2/2019				99.8	112.9	-13.1	111.0	101.1	105.6	-4.5	104.2									983.7	2498.5
Pump Off #6		848.0	874.6	3.0	141.7	138.4	2.3	134.6	140.3	145.7	-3.8	140.6	141.5	145.7	-3.0	143						
					140.5	138.4	1.5	135.5	137.2	142.0	-3.5	139.1	61.3	65.6	-7.0	64.2						
																					757.2	3255.7

Total Fluid Reconciliation

				Truck 1	Truck 2	Truck 3	Truck 4			
	Date	Total Fluid Frac Tank Strap at Venice by NRC (bbl)	Water Decanted From Frac Tank Using Strap Measurement (bbl)	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluids to Acadiana NRC Frac Strap (bbl)	Residual left in Frac Tanks (bbl)	Total of Fluid From Trucks, Residual & Decant (bbl)	% Diff
Pump Off #1	4/26/2019	215.7	0.0							
	5/6/2019			113.7	97.0	0.0	0.0	5.2	215.9	0.1
Pump Off #2	5/3/2019	223.5	15.6							
	5/8/2019			101.3	82.8	0	0	17.6	217.3	-2.8
Pump Off #3	5/13/2019	331.2	0.0							
	5/16/2019			103.2	126.4	108.5	0	16.2	354.3	-1.6
Pump Off #4	6/19/2019	905.5	32.5	139.4	138.7	0.0	0.0		310.6	
	6/20/2019			137.7	140.7	140.6	144.1		563.1	
	6/21/2019			48.5	0	0	0	0.6	49.1	
	PO4: Total								922.8	-1.8
Pump Off #5	7/31/2019	1196.6	96.3	139.2	142.7				281.9	
	8/1/2019			139.1	140.7	146	138		563.8	
	8/2/2019			99.8	101			45.2	246.0	-0.7
	PO5: Total								1188.0	
Pump Off #6	8/26/2019	874.6	56.8	141.7	140.3	141.5			480.3	
	8/27/2019			140.5	137.2	61.3		57.9	396.9	
	PO6: Total								877.2	0.3

Barrels of Oil Collected Daily

	Start Date	Start Time (hrs)	End Date	End Time (hrs)	Total Collection Duration (Days)	Net Oil Collected (bbl)	RRS Collection Rate Of Oil (bbl/day)	Collection Rate of Oil (gallon/day)
Collection Duration for 1st Trip	4/12/2019	0:00	4/23/2019	1:05	11.0	187.4	17.0	715.7 gallons/day
Collection Duration for 2nd Trip	4/23/2019	1:05	4/30/2019	21:09	7.9	181.6	23.0	965.6 gallons/day
Collection Duration for 3rd Trip	4/30/2019	21:09	5/12/2019	23:20	12.1	295.7	24.4	1,026.5 gallons/day
Collection Duration for 4th Trip	5/12/2019	23:20	6/13/2019	17:17	31.5	850.0	27.0	1132.3 gallons/day
Collection Duration for 5th Trip	6/13/2019	17:17	7/21/2019	1:40	37.4	983.7	26.3	1104.7 gallons/day
Collection Duration for 6th Trip	7/21/2019	1:40	8/18/2019	3:15	28.6	757.2	26.5	1112.0 gallons/day

Totals:

	Bbl	Gal
Net Oil collected"	3255.7	136739.4
Total Oily fluids collected in:	3747.1	157376.5

Appendix 1

MC20 Product Removal and Transportation with Completed Documentation

United States Coast Guard

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Attachment C: WASTE MANAGEMENT TRACKING FORM
Residual Frac Tank Bottoms

Date: 8/28/2019

Residual Volume left in Tanks

Strap Measurement after Trucks Loaded in each tank

		bbls		
Truck	60.3 =	228.5	21.5	Tank ①
Truck	23 =	83.7	18.6	Tank ②
Truck	6.1 =	17.8	17.8	Tank ③

Sign off by: USCG Rep (Optional) Signed Name [redacted] Printed Name [redacted] 28 AUG 19

Couvillion Rep Signed Name [redacted] Printed Name [redacted] 8-28-19

CRT Rep Signed Name Printed Name 8-28-19

Appendix1

MC20 Product Removal and Transportation with Completed Documentation

United States Coast Guard
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MC 20 Product Removal and Transportation Plan

Document #: Couv-O&M-Doc-00004
3/18/19

Revision	Date	By	Check	Approve	Remarks
Rev. 0	3/18/19	[redacted]			Initial Document
Rev. 1	7/8/19				Updates to Rev 0

MC 20 Product Removal and Transportation Plan

USCG Contractor: Couvillion Group
Spilled Material: Crude OIL
Spill Volume (estimate): TBD
Spill Location: MC 20
Date: 01 April 2019

SECTION I; BACKGROUND AND SIGN-OFF

This plan covers the disposal of oily waste debris (including debris, sediment, absorbents, oily water and recovered oil) from the MC 20 site. It addresses the process and documentation for disposal of waste debris after the maintenance vessel has collected the hydrocarbon fluids offshore and begins with the off-loading of these materials into storage tanks or lined storage boxes at the Couvillion Shore Base in Venice, LA. Applicable local, state, and federal laws and regulations will be followed when recycling or disposing of the recovered material. Disposed material will be tracked to provide an accurate documentation of waste generated from the site. All materials will be categorized and itemized for safe and efficient collection, staging, storage and recycling or disposal.

This document is part of the overall MC 20 Subsea Storage Offloading Operations and Maintenance Manual (Doc # 801057641). The plan/procedure may be amended as necessary to ensure compliance with all applicable laws and regulations, as new materials or waste streams are encountered, or alternative means of disposal are needed. Amendment may occur only upon mutual agreement of the Disposal Contractor (NRC), USCG Contractor (Couvillion Group) and the United States Coast Guard (USCG)

Submitted By
Printed Name [redacted] Date: 07/10/2019

Approved Couvillion Group, LLC:
Printed Name. [redacted] Date: 07/10/2019

Approved by US
Printed Name: [redacted] Date 07/10/2019

SECTION II: WASTE MANAGER AND WASTE HANDLERS

This section lists the contractors assigned and key roles staffed to support disposal.

Name of Company	Disposal Functions	Company Rep. (Name, Phone #)
Legacy Industries	Waste Broker	[redacted]
Legacy Industries	Waste Hauler	
Industrial Response Svcs.	Waste Hauler	
Evergreen Recyclers	Water Treatment Facility	
River Birch Subtitle D Landfill	Non-Hazardous Disposal Landfill	

- Note that additional waste haulers may be used due to availability of trucks.
- Additional disposal facilities may be required pending analytical results. List above will be updated once waste classification is made and additional facilities are required.

SECTION III: INTERIM STORAGE, SEGREGATION, PROFILING, AND TRACKING

A. INTERIM STORAGE OF SOLID AND LIQUID MATERIAL

Interim storage will be located at: Couvillion Venice Shore Base;
433 McDermott Rd; Venice, LA 70091; (504) 912-4891 (24 HR)

A special purpose maintenance vessel with the appropriate processing equipment will go to the MC 20 site and take onboard hydrocarbons collected subsea from the Rapid Response System on a nominal frequency of once a month (plus or minus one week). This vessel will then return to the Couvillion Shore Base at Venice where the collected hydrocarbons and associated water will be offloaded into four 390 bbl double wall frac tanks.

Attachment A: The collected hydrocarbons and associated water offloaded to each of the four 390 bbls BBL storage tanks will be measured via strap measurement and recorded in Attachment A. During the initial offloading (Pump-Off #1) there will be no residual fluid in the tanks. However, on subsequent offloadings there may be residual fluid in the tanks from prior operations and this value should be recorded in Column A before any offloading operation begins. The volume of fluid in the tank onboard the vessel prior to commencement of offloading activities should be strap measured by qualified Cypress personnel and recorded in Column B. Once the offloading is complete the onshore frac tanks shall be strap measured and values recorded in Column C. Column D will yield the total fluids offloaded from the vessel and Column E will yield the % difference in measurement between the strap measurements taken onboard the vessel and the measurements acquired from the onshore frac tanks that are being loaded with fluid. If there is a discrepancy of more than 3% then an attempt should be made to explain this discrepancy. After completion of this work the appropriate parties will sign-off on Attachment A.

Attachment B: The fluid in the frac tanks will be allowed to settle out water over a period of approximately 7-8 days and decanting of water from the tanks will be conducted on day 3-4 and at the beginning of any day in which fluids are transported to the recycle/disposal site. The quantity of decanted water is to be recorded via strap measurements and recorded in this attachment. The appropriate parties will sign-off on Attachment B and the Couvillion representative will give approval to begin pump-off operations. After completion of this work the appropriate parties will sign-off on attachment form.

Attachment C: The fluid pumped from the frac tanks into tank trucks is recorded via strap measurements in the oily water and net crude oil form. Once the tank trucks reach the disposal site the buyer will record the total volume of fluid transferred into their storage tanks via strap measurement and this value will be reported in the oily water and net crude oil form as will the net oil value calculed after taking into account temperature and specific gravity. The sales form from the buyer will also be attached to this appendix.

Shipment of collected, segregated and custody transferred metered volumes of oil will be shipped to either Acadiana, PSC, Plains Pipeline or other reputable company.

The residual volume of oily water left in each frac tank after loading a truck will be recorded in Attachment C – Residual Frac Tank Bottoms. Any solids or petroleum contaminated solids will be recorded in the third table of Attachment C- Transportation Tracking of Petroleum Contaimnated Contaminated Solids. Each form in attachment C requires the appropriated sign-off signatures upon completion of the work.

Attachment D: Water that has been decanted from the oil will from time to time be transported to a disposal site. Attachment D should be used to document the volumes along with the appropriate sign-off signatures.

During the operations described above, no truck will leave the yard without written approval from Couvillion Group and without the appropriate paperwork completed and a copy provided to the Couvillion On-Site Representative. All Trucks on site and utilized during these operations will be secured at the end of each shift by inspecting all valves, brakes, gauges, etc., and bleeding pressure from the system to prevent inadvertent opening of pneumatic valves.

B. SEGREGATION

Lined storage boxes delivered to the site will remain on site as interim solid waste storage pending analytical results, profile approval, and load scheduling. Boxes will be secured at the end of each working day to ensure roll tarps are in place preventing rainwater collection inside of box. NRC will seek written approval from the USCG Contractor Couvillion Group for disposal and will provide the appropriate paperwork including Attachment C – Transportation Tracking of Petroleum Contaminated Solids.

All petroleum impacted solids (i.e., absorbents, vegetation, soil, debris, etc.) will be comingled into lined storage boxes for disposal at a landfill pending hazardous waste determination and profile approvals acquired by NRC on behalf of USCG Contractor. An up-to-date Waste Management Tracking form and the appropriate permits will be maintained by NRC and copies provided to USCG Contractor.

C. PROFILING

Waste profiles will be generated by NRC upon proper hazardous waste determination based on the analytical results. All profiles are to be signed by NRC personnel via signed Broker Authorization Letter. Copies of profiles will be provided with billing tickets. Materials sent for recycle will not require a waste profile. Under no circumstances will NRC, OMI or USCG Contractor be listed as the Generator.

D. TRACKING

All waste will be tracked by NRC / Legacy Industries with copies of documentation provided to the USCG Contractor. Tracking will include management of waste manifests with indication of box numbers or truck numbers, dates of shipment, manifested volumes, and scale tickets. Waste load outs will be managed by site supervisors overseeing operations.

SECTION IV: WASTE DISPOSITION

Liquids: Decanted water will be left in the Frac tanks and then periodically disposed of at a waste management site and transported via truck. The collected oil will be sent to a recycle facility by NRC.

Solids: The solid waste will be manifested and shipped to River Birch Subtitle D Landfill for Land Disposal. The RP/UC must make the determination based on analysis and generator knowledge that the waste is below all RCRA hazardous waste limits.

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Attachment A: Dockside Transfer – Transfer of Liquid and Crude Oil in Accordance with Maintenance

Date: 08/19/19

Time Transfer Ended: 1955

	Column A Residual Tank Volume From Prior Operation (bbl)	Column B On Board the Vessel Tank Strap Measurement Prior to Start of Offloading (bbl)	Column C Onshore Frac Tank Strap Measurement after Offloading (bbl)	Column D Volume of Fluid (Column C-A) (bbl)	Column E % Difference Column (D-B)/D * 100
Tank 1	-0-		-312-	-312-	
Tank 2	-2.7-		-318.0-	-315.3-	
Tank 3	-21.5-		-268.8-	-247.3-	
Total	-24.2-	-848.0-	898.8	-874.6-	3%

Note: If the % Difference is greater than 3% please attempt to explain the difference: _____

Sign-off by:

USCG Rep Signed Name: [redacted] Printed Name: [redacted] Date: 8-19-19

Couvillion Rep Signed Name: [redacted] Printed Name [redacted] Date: 8-19-19

Cypress Rep Signed Name: [redacted] Printed Name [redacted] Date: 8/19/19

NRC Rep Signed Name: [redacted] Printed Name [redacted] Date: 8/19/19

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Attachment B: Venice Shore Base On-Site Interim Tank Storage Measurements Before Offloading to Tank Trucks (Decanting of Water)

Date: 08/26/2019 **Time:** 1000

Time Measurements begin after Vessel Offloading in hours: _____

	Column A Tank Strap from Offloading (Initially use Column C from Attach A and on subsequent decants use Column D from this form) bbl	Column B Today's Interim Tank Strap Measurement bbl	Column C Tank Strap Measurement after Decanting bbl	Column D Oily Water Mixture Volume Column (B-C) bbl
Tank 1	-312-	-312-	289.1	22.9
Tank 2	-318.0-	-319.4-	289.1	30.3
Tank 3	-268.8-	-272.1-	268.5	3.6
Total	890.8	903.5	846.7	56.8

* Sea water add from flushing out hoses from pumpoff.

Sign-off by: USCG Rep **(optional)** Signed Name [redacted] Printed Name [redacted] Date: 8-27-19

Couvillion Rep Signed Name [redacted] Printed Name [redacted] Date: 8-27-19

NRC Rep Signed Name [redacted] Printed Name [redacted] Date: 8-27-19

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Attachment C: WASTE MANAGEMENT TRACKING FORM

Oily Water Transportation and Net Crude Oil

Start Shipments Date: 08/27/2019

Manifest Number	Transporter	Truck Number	Date	Receiving Facility	Manifested Volume loaded from Venice Frac Tank into Truck (bbl from Strap)	Volume received by Buyer (bbl by Strap)	Net Crude Oil bbls (Acadiana Oil Ticket)
①	L&B	7583 854	8/27/19	AOC	141.7		
②	L&B	7064 800227	8/27/19	AOC	140.3		
③	L&B	7205 800096	8/27/19	AOC	141.5		
Total Volumes Shipped by Gallons bbls							

End of Shipments date: 08/27/2019

Sign-off by: USCG Rep (Optional) Signed Name [redacted], Printed Name [redacted] Date: 8-27-19

Couvillion Rep Signed Name [redacted], Printed Name [redacted] Date: 8-27-19

NRC Rep Signed Name [redacted], Printed Name [redacted] Date 8-27-19

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Attachment C: WASTE MANAGEMENT TRACKING FORM

Oily Water Transportation and Net Crude Oil

Start Shipments Date: 8/28/2019

Manifest Number	Transporter	Truck Number	Date	Receiving Facility	Manifested Volume loaded from Venice Frac Tank into Truck (bbl from Strap)	Volume received by Buyer (bbl by Strap)	Net Crude Oil bbls (Acadiana Oil Ticket)
(1)	L+B	7583 854	8/28/19	AOC	140.5		
(2)	L+B	7525 800207	8/28/19	AOC	137.2		
(3)	L+B	7200 800096	8/28/19	AOC	61.3		
				Total Volumes Shipped by Gallons bbls			

End of Shipments date: 8/28/2019

Sign-off by: USCG Rep (Optional) Signed Name [redacted], Printed Name [redacted] Date 28Aug19

Couvillion Rep Signed Name [redacted], Printed Name [redacted] Date 8-28-19

NRC Rep Signed Name [redacted], Printed Name [redacted] Date 8-28-19

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Attachment C: WASTE MANAGEMENT TRACKING FORM
Residual Frac Tank Bottoms

Date 8/28/2019

Residual Volume left in Tanks

Strap Measurement after Trucks Loaded in each tank

	bbls
Truck	60.3 = 228.5
Truck	23 = 83.7
Truck	6.1 = 17.8

Sign off by: [redacted] 28 AUG 19

Couvillion Rep Printed Name [redacted] 8-28-19

USCG Rep Printed Name [redacted] 8-28-19

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Attachment C: WASTE MANAGEMENT TRACKING FORM
Residual Frac Tank Bottoms

Date: 8-27-19

Residual Volume left in Tanks

		Strap Measurement after Trucks Loaded in each tank bbls
Truck	~~Tank 2~~	70.3 = 268.8
Truck	Tank 3	32.3 = 119.4
	Tank 3	

Sign-off by: USCG Rep (Optional) Signed Name [redacted] Printed Name [redacted] Date: 8-27-19

Couvillion Rep Signed Name [redacted] Printed Name [redacted] Date: 8-27-19

NRC Rep Signed Name [redacted] Printed Name [redacted] Date 8-27-19

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Attachment C: WASTE MANAGEMENT TRACKING FORM
Residual Frac Tank Bottoms

Date: 08/27/2019

Residual Volume left in Tanks

	Strap Measurement after Trucks Loaded in each tank bbls
Tank 1	39.1 = 1416.2
Tank 2	7 = 21.5
Tank 3	

Tank 1
Tank 2

Sign-off by: USCG Rep (Optional) Signed Name [redacted] Printed Name [redacted] Date: 8-27-19

Couvillion Rep Signed Name [redacted] Printed Name [redacted] Date: 8-27-19

NRC Rep Signed Name [redacted] Printed Name [redacted] Date 8-27-19

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U.S. Department of Homeland Security

COUVILLION
Couvillion Group, LLC

Attachment C: WASTE MANAGEMENT TRACKING FORM
Transportation Tracking of Petroleum Contaminated Solids

Manifest Number	Transporter	Shipment Date	Receiving Facility	Manifested Volume (Yard)	Scaled Weight (Lb)	Comments (Box Numbers, etc.)

* NO Solids

Sign-off by: USCG Rep(Optional) Signed Name: _____, Printed Name _____ Date: _____

Couvillion Rep Signed Name: _____, Printed Name _____ Date: _____

NRC Rep Signed Name: _____, Printed Name _____ Date _____

United States Coast Guard
U.S. Department of Homeland Security

COUVILLION
Couvillion Group, LLC

Attachment D: Decanted Water from Frac Tanks to Disposal Facility

Date: _____

	Column A	Column B	Column C
	Beginning Tank Strap Measurement bbl	Decant and then Tank Strap Measurement bbl	Volume of oily water transferred to Disposal Facility Column B – Colum using Strap Measurement bbl
Tank 1			
Tank 2			
Tank 3			

Water will be sent to Disposal facility during the week of September 4, 2019

Residual Volume left in Tanks

	Strap Measurement bbl
Tank 1	
Tank 2	
Tank 3	

Sign-off by: USCG Rep(Optional) Signed Name: _____, Printed Name _____ Date: _____

Couvillion Rep Signed Name: _____, Printed Name _____ Date: _____

NRC Rep Signed Name: _____, Printed Name _____ Date _____

ACADIANA OIL & ENVIRONMENTAL CORPORATION

P. O. Box 9088 • New Iberia, LA 70562
337-560-5573

TRANSPORT MANIFEST
Lease Run Ticket
14124

Date 8-27 20 19

Operator Camillion Oil Co. Lease No. C G

Lease Name Truck #1

Field

GAUGE	OIL LEVEL FEET	OIL LEVEL INCHES		
1st	0 8	0 1	8	1
2nd	0 8	0 5	8	7

BS&W LEVEL FT.	BS&W LEVEL INCHES	TANK TEMP

TANK NO. 6 2 0 0 6

SIZE

EST GROSS GALLONS @ °F

SERIAL NUMBERS
OLD
NEW

OBSERVED GRAVITY 30 @ 92 °F

PERCENT BS & W 1.4 %

TEMPERATURE OF OIL IN TANK °F

LOG NUMBER

TIME ARRIVED AM PM

TIME DEPARTED AM PM

DELIVERY STATION Berwick

OFFICE USE ONLY

GRAVITY CORR TO 60 °F	
1st	
2nd	
GROSS BARRELS	138.4
X FACTOR	.9727
NET BBLS. PER SUN TIC	134.62

TEMP FACTOR	x	BS & W FACTOR	-	X FACTOR
.9865		.9860		.9727

GROSS	OPEN	DR
TARE		OP
NET	CLOSE	DRIVER
		OPERATOR'S WITNESS

[redacted]

PROPER SHIPPING NAME	HAZARD CLASS		I.D. NUMBER	TOTAL QUANTITY
PETROLEUM CRUDE OIL	III	3	UN 1267	134.62 BBLS
BS&W				1.94
Temp. Deduction				1.84

"THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED, AND LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION, ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION".

ACADIANA OIL & ENVIRONMENTAL CORPORATION

P. O. Box 9088 • New Iberia, LA 70562
337-560-5573

TRANSPORT MANIFEST

Lease Run Ticket

14125

Date 8-27 20 19

Operator Cowillie Lease No. C G

Lease Name Tuck #2

Field

GAUGE	OIL LEVEL FEET	OIL LEVEL INCHES	
1st	08	05	7/8
2nd	08	10	7/8

BS&W LEVEL FT.	BS&W LEVEL INCHES	TANK TEMP

TANK NO. 62006

SIZE

EST. GROSS GALLONS @ °F

SERIAL NUMBERS

OLD

NEW

OBSERVED GRAVITY 30 @ 96 °F

PERCENT BS & W 2 %

TEMPERATURE OF OIL IN TANK °F

LOG NUMBER

TIME ARRIVED AM PM

TIME DEPARTED AM PM

DELIVERY STATION Berwick

TEMP FACTOR	X	BS & W FACTOR	=	X FACTOR
.9848		.9800		.9651

OFFICE USE ONLY

GRAVITY CORR TO 60 °F	
1st	
2nd	
GROSS BARRELS	145.67
X FACTOR	.9651
NET BBLS PER RUN TIC	140.59

GROSS	OPEN	DRI[redacted]
TARE	OPE	
NET	CLOSE	DRIVER
		OPERATOR'S WITNESS

PROPER SHIPPING NAME	HAZARD CLASS		I.D. NUMBER	TOTAL QUANTITY
PETROLEUM CRUDE OIL	III	3	UN 1267	140.59 BBLS
BS &W				2.92
Temp. Deduction				2.17

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ACADIANA OIL & ENVIRONMENTAL CORPORATION

P. O. Box 9088 • New Iberia, LA 70562
337-560-5573

TRANSPORT MANIFEST
Lease Run Ticket
14127

Date 8-27 20 19

Operator Comilion Lease No. C G

Lease Name Truck #3

Field

GAUGE	OIL LEVEL FEET	OIL LEVEL INCHES	
1st	0 9	0 3	1/2
2nd	0 9	0 8	1/2

BS&W LEVEL FT.	BS&W LEVEL INCHES	TANK TEMP

TANK NO. 6 2 0 0 6

SIZE

EST. GROSS GALLONS @ °F

SERIAL NUMBERS

OLD

NEW

OBSERVED GRAVITY 29 @ 88 °F

PERCENT BS & W 5/10 %

TEMPERATURE OF OIL IN TANK °F

LOG NUMBER

TIME ARRIVED AM PM

TIME DEPARTED AM PM

DELIVERY STATION Bermuda

OFFICE USE ONLY

GRAVITY CORR TO 60 °F	
1st	
2nd	
GROSS BARRELS	145.67
X FACTOR	.9834
NET BBLS PER RUN TIC.	143.25

TEMP FACTOR	X	BS & W FACTOR	=	X FACTOR
.9883		.9950		.9834

GROSS

TARE

NET

OPEN [redacted]

CLOSE

DRIVER

OPERATOR'S WITNESS

PROPER SHIPPING NAME	HAZARD CLASS	I.D. NUMBER	TOTAL QUANTITY
PETROLEUM CRUDE OIL	III 3	UN 1267	143.25 BBLS
BS&W			.73
Temp. deduction			1.7

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ACADIANA OIL & ENVIRONMENTAL
CORPORATION

P. O. Box 9088 • New Iberia, LA 70562
337-560-5573

TRANSPORT MANIFEST
Lease Run Ticket

14162

Date 8/28 20 19

Operator Cavillion Lease No. C G

Lease Name Truck #4

Field

GAUGE	OIL LEVEL FEET	OIL LEVEL INCHES
1st	10	7 3/8
2nd	11	0 1/8

BS&W LEVEL FT.	BS&W LEVEL INCHES	TANK TEMP

TANK NO. 62006

SIZE

EST. GROSS GALLONS @ °F

SERIAL NUMBERS

OLD

NEW

OBSERVED GRAVITY 29 @ 96 °F

PERCENT BS & W 4/10 %

TEMPERATURE OF OIL IN TANK °F

LOG NUMBER

TIME ARRIVED AM PM

TIME DEPARTED AM PM

DELIVERY STATION Berwick

OFFICE USE ONLY

GRAVITY CORR TO 60 °F	
1st	
2nd	
GROSS BARRELS	138.39
X FACTOR	.9789
NET BBLS PER RUN TIC	135.48

TEMP. FACTOR		BS & W FACTOR		X FACTOR
.9844	X	.9940	=	.9789

GROSS	OPEN	DR [redacted]
TARE		OI
NET	CLOSE	DRIVER
		OPERATOR'S WITNESS

PROPER SHIPPING NAME	HAZARD CLASS		I.D. NUMBER	TOTAL QUANTITY
PETROLEUM CRUDE OIL	III	3	UN 1267	135.48 BBLS
BS&W				.83
Temp. Deduction				2.08

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ACADIANA OIL & ENVIRONMENTAL CORPORATION

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337-560-5573

TRANSPORT MANIFEST
Lease Run Ticket

14163

Date 8-28 20 19

Operator Covrillion Lease No. C G

Lease Name Truck #5

Field

GAUGE	OIL LEVEL FEET	OIL LEVEL INCHES		
1st	1 1	0 0	1/8	
2nd	1 1	0 5		

BS&W LEVEL FT.	BS&W LEVEL INCHES	TANK TEMP

TANK NO.

SIZE

EST GROSS GALLONS @ °F

SERIAL NUMBERS

OLD

NEW

OBSERVED GRAVITY 28 @ 94°F

PERCENT BS & W 7/10 %

TEMPERATURE OF OIL IN TANK °F

LOG NUMBER

TIME ARRIVED AM PM

TIME DEPARTED AM PM

DELIVERY STATION Berwick

OFFICE USE ONLY

GRAVITY CORR TO 60 °F	
1st	
2nd	
GROSS BARRELS	142.04
X FACTOR	.9789
NET BBLS. PER RUN TIC	139.06

TEMP FACTOR		BS & W FACTOR		X FACTOR
.9859	X	.9930	=	.9789

GROSS	OPEN	D[redacted]
TARE		O
NET	CLOSE	DRIVER
		OPERATOR'S WITNESS

PROPER SHIPPING NAME	HAZARD CLASS		I.D. NUMBER	TOTAL QUANTITY
PETROLEUM CRUDE OIL	III	3	UN 1267	139.06BBLS
BS &W				.99
Temp. Deduction				1.99

"THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED, AND LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION, ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION".

LADIANA OIL & ENVIRONMENTAL CORPORATION

P. O. Box 9088 • New Iberia, LA 70562
337-560-5573

TRANSPORT MANIFEST
Lease Run Ticket
14164

Date 8/28 20 19

Operator Cowillion Lease No. C G

Lease Name Truck #6

Field

GAUGE	OIL LEVEL FEET	OIL LEVEL INCHES		
1st	1	1	0 5	
2nd	1	1	0 7	1/4

BS&W LEVEL FT.	BS&W LEVEL INCHES	TANK TEMP

TANK NO. | SIZE | EST. GROSS GALLONS @ °F

SERIAL NUMBERS
OLD
NEW

OBSERVED GRAVITY 29 @ 92 °F
PERCENT BS & W 8/10 %
TEMPERATURE OF OIL IN TANK °F

LOG NUMBER
TIME ARRIVED AM PM
TIME DEPARTED AM PM
DELIVERY STATION Berwick

TEMP. FACTOR	x	BS & W FACTOR	=	X FACTOR
.9866		.9920		.9787

OFFICE USE ONLY

GRAVITY CORR. TO 60 °F	
1st	
2nd	
GROSS BARRELS	65.55
X FACTOR	.9787
NET BBLS. PER RUN TIC	64.16

GROSS
TARE
NET
OPEN
CLOSE
DRIVER
OPERATOR'S WITNESS

PROPER SHIPPING NAME	HAZARD CLASS		I.D. NUMBER	TOTAL QUANTITY
PETROLEUM CRUDE OIL	III	3	UN 1267	64.16 BBLS
BS & W				.52
Temp. Deduction				.87

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DECLARATION OF INSPECTION PRIOR TO BULK CARGO TRANSFER

Date: 8-19-19	**Location:** Couvillion		
Facility/Vehicle Number:		**Start Time**	**End Time**
Vessel Name: Chloe Candies		0700	1955
Vessel Official Number:	**Vessel Capacity** (Total) (bbls):		
Product Transferred: Crude oil	***Est.* Transfer Volume** (bbls):		

Note For Emergency Notification Discharge amounts (Gallons):

Average most probable:

Maximum most probable:

Worst case discharge:

The following list refers to requirements set forth in detail in 33 CFR 156.150 and 46 CFR 35.35-30.

- The spaces on the left are to be reviewed by ALL PIC's involved in the transfer and checked in agreement.
- The right hand columns are to be initialed by the appropriate PIC and/or noted as not applicable with (N/A).
- Items on the list are provided to indicate that the detailed requirements have been met

☑	***TOPIC***	PIC Delivering	PIC Receiving
	Verify PIC designation/qualification 33 CFR 154.710, 154.730, 154.740(b)	TS	TM
	Person In Charge (PIC): In Immediate Vicinity and Available	TS	TM
	Personnel: Capable/Unimpaired	TS	TM
	Name, title and location of each person participating in the transfer operation	TS	TM
	MC 20 Subsea Storage Offloading Operations & Maintenance Manual present with procedures and particulars of the transfer and receiving systems to be followed and verified with key personnel involved in these operations	TS	TM
	Watch and shift arrangements discussed	TS	TM
	Cargo is Authorized for transfer ***to*** **or** ***from*** tanks	TS	TM
	Discuss if transfer will need to stopped to change tanks – *supply or receiving facility*	TS	TM
	Discuss transfer rates and max allowable to receiving facility	TS	TM
	(Facility/Vessel) properly vented (monitoring vacuum and positive tanks pressure)	TS	TM
	Communications & No Language Barrier	TS	TM
§ Hoses and Connection - 33CFR 154.500			
	Nonmetallic hoses usable for oil or hazardous material service	TS	TM
	Proper connections (must be one of the following):	TS	TM
	Fusion 100 hammer union connections	TS	TM
	Quick-disconnect coupling present on suction side of pump	TS	TM
	Examine transfer hose markings or records.	TS	TM
	Name of product handled; example "OIL SERVICE," or "HAZMAT SERVICE"	TS	TM
§ Examine Transfer Hose condition - 33CFR 156.170			
	No unrepaired kinks, bulges, soft spots, loose covers, other defects	TS	TM
	No cuts, slashes, or gouges that penetrate the first layer of hose reinforcement	TS	TM
	No external/internal deterioration	TS	TM
§ Emergency shutdown - 33CFR 156.170			
	Test emergency shutdown - 33CFR 154.550 - who controls the emergency shutdown	TS	TM
	Communication system continuously operated.	TS	TM
	Verify operating properly (Electric, pneumatic, or mechanical link to facility; electronic voice)	TS	
	Record test info in physical information.	TS	TM
§ Examine closure device - 33CFR 154.520			
	Verify enough to blank off ends of each hose /loading arm not connected for transfer	TS	TM
§ Inspect Small Discharge Containment - 33CFR 154.530			
	Inspect handling area and verify capacity (not less than 5 gallons).	TS	TM

☑	Pre-Transfer Conference and Agreement (Continued) TOPIC	PIC Delivering	PIC Receiving
	§ Inspect discharge containment equipment for oil & hazardous liquids - 33CFR 154.545		
	Verify booming for oil or hazmat transfer (if required by COTP).	TS	TM
	Verify adequate amount of equipment and/or absorbent material for initial response	TS	TM
	Inspect condition of response equipment stored on facility (if applicable).	TS	TM
	Verify availability of at least 200 feet of containment boom onsite within 1 hour.	TS	TM
	Verify means of deployment.		TM
	§ Means of Communication - 33 CFR 154.560		
	Verify continuous two-way voice communication between vessel and facility PICs.	TS	TM
	Communications must meet the following requirements…		
	Portable Radio:		
	IF Flammable or Combustible Liquids	TS	TM
	1. Marked or documented as intrinsically safe.	TS	TM
	2. Certified as intrinsically safe by national testing labor certification organization.	TS	TM
	Voice		
	1. Be audible.	TS	TM
	Test communications. SAT ☐ UNSAT ☐	TS	TM
	§ Inspect lighting systems - 33 CFR 154.570		
	Verify portable lighting for operations between sunrise and sunset *(if applicable).*	TS	TM
	At transfer operations work areas for facility and vessel	TS	TM
	At transfer connection points for facility and vessel	TS	TM
	Verify sufficient number or fire extinguishers.	TS	TM
	Verify protective equipment is ready to operate.	TS	TM
	Verify warning signs are adequate.	TS	TM
	§ VESSEL ONLY - 155.730 Compliance with VESSEL TRANSFER PROCEDURES §		
	PIC for vessel/operator is required by §155.720 to have current transfer procedures		
	Require vessel personnel to use the transfer procedures for each transfer operation		
	Available for inspection by the COTP or OCMI whenever the vessel is in operation		
	Legibly printed language(s) understood by personnel engaged in transfer operation		
	Permanently posted or available and used by members of crew engaged in transfer operation		
	Appropriate tank level monitoring (visual, gauging, indicators, etc.)		
	Arrangements to monitor draft marks during transfer		
	Transfer Piping Line diagram, location of each valve, pump, control device, vent, and overflow		
	Shutoff valve location or isolation device separating bilge or ballast from the transfer system		
	Adequate containment on the vessel at loading or discharge connection		
	Drains, Scuppers and overboard discharges closed		
	The number of persons required to be on duty during transfer operations;		
	Procedures for emptying discharge containment system required by §§155.310 and 155.320		
	Procedures for tending the vessel's moorings during the transfer of oil or hazardous material		
	Procedures for emergency shutdown/communications required by §§155.780 and 155.785		
	Procedures for topping off tanks		
	Procedures ensuring all valves used during transfer are closed upon completion of transfer		

I do certify that I have personally inspected this facility or vessel with reference to the requirements aforementioned and that I have indicated that the regulations have been complied with if applicable.

[redacted] 8-19-19 DATE 0700 TIME

PIC RECEIVING – NAME [redacted] TITLE 8/19/19 DATE 0700 TIME

TRANSFER COMPLETED: 874.6 Bbls AMOUNT (GALLONS) 8/19/19 DATE 1955 TIME

Phase 2
Pump off-3

DECLARATION OF INSPECTION

LOCATION & NAME OF FACILITY

NAME OF VESSEL

DATE TRANSFER OPERATIONS STARTS

An oil transfer operation may not commence to or from a vessel unless the following requirements are met and agreed upon by the respective transferring and receiving persons in charge.
Persons in charge indicate by a check (√). in the appropriate spaces. that the specific requirement has been met.

		VESSEL	FACILITY
WJ	A.	The mooring lings are adequate for all anticipated conditions.	TM
WJ	B.	Cargo hoses and/or loading arms are long enough for intended use.	TM
WJ	C.	Cargo hoses are adequately supported to prevent undue strain on the couplings.	TM
WJ	D.	The transfer system is properly lined up for discharging or receiving oil. (Additional checks shall be performed each time a valve is repositioned.)	TM
WJ	E.	Each flange connection on the cargo system not being used during the transfer operation is blanked or shut off.	TM
WJ	F.	The cargo hoses and/or loading arms are connected to the manifolds using gaskets and a bolt in every other hole. (minimum of 4 bolts). Exception: Tanks without fixed loading systems per waiver from the Captain of the Port.	TM
WJ	G.	The overboard or sea suction valves are sealed or lashed in the closed position.	TM
WJ	H.	Adequate spill containments have been provided for couplings.	TM
WJ	I.	All scuppers or other overboard drains are closed or plugged.	TM
WJ	J.	A communications system is provided between the facility and the vessel.	TM
WJ	K.	Emergency shutdown system is available and operable.	TM
WJ	L.	Communication procedures are established and understood between persons in charge.	TM
WJ	M.	Qualified and designated personnel are in charge and on duty at the terminal and vessel control stations.	TM
WJ	N.	One person at the vessel control station is present who fluently speaks the language of the terminal control station.	TM
WJ	O.	The owner of the cargo hoses will insure test requirements have been met and that the hose has no loose covers, kinks. bulges. soft spots or gouges. cuts and slashes which penetrate the hose reinforcement and that hoses are marked for identification and test data is maintained in a test log.	TM
WJ	P.	Adequate lighting of the vessel and terminal work areas and manifold areas is provided.	TM
	Q.	Persons in charge have held a conference to assure the mutual understanding of the following transfer operations:	TM
WJ		...1. Product identity to be transferred.	TM
WJ		...2. Sequence of transfer operation.	TM
WJ		...3. Transfer rate of flow	TM
WJ		...4. Name or title and location of each person participating in the transfer operation	TM
WJ		...5. Particulars of the transferring and receiving systems	TM
WJ		...6. Starting, stripping, topping and shutdown have been discussed and understood	TM
WJ		...7. Emergency procedures including notification, containment and cleanup of spills	TM
WJ		...8. Watch and shift arrangements	TM
WJ		...9. Notification before leaving stations	TM

The following items are to be filled out by Vessel personnel only.

WJ	...1. Warning signs and read warning signals (35.35-30).
WJ	...2. Repair work authorization (35.35-30).
WJ	...3. Boiler and galley fires safety (35.35-30).
WJ	...4. Fires or open flames (35.35-30).
WJ	...5. Safe smoking space (35.35-30).

I certify that I have read. understand and agree with the foregoing as marked and agree to begin continue the transfer operation.

PERSON IN CHARGE OF VESSEL	[redacted]	PERSON IN CHARGE OF FACILITY	Sign [redacted]
			Title [redacted]
	Time 0700 Date 8/19/19		Time 0700 Date 8/19/19

The operator of each facility and the operator of each vessel shall retain a signed copy for at least a month.

TASK DESCRIPTION: MC 20 Recovered Crude Oil / Vessel to Shore Transfer

SUMMARY OF POTENTIAL HAZARDS (Check applicable)

☒ Heavy or awkward lifting / movement	☒ Pinch Points or caught between	☒ Working and walking surfaces; slip, trip, fall
☐ New / Inexperienced employees	☒ Spill / containment	☒ Heat stress environment
☒ Struck by or crush hazard	☒ Noise levels (>85 dBA)	☐
☒ Hazardous liquids, vapors, waste	☒ Elevated surfaces / Fall / Ladders	☐

APPLICABLE REGULATION / SOPS / ALERTS

☐ SMS 19.2 Vacuum Trucks	☐	☐

MINIMUM PERSONAL PROTECTIVE EQUIPMENT (Check applicable)

☐ Level A	☒ Hard Hat	☐ High Visibility Vest	☒ Leather Steel Toe Boots	☒ PFD / Work vest
☐ Level B	☒ Safety Glasses	☒ Long Sleeves / Coveralls	☐ Disposable boot covers	☐ _____
☐ Level C	☐ Face Shield	☐ Chemical protective clothing	☐ Neoprene Steel Toe Boots	☐ _____
☒ Level D	☒ Hearing Protection	☐ Respirator:_____	☒ Gloves:_____	

JOB HAZARD ANALYSIS

❶ Job Steps	❷ Potential Hazards	❸ Preventive Measures / Special PPE
1. Pre-job Meetings Behavior Based Safety	• Personnel do not understand the operational plan, relevant hazards or their roles/responsibilities • Personnel do not stop work when hazards are identified • Personnel do not report injuries, illnesses, near misses or incidents	• The operational plan, hazards and controls will be explained to all involved personnel in Safety/Ops meeting. Personnel will be encouraged to ask questions if they are unsure of any project details • Immediate supervisor will remind their crews of their Authority and Responsibility to Stop work and contact their supervisor if they discover a hazard • Personnel will be instructed to report any injuries, illnesses, near misses or incidents
2. Site Survey and Equipment Set-up	• Uneven working surfaces and trip hazards. • Equipment not certified, not tested or damaged • Improper set-up due to untrained or unqualified personnel	• Inspect site for correctable walking surface hazards. Flag or correct unsafe conditions. Position equipment and hoses away from travel paths. Identify "no-go" areas. • All equipment will be inspected for current certifications, testing and serviceable working condition prior to work • Personnel will be pre-selected to perform tasks based on verified competency
3. Vehicle movements	• Personnel, equipment or hoses struck or crushed by moving vehicles or equipment • Vehicles not inspected prior to movements. Unsafe for travel. • Unsecured items create dropped object or road hazards.	• Ground guides will be used for equipment movements. Non-essential personnel will clear the travel path. Travel path will be confirmed as clear prior to movements. • Vehicles will be inspected by drivers prior to travel and after travel for potential damage. • Vehicles will be inspected to ensure that there are no loose items and that loads are secured properly.
4. Mooring Vessel and working near water	• Personnel struck by thrown lines or caught in "line of fire". • Personnel pinched or crushed during vessel movements. • Personnel fall into the water. Man overboard.	• When tossing the mooring lines to the shore allow the lines to fall on the ground and pick them up. Do not attempt to catch mooring lines from the M/V. • When mooring the vessel, keep hands, fingers, arms, and all other body parts from between the mooring line and the bits on the dock • Never work alone. All personnel within 5' of the docks edge are required to wear a USCG approved PFD. Always discuss "man overboard" procedures prior to work. Have life ring and recovery plan in place.
5. Connecting hoses	• Personnel crushed or pinched while connecting transfer hoses. • Personnel suffer back strain or other ergonomic related injuries during connections or moving hoses • Slip/trip/fall hazards while working	• Identify, communicate and avoid all crush/pinch points: including cam-lock connections, vehicles and other moving parts or equipment • Transfer hoses can be heavy and when handling these hoses employees shall use proper ergonomic practices including keeping your back as straight as possible as well as lifting with your knees and not your back

① Job Steps	② Potential Hazards	③ Preventive Measures / Special PPE
		• Observe good housekeeping and maintain situational awareness when walking in the dock area. Try to run hoses in an area that is out of the normal walking path and go around if possible
6. Working in potentially hazardous atmospheres	• Personnel exposed to hazards related to hazardous atmospheres. • Ignition sources create potential for explosive conditions • Personnel not equipped to suppress incipient fire	• Calibrated multi-gas meters/detectors will be used to confirm that LEL's, CO and other gases are within safe range for pumping and transfer operations. Operations will transfer operations will stop immediately if LEL's or Carbon Monoxide levels become elevated • A protective distance of 100' outside shoreside transfer will be identified, and marked with caution tape and warning signs, to prohibit smoking, sparks and any potential source of ignition within the transfer area perimeter. The M/V will suspend all similar activities for the duration of transfer operations. • Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.
7. Energizing pneumatic equipment	• Personnel injured when struck by hoses or pressure during hose connection or fitting failure. • Air leaks or blowout causing pressure related injuries. • Hearing loss/injury due to noise levels above 85 decibels	• All pressurized hoses will have whip checks and safety clips installed prior to energizing. All pneumatic hoses will be inspected prior to use. • Pumping operations will be stopped immediately if leaks are detected during operations. Defective hoses will be replaced with new hoses/whips. • Hearing protection will be worn in all areas where high-noise machinery and equipment is being operated.
8. Transfer of recovered crude oil	• Personnel contacted by crude oil spray or environmental release. • Overfilling tank resulting in spills • Personnel overcome by potentially hazardous vapors	• All transfer hoses used will be inspected, certified and tested prior to use. They will be secured with safety clips and wrapped with absorbent pads and duct tape. Polypropylene line will be used as an added retention measure. Personnel will wear Level D PPE and increase protection as appropriate. Spill control kits/supplies will be available on site. **The DOI Declaration of Inspection will be completed prior to operations.** • Prior to transfer the amount of product that can be accepted will be calculated and the PIC will ensure that there is ample room to handle the transferred product. • Crude oil is a mixture of various hydrocarbons. Among them can be benzene, hydrogen sulfide, and other chemicals. There will be a properly calibrated and bump tested 4-gas meter on site during transfer to ensure vapors aren't present. All work will stop if hazardous gasses are detected. PPE will be upgraded according to the concentration of hazards detected. • If personnel will work at heights above 6': fall protection will be worn and a rescue plan will be in place. • Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.
9. Transfer of oil into transporter	• Personnel contacted by crude oil spray or environmental release • Overfilling transportation vessel resulting in spills • Personnel overcome by potentially hazardous vapors • Fall hazards present if personnel are working above 6 feet	• All transfer hoses used will be inspected, certified and tested prior to use. They will be secured with safety clips and wrapped with absorbent pads and duct tape. Polypropylene line will be used as an added retention measure. Personnel will wear Level D PPE and increase protection as appropriate. Spill control kits/supplies will be available on site. • Prior to transfer the amount of product that can be accepted will be calculated and the PIC will ensure that there is ample room to handle the transferred product. • Crude oil is a mixture of various hydrocarbons. Among them can be benzene, hydrogen sulfide, and other chemicals. There will be a properly calibrated and bump tested 4-gas meter on site during transfer to ensure vapors aren't present. All work will stop if hazardous gasses are

	SAFETY MANAGEMENT SYSTEM	
Form 8.1.7	Site Specific Safety Plan Project Name: MC20 Recovered Crude Oil Transfer	Revision: 08/2019

NRC PROJECT PERSONNEL AND EMERGENCY CONTACTS	
Shore side NRC Project Manager	[redacted]
Director of Marine Ops	
Director of Operations	
NRC HSEQ Manager	
NRC HSEQ Director	
Hospital / Medical Intervention	Plaquemines Medical Center – Port Sulfur, La (504) 564-3344

Date: 04/19/2019	Start Time: 0700	Job Number: 19-0192

☐ Land Emergency Response ☐ Marine Emergency Response ☐ Land Service ☒ Marine Service

SITE DESCRIPTION / WORK SUMMARY

The site is the Couvillion Dockside Facility located at 433 McDermott Rd., Venice, La.

NRC will facilitate removing recovered crude oil from the well located at MC20 project. The M/V Charlie Crowley has been collecting crude oil from the location and storing it on Marine Portable Tanks (MPTs) located on her deck. The M/V CC will be moored to the dock at the above location and transfer the recovered crude from the MPTs on her deck to double walled frac tanks on the dockside.

Once the frac tanks on the Couvillion docks are ready for transfer the crude will then be transferred into bulk transporter trailers to be sent to its final destination.

SCOPE OF WORK

The M/V _____ will send a 100' section of 3-inch petroleum duty hose to the dock where it will be connected to the hoses leading to a properly rated and tested manifold. The manifold has one inlet and three outlets. Each outlet will be fitted with a 3-inch transfer hose and affixed to the frac tanks. Once the connections are secured and the declaration of inspection (DOI) is complete, the M/V _____ will transfer the crude oil in her tanks using a 4-inch pneumatic diaphragm pump. As the frac tanks near capacity the dockside operator will open the next manifold valve and close the active one. This process will continue until all three frac tanks are at capacity. Once the transfer is complete a 1-inch airline with the proper fitting will be given to the M/V's crew to send compressed air up the hose to "blow down" any residual product left in the hoses to ensure no product is spilled when the hoses are disconnected.

After the crude oil sits in the frac tank at the Couvillion Dock for 12 to 24 hours the crude oil will be pumped using a 3-inch pneumatic diaphragm pump to transport trailers to be sent to final destination.

Form 8.1.7	SAFETY MANAGEMENT SYSTEM Site Specific Safety Plan Project Name: MC20 Recovered Crude Oil Transfer	SAFETY Revision: 04/2019

SAFETY PLAN APPROVAL

Site Safety Officer [redacted] Date 08/27/2019

ACKNOWLEDGMENTS (signed by all NRC site personnel)

I have read and understand the topics outlined on all pages of this HASP and will follow all the required safety rules.
**I am aware that I am to sign in at the beginning of the shift and sign out at the end of my shift on the Daily Safety Meeting form.
I must notify the on site supervisor of any injury /accident/ near miss that I had or observed during my shift**
I understand that I have the right to stand down for Safety and report any potential hazards to the NRC Site Supervisor.
After an injury/accident/near miss is reported, the Site Supervisor must call the H & S Manager at

Date	Print Name	Signature
8-27-19	[redacted]	
8-27-19		

Form 8.1.7	SAFETY MANAGEMENT SYSTEM	SAFETY
	Site Specific Safety Plan Project Name: MC20 Recovered Crude Oil Transfer	Revision: 04/2019

NRC PROJECT PERSONNEL AND EMERGENCY CONTACTS	
Shore side NRC Project Manager	[redacted]
Director of Marine Ops	
Director of Operations	
NRC HSEQ Manager	
NRC HSEQ Director	
Hospital / Medical Intervention	Plaquemines Medical Center – Port Sulfur, La (504)564-3344

Date: 08/27/2019	Start Time: 0600	Job Number: 19-0192

☐ Land Emergency Response ☐ Marine Emergency Response ☐ Land Service ☒ Marine Service

SITE DESCRIPTION / WORK SUMMARY

The site is the Couvillion Dockside Facility located at 433 McDermott Rd., Venice, La.

NRC will facilitate removing recovered crude oil from the well located at MC20 project. The M/V Chloe Candies has been collecting crude oil from the location and storing it on frac tanks located on her deck. The M/V Chloe Candies will be moored to the dock at the above location and transfer the recovered crude from the frac tanks on her deck to double walled frac tanks on the dockside.

Once the frac tanks on the Couvillion docks are ready for transfer the crude will then be transferred into bulk transporter trailers to be sent to its final destination.

SCOPE OF WORK

The M/V Chloe Candies will send a 100' section of 2-inch petroleum duty hose to the dock where it will be connected to the hoses leading to the double walled frac tanks on the dock. Once the connections are secured and the declaration of inspection (DOI) is complete, the M/V Chloe Candies will transfer the crude oil in her tanks using a 3-inch pneumatic diaphragm pump. Once the transfer is complete a 1-inch airline with the proper fitting will be given to the M/V's crew to send compressed air up the hose to "blow down" any residual product left in the hoses to ensure no product is spilled when the hoses are disconnected.

After the crude oil sits in the frac tank at the Couvillion Dock for 12 to 24 hours the crude oil will be pumped using a 3-inch pneumatic diaphragm pump to transport trailers to be sent to final destination.

NRC	SAFETY MANAGEMENT SYSTEM	SAFETY
Form 8.1.7	Site Specific Safety Plan Project Name: MC20 Recovered Crude Oil Transfer	Revision: 04/2019

[redacted]TY PLAN APPROVAL

Site Safety Officer [redacted] Date 08/26/2019

ACKNOWLEDGMENTS (signed by all NRC site personnel)

I have read and understand the topics outlined on all pages of this HASP and will follow all the required safety rules.
**I am aware that I am to sign in at the beginning of the shift and sign out at the end of my shift on the Daily Safety Meeting form.
I must notify the on site supervisor of any injury /accident/ near miss that I had or observed during my shift**
I understand that I have the right to stand down for Safety and report any potential hazards to the NRC Site Supervisor.
After an injury/accident/near miss is reported, the Site Supervisor must call the H & S Manager at [redacted]

Date	Print Name	Signature
8-26-19	[redacted]	

Form 8.1.7	SAFETY MANAGEMENT SYSTEM	SAFETY IT'S THE WAY TO GO!
	Site Specific Safety Plan Project Name: MC20 Recovered Crude Oil Transfer	Revision: 04/2019

NRC PROJECT PERSONNEL AND EMERGENCY CONTACTS	
Shore side NRC Project Manager	[redacted]
Director of Marine Ops	
Director of Operations	
NRC HSEQ Manager	
NRC HSEQ Director	
Hospital / Medical Intervention	Plaquemines Medical Center – Port Sulfur, La (504)564-3344

Date: 08/24/2019	Start Time: 1000	Job Number: 19-0192

☐ Land Emergency Response ☐ Marine Emergency Response ☐ Land Service ☒ Marine Service

SITE DESCRIPTION / WORK SUMMARY

The site is the Couvillion Dockside Facility located at 433 McDermott Rd., Venice, La.

NRC will facilitate removing recovered crude oil from the well located at MC20 project. The M/V Chloe Candies has been collecting crude oil from the location and storing it on frac tanks located on her deck. The M/V Chloe Candies will be moored to the dock at the above location and transfer the recovered crude from the frac tanks on her deck to double walled frac tanks on the dockside.

Once the frac tanks on the Couvillion docks are ready for transfer the crude will then be transferred into bulk transporter trailers to be sent to its final destination.

SCOPE OF WORK

The M/V Chloe Candies will send a 100' section of 2-inch petroleum duty hose to the dock where it will be connected to the hoses leading to the double walled frac tanks on the dock. Once the connections are secured and the declaration of inspection (DOI) is complete, the M/V Chloe Candies will transfer the crude oil in her tanks using a 3-inch pneumatic diaphragm pump. Once the transfer is complete a 1-inch airline with the proper fitting will be given to the M/V's crew to send compressed air up the hose to "blow down" any residual product left in the hoses to ensure no product is spilled when the hoses are disconnected.

After the crude oil sits in the frac tank at the Couvillion Dock for 12 to 24 hours the crude oil will be pumped using a 3-inch pneumatic diaphragm pump to transport trailers to be sent to final destination.