



**Couvillion Group, LLC**  
**MC-20 Hydrocarbon Pump-Off #56**  
**Results Report**

**Document #: Couv-MC20-O&M-RPT-  
DOC-00082**  
**12/11/2023**

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Revision	Date	By	Check	Approve	Remarks
0	10/30/2023				Initial Document

## **Summary:**

Couvillion Group's Rapid Response Collection System initiated its fifty-sixth collection cycle on 10/8/2023 and completed the cycle on 11/8/2023 resulting in a collection duration of 30.4 days. Using the OSV Brandon Bordelon the collected hydrocarbon fluid that was recovered from the subsea oil containment vessels was taken to the Couvillion Dock in Port Fourchon, Louisiana. Vessel to Dockside Transfer commenced on 11/9/2023, with 715.7 bbl of hydrocarbon fluids transferred to onshore frac tanks 2-3 according to NRC frac tank strapping.

On 11/29/2023, Couvillion Group confirmed the initial measurement of 715.7 bbl of hydrocarbon fluids in frac tanks 2-3 via strap measurements. After a confirmation measurement was recorded, the decanting process began. From frac tanks 2-3, a total of 107.6 bbl of water was decanted on 11/29/2023. This 107.6 bbl of water was sent to the fourth frac tank for disposal at a later time. A gross total of 590.3 bbl of fluids according to NRC strapping measurements was sent to Acadiana oil using tank trucks from frac tanks 2-3. After temperature and BS&W deductions a net total of 574.7 bbl of oil was transferred from tanks 2-3 in the Port Fourchon yard to the Acadiana Oil Company.

## **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 MC-20 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 Brandon Bordelon OSV moved in place on location at MC-20 on 11/7/2023 at 04:20 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. On 11/8/2023 the ATI/BTI were closed at 00:22, marking the end of the 56<sup>th</sup> collection cycle. Pumping commenced at 01:57 on 11/8/2023 and ended at 13:27 on 11/8/23. Fluids were 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 719.9 bbl of hydrocarbon fluid was collected according to the tank strap measurement taken offshore.** 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**

The Brandon Bordelon arrived at the Couvillion Dock in Port Fourchon, Louisiana on 11/9/2023. On the morning of 11/9/2023 hoses were run from the tanks on the vessel through a diaphragm pump and then run to 500 bbl frac tanks. The pump-off process was begun and continued until all MPT tanks aboard the Brandon Bordelon were empty. Tankermen from Team Services verified that the MPT tanks onboard the vessel were emptied, then an NRC representative strapped the dockside frac tanks to determine **the total quantity transferred which was 715.7 bbl.** With the dockside transfer complete, the fluid was allowed to settle out water from the oil over a period of time before the transfer of the oil from the frac tanks to tank trucks.

### **Dockside Frac Tanks to Truck Transfers**

On the morning of 11/30/2023 at 07:00 hrs the first round of frac tanks to tank truck transfers commenced. A hose was attached to the frac tank and ran through a diaphragm pump into a tank truck. Pumping commenced and the first truck received 145.6 bbls and the second truck received 151.1 bbls of hydrocarbon fluids. The second day of truck transfers began on 12/1/2023 at 07:00. The third truck received 151.1 bbls and the final truck of pumpoff 56 received 142.5 bbls of hydrocarbon fluids. There was a total of 17.8 bbls of residual fluids which remained in frac tanks 2-3 and was later pumped into tank 4. All values were recorded in the appropriate forms in the MC-20 Response Disposal Plan (see report Appendix I). Total fluid reconciliation for frac tanks 2-3 was within 0.0%.

### **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 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 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 715.7 bbls of hydrocarbon fluid was transferred from the Brandon Bordelon into an onshore frac tank. Tank trucks transported a gross total of 590.3 bbl to Acadiana Oil Company, which netted out to a total of 574.7 bbl. From a total fluid reconciliation standpoint, measurements at different site locations were within 0.0% for frac tanks 2-3. The calculated flow rate during the 30.4-day collection cycle offshore was 18.9 bbl/day or 793.8 gal/day. Monthly pump off collection rates reflects collection rates which are not inclusive of product that remains in the residual tank. This causes monthly collection rates to appear slightly lower than the historic average. As of the end of this pump off campaign 1,413,459.6 gallons of salvaged crude oil have been contained from the MC-20 site.

# Oil Tally

Oil Tally	Date	Total Fluid Transfer by Legends (bbl)	Total Fluid Frac Tank Strap by NRC (bbl)	%	Truck 1				Truck 2				Truck 3				Truck 4				Total Net	Running Total Net
					Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluid at Acadiana by strap (bbl)	%	Net	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluid at Acadiana by strap (bbl)	%	Net	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluid at Acadiana by strap (bbl)	%	Net	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluid at Acadiana by strap (bbl)	%	Net		
Pump Off #1	4/26/2019 5/6/2019	220.0	215.7	-2.0																		
					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 5/8/2019	246.3	223.5	-10.2																		
					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 5/16/2019	335.0	331.2	-1.1																		
					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 6/20/2019 6/21/2019	901.7	905.5	0.4	139.4 137.7 48.5	145.8 136.2 47.1	-4.6 1.1 2.8	143.0 113.0 44.6	138.7 140.7	139.4 141.4	-0.5 -0.5	137.4 139.4	140.6	141.4	-0.6	134.2	144.1	141.4	1.9	138.4	850.0	1,514.8
Pump Off #5	7/31/2019 8/1/2019 8/2/2019	1200.2	1196.6	-0.3	139.2 139.1 99.8	138.3 145.7 112.9	0.6 -4.7 -13.1	133.7 135.1 111.0	142.7 140.7	150.0 138.4	-5.1 1.6 -4.5	146.5 131.9 104.2	146.0	142.0	2.7	81.3	138.0	142.0	-2.9	140.0	983.7	2,498.5
Pump Off #6	8/26/2019 8/27/2019	848.0	874.6	3.0	141.7 140.5	138.4 138.4	2.3 1.5	134.6 135.5	140.3 137.2	145.7 142.0	-3.8 -3.5	140.6 139.1	141.5 61.3	145.7 65.6	-3.0 -7.0	143.2 64.2					757.2	3,255.7
Pump Off #7	9/23/2019 9/24/2019	891.9	880.4	-1.3	138.0 144.4	134.7 142.0	2.4 1.7	132.4 139.1	144.3 143.7	151.8 138.4	-5.2 3.7	148.9 135.5	142.6 55.3	142.0 54.6	0.4 1.3	139.7 53.7					749.3	4,005.0
Pump off #8	10/21/2019 10/22/2019 10/23/2019	790.9	787.4	-0.4																		
					143.9 137.7	131.0 141.4	9.0 -2.7	129.1 139.2	154.3 130.0	151.9 125.7	1.5 3.3	149.7 123.6	144.0	136.2	5.4	134.2						
Residual Tank	10/23/2019		205.1										125.4	125.7	-0.2	123.6					799.4	4,804.4
Pump off #9	11/11/2019 11/19/2019 11/20/2019	772.3	757.8	-1.9																		
					142.3 145.6	156.5 145.6	-10.0 0.0	153.6 140.0	143.8 92.1	131.0 94.6	8.9 -2.8	128.8 93.3	145.3	142.0	2.3	139.9					659.1	5,463.5
Pump off #10	12/17/2019 12/18/2019	940.7	942.8	0.2	142.0 146.4	138.4 138.4	2.5 5.5	136.9 136.8	71.4 144.3	69.2 145.7	3.1 -1.0	68.5 144.4	146.4 144.0	145.7 142.0	0.5 1.4	144.2 140.8						
Pump off #11	1/9/2020 1/10/2020	697.7	691.0	-1.0	128.7 79.4	131.1 91.0	-1.9 -14.6	128.3 90.0	128.0 92.6	131.1 91.1	-2.4 1.6	129.3 90.0	129.8	131.1	-1.0	129.6					818.6	6,282.1
Residual Tank	1/8/2020				141.9	142.0	-0.1	140.0													707.2	6,989.3
Pump off #12	2/12/2020 2/13/2020 2/17/2020	725.4	722.5	-0.4	120.8 149.5 108.2	123.8 160.2 105.6	-2.5 -7 2.4	115.8 154 101.3	102.1 114.2	101.9 101.92	0.2 10.8	100.4 61.1	99.0	101.9	-2.9	97.5						
Residual Tank	2/17/2020																				630.1	7,619.4
Pump off #13	3/11/2020 3/12/2020 3/13/2020	583.7	570.2	-2.4																		
					114.5 93.6	115.2 94.3	-0.6 -0.7	112.7 91.9	138.3 120.0	136.2 120.4	1.5 -0.3	134.3 117.5									456.4	8,075.8
Pumpoff #14	4/16/2020 4/17/2020	966.7	928.8	-4.1	147.2 144.9	146.5 146.5	0.5 -1.1	144.6 144.3	145.2 144.1	141.2 141.2	2.8 2.0	139.4 139.1	148.0 87.4	146.5 88.9	1.0 -1.7	143.7 87.3					798.4	
Residual Tank	4/14/2020				149.9	151.9	-1.3	132.3													132.3	9,006.5
Pump off #15	5/7/2020 5/8/2020	798.4	783.1	-1.9	150.3 147.2	145.8 149.4	3.0 -1.5	143.4 147.6	148.0 131.7	153.1 131.2	-3.4 0.4	149.4 128.6	145.2	142.1	2.1	138.7					707.7	9,714.2
Pump off #16	5/28/2020 5/29/2020	598.8	583.3	-2.7	142.1 138.0	140.3 138.5	1.3 -0.4	137.5 134.1													513.0	10,227.2
Pumpoff #17	7/8/2020 7/9/2020 7/10/2020	970.1	956.3	1.4																		
					149.1 150.7	149.9 149.6	-0.5 0.7	146.8 146.6	148.8 137.1	145.5 138.0	2.2 -0.7	142.5 135.2	149.2 119.9	149.9 119.0	-0.5 0.8	146.8 116.5					834.4	11,061.4
Pumpoff #18	7/22/2020 7/27/2020 7/28/2020	658.4	642.6	-2.5																		
					129.9 66.0	129.9 66.0	0.0 0.0	127.8 62.8	140.6	140.6	0.0	137.7	138.2	138.2	0.0	135.7	139.8	139.8	0.0	137.5	601.5	11,663.1
Residual Tank	7/28/2020								113	113	0.0	110.7									110.7	11,773.8
Pumpoff #19	9/1/2020 9/2/2020	901.6	886.4	-1.7	128.2 131.2	128.2 131.2	0.0 0.0	125.6 128.3	135.5 136.8	135.5 136.8	0.0 0.0	132.6 134.0	134.8	134.8	0.0	132.0	135.9	135.9	0.0	133.0	785.5	12,559.3
Pumpoff #20	9/29/2020 9/30/2020	464.2	450.9	-2.9	144.0 85.7	140.0 83.0	2.8 3.2	137.9 81.6	143.5	140.0	2.4 1.3	137.9										
Residual Tank	10/1/2020				136.5	131.0	4.0	128.6													357.4	12,916.7
Pumpoff #21	10/15/2020 10/16/2020	620.9	610.1	-1.8	139.0 147.2	139.0 144.0	0.0 2.2	130.8 142.5	145.3 136.0	145.0 135.0	0.2 0.7	142.1 132.9									548.3	13,593.6
Pumpoff #22	11/16/2020 11/17/2020	685.6	673.2	-1.8	146.5 133.2	143.0 130.0	2.4 2.4	139.7 124.3	143.4	142.0	1.0	140.1	146.4	140.0	4.4	128.3					532.4	14,126.0
Pumpoff #23	12/30/2020 12/31/2020	781.7	784.3	0.3	146.1 145.3	140.0 141.0	4.2 3.0	137.3 138.4	146.8 113.9	140.0 111.0	4.6 2.5	138.6 107.2	145.2	137.0	5.6	133.9					655.4	14,781.4
Pumpoff # 24	1/27/2021 1/28/2021 2/19/2021	676.5	663.9	-1.9	123.9 141.0 146.0	* * 135.0	* * 7.5	* * 133.7	* 140.2	140.0	0.1	137.7	146.8	*	*	*					517.5	15,298.9
Residual Tank	2/20/2021				100.9	101.5	-0.6	96.0													96.0	15,394.9
Pumpoff #25	3/8/2021 3/9/2021	759.7	738.1	-2.9	144.6 144.1	143.0 140	1.1 2.8	140.9 133.9	146.5 77.3	143.0 75.0	2.4 3.0	141.7 70.8	146.0	140.0	4.1	137.4					624.7	16,019.5
Pumpoff #26-27	4/21/2021 4/22/2021 4/23/2021	498.2 553.0	472.6 544.3	-5.4 -1.6	143.7 123.5	136.2 129.7	5.2 -5.0	134.8 128.0	142.6 146.4	138.6 146.7	2.8 -0.2	137.2 146.6										
Residual Tank	4/23/2021								111.4	109.1	2.1	106.3	144.1	142.0	1.5	139.9					792.8	16,812.3
Pumpoff #28	5/26/2021 5/27/2021 5/28/2021	716.0	706.1	-1.4																	127.0	16,939.3
					144.5 81.1	140.6 78.0	2.7 3.8	136.3 76.1	141.1 88.7	139.0 82.0	1.5 7.6	136.6 78.3	143.3	140.4	2	137.9					565.2	17,504.5
Pumpoff #29	7/14/2021 7/15/2021 7/16/2021	648.0	631.7	-2.6	114.7	115.3	-0.5	113.8	150.8	149.0	1.2	145.9	119.8	120.2	-0.3	118.5	155.3	151.7	2.3	149.2	527.4	18,031.9
Pumpoff #30	8/5/2021 8/6/2021	763.0	750.2	-1.7	115.3 118.5	115.0 118.0	0.3 0.4	112.9 115.5	112.6 118.4	111.0 117.0	1.4 1.2	109.0 114.2	106.8 124.3	105.0 123.0	1.7 1.0	103.2 118.6					673.4	18705.3

# Oil Tally Contd.

Oil Tally	Date	Total Fluid Transfer by Legends (bbl)	Total Fluid Frac Tank Strap by NRC (bbl)	%	Truck 1				Truck 2				Truck 3				Truck 4				Total Net	Running Total Net
					Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluid at Acadiana by strap (bbl)	%	Net	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluid at Acadiana by strap (bbl)	%	Net	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluid at Acadiana by strap (bbl)	%	Net	Total Fluids to Acadiana NRC Frac Strap (bbl)	Total Fluid at Acadiana by strap (bbl)	%	Net		
Pumpoff #31	9/23/2021 9/24/2021	616.2	598.4	-3.0	145.6 126.3	141.6 123.1	2.7 2.5	140.0 119.8	142.9 138.7	142.9 134.3	0.0 3.2	141.8 129.2									530.8	19236.1
Pumpoff #32	11/3/2021 11/4/2021 11/5/2021 11/9/2021	952.4	937.1	-1.6	147.8 152.5 150.2 118.8	147.0 149.0 147.0 117.0	0.5 2.3 2.1 1.5	145.5 147.0 144.8 115.4	148.7 154.6 145.0	148.0 145.0	0.5 6.2	146.0 142.2									840.9	20077.0
Pumpoff #33	11/30/2021 12/1/2021	787.9	786.2	-0.2	142.9 141.5	140.5 138.5	1.7 2.1	139.5 137.8	144.0 130.9	140.9 128.0	2.2 2.2	139.9 127.2	149.6	145.3	2.9	143.6					688.0	20765.0
Pumpoff #34	1/6/2022 1/7/2022	686.6	673.8	-1.9	149.6 86.4	140.5 87.0	6.1 -0.7	138.9 86.3	144.0	148.3	-3.0	146.1	152.3	148.5		147.2					518.5	21283.5
Pumpoff #35	2/16/2022	564.2	551.9	-2.2	144.1 125.5 94.0	144.0 120.0 88.0	0.1 4.4 6.4	142.7 118.3 70.1	140.2 121.8	136.2 114.6	2.9 5.9	140.2 112.3									513.5 70.1	21867.1
Residual Tank																						
Pumpoff #36	3/23/2022 3/24/2022	690.7	678.5	-1.8	152.5 148.0	148.3 142.1	2.8 4.0	147.4 141.1	152.7 157.6	147.9 150.0	3.1 4.8	145.8 144.6									578.9	22446.0
Pumpoff #37	5/4/2022 5/6/2022	882.7	868.2	-1.7	146.0 145.7	144.0 142.4	1.4 2.3	141.4 141.3	151.5 127.3	146.6 125.0	3.2 1.8	143.9 123.7	156.2 70.4	153.0 68.3	2.0 3.0	150.8 67.4					768.5	23214.5
Pumpoff #38	6/1/2022 6/2/2022	685.4	674.0	-1.7	145.2 140.2	142.0 135.0	2.2 3.7	139.9 128.1	150.3 136.6	146.7 132.6	2.4 2.9	144.6 130.4									543.0	23757.5
Pumpoff #39	6/29/2022 6/30/2022	545.5	539.3	-1.3	145.7 142.0	136.9 139.5	6.0 1.8	134.1 136.7	143.6 49.8	140.7 49.0	2.0 1.6	137.7 46.6									455.1	24212.6
Pumpoff #40	7/28/2022 7/29/2022	707.2	702.1	-0.7	139.1 141.8	137.0 138.1	1.5 2.6	134.4 135.2	144.9 86.8	140.7 83.3	2.9 4.0	137.6 81.8	135.9	133.2	2.0	130.2					619.2	24831.8
Pumpoff #41	8/26/2022 8/29/2022	461.4	459.8	-0.3	149.6 149.9	146.2 146.6	2.3 2.2	143.8 144.0		106.3	102.1	4.0	99.8								387.6	25219.4
Pumpoff #42	9/20/2022 9/21/2022	565.9	563.9	-0.4	151.5 151.9	147.6 149.9	2.6 1.3	144.6 146.9	153.7	153.0	0.5	150.0	75.0	75.0	0.0	73.4					514.9	25734.3
Residual Tank	9/21/2022				74.2	70.5	5.0	69.0	86.5	86.0	0.6	68.0									137.0	25871.3
Pumpoff #43	10/26/2022 10/27/2022	577.3	581.8	0.8	143.8 146.6	139.5 141.4	3.0 3.5	137.5 139.4	145.6 83.9	143.4 81.3	1.5 3.1	141.5 80.2									498.6	26369.9
Pumpoff #44	11/22/2022 11/23/2022	583.2	580.2	-0.5	138.3 148.0	127.6 140.4	7.7 5.1	126.5 138.7	132.4 133.2	137.7 129.6	-4.0 2.7	136.5 128.5									530.2	26900.1
Pumpoff #45	12/20/2022 12/21/2022	625.5	621.7	-0.6	144.9 145.7	140.0 140.0	3.4 3.9	137.0 137.0	150.3	140.0	6.9	137.0	149.5	141.0	5.7	138.0					549.0 61.4	27449.1 27510.5
Residual Tank	12/21/2022				62.5	62.7	-0.3	61.4														
Pumpoff #46	1/26/2023 1/27/2023	719.7	709.7	-1.4	137.9 135.2	137.9 131.9	0.0 2.4	137.0 131.1	132.9 102.5	128.8 109.0	3.1 -6.3	127.8 103.3	124.3	120.1	3.4	119.2					618.4	28128.9
Pumpoff #47	2/23/2023 2/24/2023	576.8	578.6	0.3	110.7 139.8	106.0 139.0	4.2 0.6	103.6 135.7	145.7 122.3	145.0 117.0	0.5 4.3	141.7 114.2									495.2	28624.1
Pumpoff #48	3/28/2023 3/29/2023	612.4	607.8	-0.8	141.8 149.1	140.0 145.0	1.3 2.7	138.4 143.9	136.7 136.4	132.0 135.0	3.4 1.0	129.8 133.9									546.0	29170.1
Pumpoff #49	5/10/2023 5/11/2023	651.9	647.4	-0.7	147.2 150.8	146.1 150.0	0.7 0.5	144.8 148.2	157.3 155.7	151.0 152.0	4.0 2.4	149.2 150.0									592.2	29762.3
Pumpoff #50	6/6/2023 6/7/2023	756.6	740.4	-2.2	141.3 147.2	140.0 140.0	0.9 4.9	138.1 138.3	155.4 101.7	145.0 100.7	4.7 1.0	143.0 97.8	152.3	142.0	6.8	140.0					657.2	30419.5
Pumpoff #51	6/22/2023 6/23/2023	551.1	545.6	-1.0	134.4 143.7	135.0 138.0	-0.4 4.0	132.2 136.1	143.5 78.8	141.0 77.0	1.7 2.3	137.6 75.9									481.8	30901.3
Pumpoff #52	8/3/2023 8/4/2023	743.6	740.4	-0.4	141.8 148.0	140.0 140.0	1.3 5.4	137.3 137.3	147.6 148.3	145.0 145.0	1.8 2.2	142.2 141.8	87.5	84.0	4.0	82.0					640.6	31541.9
Pumpoff #53	8/24/2023	419.9	410.9	-2.2	132.1	130.0	1.6	127.8	139.0	130.0	6.5	127.6	104.8	104.0	0.8	101.9					357.3	31899.2
Residual Tank	8/25/2023				136.3	135.0	1.0	129.5													129.5	32028.7
Pumpoff #54	9/28/2023 9/29/2023	639.3	637.7	-0.3	142.2 167.8	135.0 165.0	5.1 1.7	133.0 162.7	146.4	135.0	7.8	133.0	151.5	150.0	1.0	147.6					576.3	32605.0
Pumpoff #55	10/24/2023 10/25/2023	579.1	577.4	-0.3	149.6 150.4	135.0 130.0	9.8 13.6	133.3 128.4	142.7 79.9	140.0 75.0	1.9 6.1	138.3 74.1									474.1	33079.1
Pumpoff #56	11/30/2023 12/1/2023	719.9	715.7	-0.6	145.6 151.1	145.0 150.0	0.4 0.7	143.7 148.9	151.1 142.5	150.0 135.0	0.7 5.3	148.4 133.8									574.7	33653.8

# Total Fluid Reconciliation

				Truck 1	Truck 2	Truck 3	Truck 4			
	Date	Total Fluid Frac Tank Strap at Port Fourchon 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	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	0.0	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	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	146.0	138.0		563.8	
	8/2/2019			99.8	101.0			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
Pump Off #7	9/23/2019	880.4	41.3	138.0	144.3	142.6			466.2	
	9/24/2019		*	144.4	143.7	55.3		55.3	398.7	
	PO7: Total							*	864.9	-1.8
Pump Off #8	10/21/2019	787.4	27.2						27.2	
	10/22/2019			143.9	154.3	144.0			442.2	
	10/23/2019			137.7	130.0				267.7	
Residual Tank	10/23/2019	205.1	53.5			125.4		66.4	245.3	
	PO8: Total								982.4	-1.0
Pump Off #9	11/19/2019		32.0	142.3	143.8	145.3			463.4	
	11/20/2019	757.8		145.6	92.1			55.6	293.3	
	PO9: Total								756.7	-0.1
Pump Off #10	12/17/2019	942.8	33.4	142.0	71.4	146.4			393.2	
	12/18/2019			146.4	144.3	144.0	47.4	73.9	556.0	
	PO10: Total								949.2	0.7
Pump Off #11	1/9/2020	691.0	39.2	128.7	128.0	129.8		72.7	498.4	
	1/10/2020			79.4	92.6				172.0	
Residual Tank	1/8/2020	307.0	81.5	141.9				121.7	345.1	
	PO11: Total								1015.5	1.8
Pumpoff #12	2/11/2020	722.5	49.1			99.0			49.1	
	2/12/2020		2.7	120.8	102.1				324.6	
	2/13/2020		3.9	149.5	114.2			87.5	355.1	
	PO12: Total							*	728.8	0.9
Residual tank	2/17/2020	265.8	93.6	108.2					201.8	
	2/18/2020		23.5					121.7	145.2	
	Resid Total								347	-1.8
Pumpoff #13	3/11/2020	570.2	39.6						39.6	
	3/12/2020		2.8	114.5	138.3				255.6	
	3/13/2020			93.6	120.0			63.7	277.3	
	PO13: Total								572.5	0.4
Pumpoff #14	4/15/2020	928.8	55.1						55.1	
	4/16/2020			147.2	145.2	148			440.4	
	4/17/2020			144.9	144.1	87.4		65.4	441.8	
	PO14: Total								937.3	0.9
Residual tank	4/13/2020	244.1	67.6						67.6	
	4/14/2020			149.9				26.6	176.5	
									244.1	0.0
Pumpoff #15	5/6/2020	783.1	18.3						18.3	
	5/7/2020		1.2	150.3	148.0	145.2			444.7	
	5/8/2020			147.2	131.7			40.0	318.9	
	PO15: Total								781.9	-0.2
Pumpoff #16	5/27/2020	583.3	25.3						25.3	
	5/28/2020			142.1					142.1	
	5/29/2020			138.0	135.1	115.0		27.8	415.9	
	PO16: Total								583.3	0.0
Residual tank	5/27/2020		67.2					153.6		
Pumpoff #17	7/8/2020	956.3	23.6						23.6	
	7/9/2020		2.4	149.1	148.8	149.2			449.5	
	7/10/2020			150.7	137.1	119.9		63.3	471	
	PO17: Total								944.1	-1.3
Pumpoff #18	7/22/2020	642.6	14.3							
	7/27/2020			129.9	140.6	138.2	139.8	0.0		
	7/28/2020		13.6	66.0					642.4	0.0
Residual Tank	7/22/2020	299.6	67.2							
	7/28/2020		31.3	113.0				84.5	296.0	-1.2
Pumpoff #19	9/1/2020	886.4	7.8	128.2	135.5					
	9/2/2020			131.2	135.9	135.9	134.8	76.2	885.5	-0.1
Residual Tank	8/31/2020	292.6	102.9					189.7	189.7	

# Total Fluid Reconciliation Contd.

				Truck 1	Truck 2	Truck 3	Truck 4			
	Date	Total Fluid Frac Tank Strap at Port Fourchon 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
Pumpoff #20	9/29/2020 9/30/2020	450.9	52.9	144.0 85.7	143.5			24.8	450.9	0.0
Residual Tank	9/30/2020 10/1/2020	273.2	116.1 2.7	136.5				17.9	273.2	0.0
Pumpoff #21	10/15/2020 10/16/2020	610.1	14.0	139.0 147.2	145.3 136.0			28.6	610.1	0.0
Residual Tank	10/14/2020 10/15/2020	293.4	111.8 132.1					49.5	293.4	0.0
Pumpoff #22	11/16/2020 11/17/2020	673.2	68.7 2.7	146.5 133.2	143.4	146.4		32.3	673.2	0.0
Pumpoff #23	12/30/2020 12/31/2020	784.3	30.3	146.1 145.3	146.8 113.9	145.2		56.7	784.3	0.0
Pumpoff #24	1/27/2021 1/28/2021 2/19/2021	663.9	23.3  11.8	140.2 146.0	 150.7	 115.3		68.5	655.8	-1.2
Residual Tank	2/20/2021	164.8	31.1	100.9				32.8	164.8	0.0
Pumpoff # 25	3/3/2021 3/8/2021 3/9/2021	738.1	26.1 5.7	144.6 144.1	146.5 77.3	146.0		47.8	738.1	0.0
Pumpoff # 26-27	4/1/2021 4/20/2021 4/21/2021 4/22/2021 4/23/2021	1016.9	73.8 60.2  6.4	  143.7 123.5 111.4	  142.6 146.4	  144.1		62.2	1014.3	-0.3
Residual Tank	4/21/2021 4/22/2021 4/23/2021	216.9	9.4 18.2 32.6	132.5				23.8	216.5	-0.2
Pumpoff #28	5/26/2021 5/27/2021 5/28/2021	706.1	72.5	144.5 81.1	141.4 88.7	143.3		34.6	706.1	0.0
Pumpoff #29	7/14/2021 7/15/2021	631.7	81.4	114.7	150.8	119.8	155.3	9.7	631.7	0.0
Residual Tank	7/16/2021 7/21/2021	371.2	219.1 152.1						371.2	0.0
Pumpoff #30	8/4/2021 8/5/2021 8/6/2021	750.2	20.4	115.3 118.5	112.6 118.4	106.8 124.3		33.9	750.2	0.0
Pumpoff #31	9/22/2021 9/23/2021 9/24/2021	598.4	16.7  28.2	145.6 126.3	142.9 138.7				598.4	0.0
Pumpoff #32	11/3/2021 11/4/2021 11/5/2021 11/9/2021	937.1	31.7	147.8 152.5 150.2 118.8	148.7 154.6			32.0	936.3	-0.1
Pumpoff #33	11/29/2021 11/30/2021 12/1/2021	786.2	56.0	142.9 141.5	144.0 130.9	149.6		21.3	786.2	0.0
Pumpoff #34	1/5/2022 1/6/2022 1/7/2022	673.8	107.1	149.6 86.4	144.0	152.3		34.2	673.6	-0.6
Pumpoff #35	2/8/2022 2/15/2022 2/16/2022 2/17/2022	551.9	6.2 9.3	 144.1 125.5	 140.2 121.8			8.3	555.4	0.6
Residual Tank	2/8/2022 2/17/2022	207.1	104.8 1.5	94.0				6.8	207.1	0.0
Pumpoff #36	2/21/2022 3/18/2022 3/23/2022 3/24/2022	678.5	54.9 3.1	152.5 148	152.7 157.6			31.6	700.4	3.1
Residual Tank	3/18/2022	27.7	27.7					0	27.7	0.0
Pumpoff #37	4/6/2022 4/22/2022 5/4/2022 5/6/2022	868.2	22.9 2.8	146 145.7	151.5 127.3	156.2 70.4		46.2	869.0	0.1
Pumpoff #38	5/15/2022 5/31/2022 6/1/2022 6/2/2022	674	69.2 3.9	145.2 140.2	150.3 136.6			28.6	674.0	0.0
Pumpoff #39	6/28/2022 6/29/2022 6/30/2022	538.3	39.3	145.7 142	143.6 49.8			22.0	542.4	0.2

# Total Fluid Reconciliation Contd.

		Total Fluid Frac Tank Strap at Port Fourchon by NRC (bbl)	Water Decanted From Frac Tank Using Strap Measurement (bbl)	Truck 1 Total Fluids to Acadiana NRC Frac Strap (bbl)	Truck 2 Total Fluids to Acadiana NRC Frac Strap (bbl)	Truck 3 Total Fluids to Acadiana NRC Frac Strap (bbl)	Truck 4 Total Fluids to Acadiana NRC Frac Strap (bbl)	Residual left in Frac Tanks (bbl)	Total of Fluid From Trucks, Residual & Decant (bbl)	% Diff
Pumpoff #40	7/27/2022 7/28/2022 7/29/2022	702.1	15.4	139.1 141.8	144.9 86.8	135.9		38.2	702.1	0.0
Pumpoff #41	8/25/2022 8/26/2022 8/29/2022	459.8	36.5	149.6 149.9	106.3			17.5	459.8	0.0
Pumpoff #42	9/5/2022 9/20/2022 9/21/2022	563.9	16.6	151.5 151.9	153.7 86.5	75.0		15.5 26.6	564.2 203.3	0.1 0.0
Residual Tank	9/21/2022	203.3	16.0	74.2	86.5			26.6	203.3	0.0
Pumpoff #43	10/4/2022 10/26/2022 10/27/2022	581.8	19.5	143.8 146.6	145.6 83.9			42.6	582.0	0.0
Pumpoff #44	11/5/2022 11/22/2022 11/23/2022	580.2	15.2	138.3 148.0	132.4 133.2			18.2	585.3	0.9
Pumpoff #45	12/3/2022 12/20/2022 12/21/2022	621.7	18.5	144.9 145.7	150.3	149.5		12.8 11.8	621.7 209.5	0.0 0.0
Residual Tank	12/21/2022	209.5	135.2	62.5				11.8	209.5	0.0
Pumpoff #46	1/7/2023 1/26/2023 1/27/2023	709.7	37.6	137.9 135.2	132.9 102.5	124.3		39.3	709.7	0.0
Pumpoff #47	2/2/2023 2/23/2023 2/24/2023	578.6	43.4 2.7	110.7 139.8	145.7 122.3			14.0	578.6	0.0
Pumpoff #48	3/8/2023 3/28/2023 3/29/2023	607.8	22.5 2.0	141.8 149.1	136.7 136.4			19.3	607.8	0.0
Pumpoff #49	4/10/2023 5/10/2023 5/11/2023	647.4	15.5	147.2 150.8	157.3 155.7			20.9	647.4	0.0
Pumpoff #50	5/21/2023 6/6/2023 6/7/2023	740.4	12.9	141.3 147.2	155.4 101.7	152.3		29.6	740.4	0.0
Pumpoff #51	6/13/2023 6/22/2023 6/23/2023	545.6	18.5	134.4 143.7	143.5 78.8			26.7	545.6	0.0
Pumpoff #52	7/21/2023 8/3/2023 8/4/2023	740.4	14.4	141.8 148.0	147.6 148.3	87.5		52.8	740.4	0.0
Pumpoff #53	8/12/2023 8/24/2023	410.9	16	132.1	139.0	104.8		19.0	410.9	0.0
Residual Tank	8/25/2023	216.1	38.5	136.3				41.3	216.1	0.0
Pumpoff #54	9/13/2023 9/28/2023 9/29/2023	637.7	8.1	142.2 167.8	146.4	151.5		21.7	637.7	0.0
Pumpoff #55	10/10/2023 10/24/2023 10/25/2023	577.4	39.1 0.4	149.6 150.4	142.7 79.9			15.3	577.4	0.0
Pumpoff #56	11/9/2023 11/30/2023 12/1/2023	715.7	107.6	145.6 151.1	151.1 142.5			17.8	715.7	0.0



# 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	00:00	4/23/2019	01:05	11.0	187.4	17.0	715.7 gallons/day
Collection Duration for 2nd Trip	4/23/2019	01:05	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	1026.5 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	01:40	37.4	983.7	26.3	1104.7 gallons/day
Collection Duration for 6th Trip	7/21/2019	01:40	8/18/2019	03:15	28.6	757.2	26.5	1112.0 gallons/day
Collection Duration for 7th Trip	8/18/2019	03:15	9/12/2019	22:30	25.8	749.2	29.0	1219.6 gallons/day
Collection Duration for 8th Trip	9/12/2019	22:30	10/9/2019	10:15	26.5	675.8	25.5	1071.1 gallons/day
Collection Duration for 9th Trip	10/9/2019	10:15	11/10/2019	01:05	31.6	659.1	20.8*	875.5 gallons/day
Collection Duration for 10th Trip	11/10/2019	01:05	12/6/2019	10:25	25.9	818.6	31.6*	1327.5 gallons/day
Collection Duration for 11th Trip	12/6/2019	10:25	12/31/2019	22:25	25.5	567.2	22.2	934.2 gallons/day
Collection Duration for 12th Trip	12/31/2019	22:25	1/30/2020	17:50	29.8	528.8	17.7	745.3 gallons/day
Collection Duration for 13th Trip	1/30/2020	17:50	3/2/2020	02:00	31.3	456.4	14.6	612.4 gallons/day
Collection Duration for 14th Trip	3/2/2020	02:00	4/2/2020	01:15	31.0	798.4	25.8	1081.7 gallons/day
Collection Duration for 15th Trip	4/2/2020	01:15	4/25/2020	15:45	23.1	707.7	30.6	1286.7 gallons/day
Collection Duration for 16th Trip	4/25/2020	15:45	5/15/2020	18:40	20.1	513.0	25.5	1071.0 gallons/day
Collection Duration for 17th Trip	5/15/2020	18:40	6/18/2020	22:55	34.2	834.4	24.4	1024.8 gallons/day
Collection Duration for 18th Trip	6/18/2020	22:55	7/12/2020	15:10	23.7	601.5	25.4	1066.8 gallons/day
Collection Duration for 19th Trip	7/12/2020	15:10	8/13/2020	06:00	33.6	785.5	23.4	982.8 gallons/day
Collection Duration for 20th Trip	8/15/2020	06:00	9/2/2020	13:25	18.3	357.4	19.5	819.0 gallons/day
Collection Duration for 21st Trip	9/2/2020	13:25	10/4/2020	15:20	32.1	548.3	17.1	718.2 gallons/day
Collection Duration for 22nd Trip	10/4/2020	15:20	11/3/2020	16:10	30.0	532.4	17.7	743.4 gallons/day
Collection Duration for 23rd Trip	11/3/2020	16:10	12/10/2020	13:00	36.9	655.4	17.8	747.6 gallons/day
Collection Duration for 24th Trip	12/10/2020	13:00	1/9/2021	09:15	29.8	517.5	17.4	730.8 gallons/day
Collection Duration for 25th Trip	1/9/2021	09:15	2/21/2021	11:30	43.1	624.7	14.5	609.0 gallons/day
Collection Duration for 26th Trip	2/21/2021	11:30	3/15/2021	22:25	22.4	-	-	-
Collection Duration for 27th Trip	3/15/2021	22:25	4/8/2021	12:35	23.6	-	-	-
Collection Duration for 26-27th Trip	2/21/2021	11:30	4/8/2021	12:35	46.0	792.8	17.2	722.4 gallons/day
Collection Duration for 28th Trip	4/8/2021	12:35	5/14/2021	12:14	36.0	565.2	15.7	659.4 gallons/day
Collection Duration for 29th Trip	5/14/2021	12:14	6/11/2021	12:08	28.0	527.4	18.8	789.6 gallons/day
Collection Duration for 30th Trip	6/11/2021	12:08	7/22/2021	13:38	41.1	673.4	16.4	688.8 gallons/day
Collection Duration for 31st Trip	7/22/2021	13:38	9/4/2021	05:40	43.7	-	-	- gallons/day
Collection Duration for 32nd Trip	9/4/2021	05:40	10/5/2021	15:30	31.4	-	-	- gallons/day
Collection Duration for 31-32nd Trip	7/22/2021	13:38	10/5/2021	15:30	75.1	1371.7	18.3	768.6 gallons/day
Collection Duration for 33rd Trip	10/5/2021	15:30	11/13/2021	22:29	39.3	688.0	17.5	735.0 gallons/day
Collection Duration for 34th Trip	11/13/2021	22:29	12/14/2022	13:20	30.6	518.5	16.9	709.8 gallons/day
Collection Duration for 35th Trip	12/14/2022	13:20	1/13/2023	23:30	30.4	513.5	16.9	709.8 gallons/day
Collection Duration for 36th Trip	1/13/2023	23:30	2/18/2023	17:25	35.8	578.9	16.2	680.4 gallons/day
Collection Duration for 37th Trip	2/18/2023	17:25	4/4/2023	17:56	45.0	768.5	17.1	718.2 gallons/day
Collection Duration for 38th Trip	4/4/2023	17:56	5/11/2023	16:43	36.9	547.6	14.8	621.6 gallons/day
Collection Duration for 39th Trip	5/11/2023	16:43	6/7/2023	15:50	26.9	455.1	16.9	709.8 gallons/day
Collection Duration for 40th Trip	6/7/2023	15:50	7/14/2023	05:15	36.6	619.2	16.9	709.8 gallons/day
Collection Duration for 41st Trip	7/14/2023	05:15	8/5/2023	01:45	21.9	387.6	17.7	743.4 gallons/day
Collection Duration for 42nd Trip	8/5/2023	01:45	9/2/2023	14:35	28.5	514.9	18.1	760.2 gallons/day
Collection Duration for 43rd Trip	9/2/2023	14:35	10/1/2023	18:16	29.2	498.6	17.1	718.2 gallons/day
Collection Duration for 44th Trip	10/1/2023	18:16	11/2/2023	10:40	31.7	530.2	16.7	701.4 gallons/day
Collection Duration for 45th Trip	11/2/2023	10:40	12/2/2023	02:09	29.6	549.0	18.5	777.0 gallons/day
Collection Duration for 46th Trip	12/2/2023	02:09	1/5/2024	03:27	34.1	618.4	18.1	760.2 gallons/day
Collection Duration for 47th Trip	1/5/2024	03:27	1/31/2024	15:01	26.5	495.2	18.7	785.4 gallons/day
Collection Duration for 48th Trip	1/31/2024	15:01	3/5/2024	14:26	32.9	546.0	16.6	697.2 gallons/day
Collection Duration for 49th Trip	3/5/2024	14:26	4/7/2024	17:47	33.1	592.2	17.9	751.8 gallons/day
Collection Duration for 50th Trip	4/7/2024	17:47	5/14/2024	05:36	36.5	657.2	18.0	756.0 gallons/day

## Barrels of Oil Collected Daily Contd.

	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 51st Trip	5/14/2023	05:36	6/10/2023	14:30	27.4	481.8	17.6	739.2 gallons/day
Collection Duration for 52nd Trip	6/10/2023	14:30	7/19/2023	20:38	39.3	640.6	16.3	684.6 gallons/day
Collection Duration for 53rd Trip	7/19/2023	20:38	8/10/2023	00:15	21.2	357.3	16.9	709.8 gallons/day
Collection Duration for 54th Trip	8/10/2023	00:15	9/10/2023	23:55	32.0	576.3	18.0	756.0 gallons/day
Collection Duration for 55th Trip	9/10/2023	23:55	10/8/2023	14:38	27.6	474.1	17.2	722.4 gallons/day
Collection Duration for 56th Trip	10/8/2023	14:33	11/8/2023	00:22	30.4	574.7	18.9	793.8 gallons/day

## Barrels of Oil Collected Per Day Since RRS Install

	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)
Average collection to date less residual tank	4/12/2019	00:00	11/8/2023	00:22	1671.0	32,300.9	19.3	810.6 gallons/day
Total Collection to date	4/12/2019	00:00	11/8/2023	00:22	1671.0	33,653.8	20.1	844.2 gallons/day

## Totals from Pumpoff 1-56

	Bbl	Gal
Net Oil collected	33,653.8	1,413,459.6
Total Oily fluids collected:	37,838.7	1,589,225.4

# **Appendix 1**

## **MC20 Product Removal and Transportation with Completed Documentation**



Couvillion Group, LLC

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

Date: 11-9-23

Time Transfer Ended: \_\_\_\_\_

	Column A	Column B	Column C	Column D	Column E
	Residual Tank Volume From Prior Operation (bbl)	On Board the Vessel Tank Strap Measurement Prior to Start of Offloading (bbl)	Onshore Frac Tank Strap Measurement after Offloading (bbl)	Volume of Fluid (Column C-A) (bbl)	% Difference Column (D-B)/D * 100
Tank 1	0	Port 360.1	—	—	
Tank 2	0	STBD 359.8	364.1	364.1	
Tank 3	0		351.6	351.6	
Total	0	719.9	715.7	715.7	-0.5

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

Sign-off by:      USCG Rep      Signed Name: \_\_\_\_\_  
                         Couvillion Rep Signed Name: \_\_\_\_\_  
                         Legends Rep      Signed Name: \_\_\_\_\_  
                         NRC Rep      Signed Name: \_\_\_\_\_





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

Date: 11-29-23

Time: \_\_\_\_\_

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	-	-	-	-
Tank 2	364.1	364.1	300.0	64.1
Tank 3	351.6	351.6	308.1	43.5
Total	715.7	715.7	608.1	107.6

Sign-off by: USCG Rep (optional) Signed Name: \_\_\_\_\_

Couvillion Rep Signed Name: \_\_\_\_\_

NRC Rep Signed Name: \_\_\_\_\_

#56



Couvillion Group, LLC

## Attachment D: Decanted Water from Frac Tanks to Disposal Facility

Date: 11-29-23

	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 – Column using Strap Measurement bbl
Tank 1	—	—	—
Tank 2	364.1	300.0	64.1
Tank 3	351.6	308.1	43.5

### Residual Volume left in Tanks

	Strap Measurement bbl
Tank 1	—
Tank 2	300.0
Tank 3	308.1

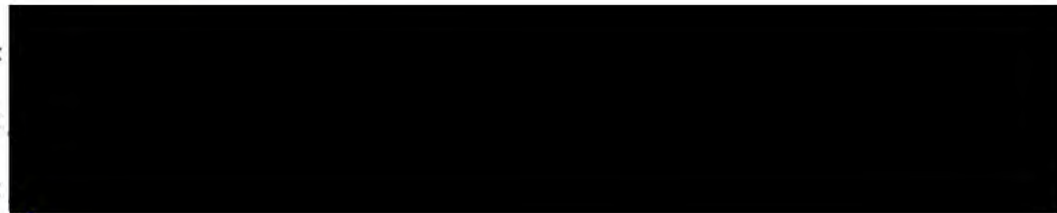
Sign-off by: USCG Rep(Optional) Signed Name:

Couvillion Rep

Signed Name:

NRC Rep

Signed Name:







## Attachment C: WASTE MANAGEMENT TRACKING FORM

### Oil Water Transportation and Net Crude Oil

Start Shipments Date: 11-30-23

Manifest Number	Transporter	Truck Number	Date	Receiving Facility	Manifested Volume loaded from Port Fourchon Frac Tank into Truck (bbl from Strap)	Volume received by Buyer (bbl by Strap)	Net Crude Oil bbls (Acadiana Oil Ticket)
1	AOC	2001-02	11/30	AOC	145.6		
2	AOC	200-03	11/30	AOC	151.1		
Total Volumes Shipped by Gallons/bbls							

End of Shipments date: \_\_\_\_\_

Sign-off by:USCG Rep (Optional) Signed Name:

Couvillion Rep Signed Name:

NRC Rep Signed Name:

Doc #: Couv-O&M-Doc-00004

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**Attachment C: WASTE MANAGEMENT TRACKING FORM**  
**Residual Frac Tank Bottoms**

Date: 11-30-23

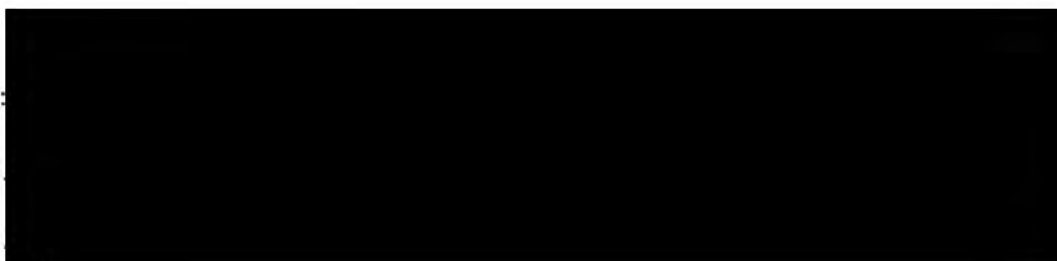
**Residual Volume left in Tanks**

	Strap Measurement after Trucks Loaded in each tank bbls
Tank 1	<u>1</u>
Tank 2	<u>300.0</u>
Tank 3	<u>11.4</u>

Sign-off by: USCG Rep (Optional) Signed Name:

Couvillion Rep Signed Name:

NRC Rep Signed Name:







**COUVILLION**

Couvillion Group, LLC

## Attachment C: WASTE MANAGEMENT TRACKING FORM

### Oily Water Transportation and Net Crude Oil

Start Shipments Date: 12-1-23

Manifest Number	Transporter	Truck Number	Date	Receiving Facility	Manifested Volume loaded from Port Fourchon Frac Tank into Truck (bbl from Strap)	Volume received by Buyer (bbl by Strap)	Net Crude Oil bbls (Acadiana Oil Ticket)
3	AOC	2001-03	12/1	AOC	151.1		
4	AOC	2001-01	12/1	AOC	142.5		
Total Volumes Shipped by Gallons/bbls							

End of Shipments date: \_\_\_\_\_

Sign-off by: USCG Rep (Optional) Signed Name: \_\_\_\_\_

Couvillion Rep Signed Name: \_\_\_\_\_

NRC Rep Signed Name: \_\_\_\_\_

Doc #: Couv-O&M-Doc-00004

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**Attachment C: WASTE MANAGEMENT TRACKING FORM**  
**Residual Frac Tank Bottoms**

Date: 12-1-23

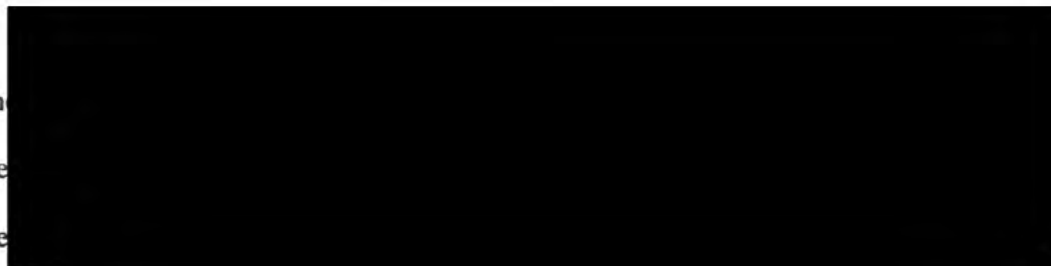
**Residual Volume left in Tanks**

	Strap Measurement after Trucks Loaded in each tank bbls
Tank 1	—
Tank 2	6.4
Tank 3	11.4

Sign-off by:USCG Rep (Optional) Signed Name

Couvillion Rep Signed Name

NRC Rep Signed Name



[illegible]

NRC Rep                      Signed Name:





ACADIANA OIL & ENVIRONMENTAL  
CORPORATION

1206 Lemaire St. • New Iberia, LA 70560  
337-560-5573

TRANSPORT MARCH 2011

Lease Run Ticket

26514

EMERGENCY RESPONSE CONTACT:

E S & H

985-851-5055

Date

11-30

20

23

Operator

Couville

Lease No.

C G

Lease Name

Field

Section

	OIL LEVEL			
	FEET	INCHES		
1st				
2nd				

BS&W LEVEL		TANK TEMP.
FT.	INCHES	

TANK NO.

SIZE

EST. GROSS GALLONS	@	°F

SERIAL NUMBERS			
OLD	19	39	92 3
NEW	19	39	96 4

OBSERVED GRAVITY	25	@	62 °F
PERCENT BS & W	8/10	%	TEMPERATURE OF OIL IN TANK °F

LOG NUMBER		
TIME ARRIVED	11:45	PM
TIME DEPARTED	12:15	AM PM

2153685.9  
2153542.6

OFFICE USE ONLY	
GRAVITY CORR. TO 60 °F	
1st	
2nd	
GROSS BARRELS	145
X FACTOR	.9912
NET BBL'S. PER RUN TIC.	143.72

DELIVERY STATION Central Crude Oil

TEMP. FACTOR	X	BS & W FACTOR	=	X FACTOR
.9992		.9920		.9912

GROSS	4.00	OPEN	
TARE		CLOSE	
NET		DRIVER	
		OPERATOR'S WITNESS	

I.D. NUMBER	PROPER SHIPPING NAME	HAZARD CLASS	PG	TOTAL BBL'S
UN 1267	PETROLEUM CRUDE OIL	3	III	143.72
	Temp.			0.12
	BS+W			1.16

"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".

Shipper: Mike LeBlanc Jr. Date:



## STRAIGHT BILL OF LADING - SHORT FORM

NOTICE: Shippers of hazardous materials must enter 24-hour emergency response telephone number under "Emergency Response Phone Number."

Date 11-30-23Bill of Lading No. 2

Original—Not Negotiable

Ardiana Oil Company  
(Name of Carrier)Shipper No. 2Carrier No. 2

TO: Consignee <u>Ardiana Oil Company</u>		FROM: Shipper <u>Conillion Dock</u>	
Street: <u>1825 River Rd</u>		Street: <u>554 Dudley Bernard</u>	
Destination <u>Berwick</u>		Zip Code <u>70842</u>	Origin <u>70357</u>
Route: <u>Hwy 90</u>		Vehicle No. <u>2001-</u>	SCAC
Emergency Response Phone Number <u>1-800-255-3924</u>			

No. Shipping Units	+HM	Kind of Packaging, Description of Articles Special Marks and Exceptions	Weight (Subject to Correction)*	Rate or Class	CHARGES
<u>151.1</u> <u>bb</u>	<u>X</u>	<u>UN 1267 Petroleum Crude Oil, 3, Pg 11</u>	<u>76,000</u>		
<u>151.1 bb</u>					

\*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading state whether weight is "carrier's or shipper's weight".

REMIT  
C.O.D. TO:  
ADDRESSC.O.D.  
Amt. \$C.O.D. FEE:  
PREPAID ☐  
COLLECT ☐ \$TOTAL  
CHARGES: \$

Note—Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

\$ \_\_\_\_\_ per \_\_\_\_\_

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.

The carrier shall not make delivery of this shipment without payment of freight and all other charges.

(Signature of Consignor)

FREIGHT CHARGES  
Check Appropriate Box:  
☐ Freight prepaid  
☐ Collect

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment or (2) in the applicable motor carrier classification or tariff, if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Mark with "RD" if appropriate to designate Hazardous Materials as defined in the U.S. Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading per 172.204(e)(1) (ii) of Title 49 Code of Federal Regulations. Also when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(n) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material.

The format and content of hazardous item list is the responsibility of individual company interpretation of requirements as described in 49 Code of Federal Regulations 172, Subpart C-Shipping Papers. Such description consists of the following per Sections 172.201 (Hazardous Material Table) and Sections 172.202 and 172.203: Proper shipping name, hazardous class, UN identification number, packing group, and subsidiary class(es).

Note: Liability limitation for loss or damage in this shipment may be applicable. See 49 United States Code, Sections 14706(c) (1)(A) and (B).

1

This is to certify that the above named materials are properly classified, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the U.S. Department of Transportation.

Carrier acknowledges receipt of packages and any required placards. Carrier certifies emergency response information was made available and/or carrier has the U.S. Department of Transportation emergency response guidebook or equivalent documentation in the vehicle. Property described above is received in good order, except as noted.

ACADIANA OIL & ENVIRONMENTAL  
CORPORATION

1206 Lemaire St. • New Iberia, LA 70560  
337-560-5573

TRANSPORT MANIFEST

Lease Run Ticket

26393

EMERGENCY RESPONSE CONTACT:

E S & H

985-851-5055

Date

11-30-23

Operator

Couvillion

Lease No.

C G

Lease Name

Field

Fourchon, LA

GAUGE	OIL LEVEL	
	FEET	INCHES
1st		
2nd		

BS&W LEVEL		TANK TEMP
FT.	INCHES	

TANK NO.	SIZE

SERIAL NUMBERS	
OLD	1939964
NEW	1948110

OBSERVED GRAVITY	26 @ 62°F
PERCENT BS & W	%
TEMPERATURE OF OIL IN TANK	°F

LOG NUMBER	2153685.9
TIME ARRIVED	12:16 AM
TIME DEPARTED	12:45 AM

OFFICE USE ONLY  
GRAVITY CORR. TO 60 °F

1st	
2nd	

DELIVERY STATION	Central Coker Gibson
TEMP. FACTOR	.9992
BS & W FACTOR	.9900
X FACTOR	.9892
GROSS BARRELS	150
FACTOR	.9892
NET BBLS. PER RUN TIC.	148.38

GROSS	3416m
TARE	4000m
NET	
OPEN	
CLOSE	
DRIVER	
OPERATOR'S WITNESS	

I.D. NUMBER	PROPER SHIPPING NAME	HAZARD CLASS	PG	TOTAL BBLS
UN 1267	PETROLEUM CRUDE OIL	3	III	148.38
	Temp			0.12
	BS+W			1.50

"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".

Shipper: Mike LeBlanc Jr. Date:

Couv-MC20-O&M-RPT-DOC-00082



NOTICE: Shippers of hazardous materials must enter 24-hour emergency response telephone number under "Emergency Response Phone Number."

Andiana O.I Company  
(Name of Carrier)

Bill of Lading No. 3

Shipper No. \_\_\_\_\_ 3

Carrier No. \_\_\_\_\_

[illegible]

Note-Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.  
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

\$\_\_\_\_\_ per

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other charges.

(Signature of Consignor)

FREIGHT CHARGES

Check Appropriate Box:

☐ Freight prepaid☐ Collect

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier or any motor carrier that the property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property that every service to be performed thereon shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment or (2) in the applicable motor carrier classification or tariff, if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Mark with "RQ" if appropriate to designate Hazardous Materials as defined in the U.S. Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading per 172.201(a)(1)(ii) (b) of Title 49 Code of Federal Regulations. Also when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(e) of the Federal Regulations, as indicated on the Bill of Lading, does apply, unless a specific exception from the requirement is provided in the Regulation for a particular material.

The format and content of hazardous item list is the responsibility of individual company interpretation of requirements as described in 49 Code of Federal Regulations 172, Subpart C-Shipping Papers. Such description consists of the following per Sections 172.201 (Hazardous Material Table) and Sections 172.202 and 172.203: Proper shipping name, hazardous class, UN identification number, packing group, and subsidiary class(es).

Note: Liability limitation for loss or damage in this shipment may be applicable. See 49 United States Code, Sections 14706(c)(1)(A) and (B).



This is to certify that the above named materials are properly classified, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the U.S. Department of Transportation.

Carrier acknowledges receipt of packages and any required placards. Carrier certifies emergency response information was made available and/or carrier has the U.S. Department of Transportation emergency response guidebook or equivalent documentation in the vehicle. Property described above is received in good order, except as noted.



ACADIANA OIL & ENVIRONMENTAL  
CORPORATION

1206 Lemaire St. • New Iberia, LA 70560  
337-560-5573

TRANSPORT MANIFEST

Lease Run Ticket

26395

EMERGENCY RESPONSE CONTACT:

E S & H

985-851-5055

Date

12-1-23

Operator

Couvillion

Lease No.

C	G						
---	---	--	--	--	--	--	--

Lease Name

Field

Fouchon, LA

Gauge	OIL LEVEL	
	FEET	INCHES
1st		
2nd		

BS&W LEVEL		TANK TEMP
FT.	INCHES	

TANK NO.	SIZE

EST. GROSS GALLONS	@	°F
--------------------	---	----

SERIAL NUMBERS	
OLD	1940110
NEW	1940181

OBSERVED GRAVITY	26 @ 64 °F
PERCENT BS & W	6/10 %
TEMPERATURE OF OIL IN TANK	°F

LOG NUMBER	
TIME ARRIVED	10:31 AM
TIME DEPARTED	11:39 AM

OFFICE USE ONLY	
GRAVITY CORR. TO 60 °F	
1st	
2nd	

DELIVER STATION	Central Crude Gibson LA
-----------------	-------------------------

GROSS BARRELS	150
X FACTOR	.9924
NET BBLs. PER RUN TIC.	148.86

TEMP. FACTOR	x	BS & W FACTOR	=	X FACTOR
.9984		.9940		.9924

Truck Time	
GROSS	
TARE	2:00 pm
NET	4:00 AM

DRIVER	
OPERATOR'S WITNESS	

I.D. NUMBER	PROPER SHIPPING NAME	HAZARD CLASS	PG	TOTAL BBLs
UN 1267	PETROLEUM CRUDE OIL	3	III	148.86
	TCmp			0.24
	BS&W			0.90

"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"

Shipper: Mike LeBlanc Jr. Date:

Couv-MC20-O&M-RPT-DOC-00082





ACADIANA OIL & ENVIRONMENTAL  
CORPORATION

1206 Lemaire St. • New Iberia, LA 70560  
337-560-5573

TRANSPORT MANIFEST

Lease Run Ticket

25768

EMERGENCY RESPONSE CONTACT:

ES & H

985-851-5055

Date 12-1-23

Operator Couvillion Lease No. C G

Lease Name

Field Fourchon

Gauge	OIL LEVEL				BS&W LEVEL		TANK TEMP
	FEET		INCHES		FT.	INCHES	
1st							
2nd							

TANK NO.				SIZE

EST. GROSS GALLONS @ °F

SERIAL NUMBERS				OBSERVED GRAVITY	TEMPERATURE OF OIL IN TANK °F
OLD	1940	181		24 @ 68	
NEW	1940	220		5/10	

LOG NUMBER	TIME ARRIVED	TIME DEPARTED	DELIVERY STATION	OFFICE USE ONLY
	1155 AM	1230 PM	Central Ave (Shell) Gibson, La	GRAVITY CORR. TO 60 °F
				1st
				GROSS BARRELS L
				X FACTOR
				NET BBLs. PER RUN TIC.

TEMP. FACTOR	BS & W FACTOR	X FACTOR
.9968	.9940	.9908

GROSS	TARE	DRIVER	OPERATOR'S WITNESS
Truckline	1400 91/2		
	0430 2		

I.D. NUMBER	PROPER SHIPPING NAME	HAZARD CLASS	PG	TOTAL BBLs
UN 1267	PETROLEUM CRUDE OIL	3	III	133.76
	Temp			0.43
	BS+W			0.81

"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".

Shipper: Mike LeBlanc Jr. Date: \_\_\_\_\_

# **Appendix II**

## **NRC Waste Handling Documentation**

# DECLARATION OF INSPECTION

LOCATION & NAME OF FACILITY

Port Panchas, Couvillios Dock

11-09-23

NAME OF VESSEL

Brandon Bondeelon

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

- |                                     |  |                                     |
|-------------------------------------|--|-------------------------------------|
| <input checked="" type="checkbox"/> | A. The mooring lings are adequate for all anticipated conditions. ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | B. Cargo hoses and/or loading arms are long enough for intended use. ....  | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | C. Cargo hoses are adequately supported to prevent undue strain on the couplings. ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | D. The transfer system is properly lined up for discharging or receiving oil. (Additional checks shall be performed each time a valve is repositioned.) ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | E. Each flange connection on the cargo system not being used during the transfer operation is blanked or shut off. ....  | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 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. ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | G. The overboard or sea suction valves are sealed or lashed in the closed position. ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | H. Adequate spill containments have been provided for couplings. ....  | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | I. All scuppers or other overboard drains are closed or plugged. ....  | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | J. A communications system is provided between the facility and the vessel. ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | K. Emergency shutdown system is available and operable. ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | L. Communication procedures are established and understood between persons in charge. ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | M. Qualified and designated personnel are in charge and on duty at the terminal and vessel control stations. ....  | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | N. One person at the vessel control station is present who fluently speaks the language of the terminal control station. ....  | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 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. .... | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | P. Adequate lighting of the vessel and terminal work areas and manifold areas is provided. ....  | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | Q. Persons in charge have held a conference to assure the mutual understanding of the following transfer operations:   |                                     |
| <input checked="" type="checkbox"/> | .. 1. Product identity to be transferred. ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | .. 2. Sequence of transfer operation. ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | .. 3. Transfer rate of flow ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | .. 4. Name or title and location of each person participating in the transfer operation ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | .. 5. Particulars of the transferring and receiving systems ....   | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | .. 6. Starting, stripping, topping and shutdown have been discussed and understood ....  | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | .. 7. Emergency procedures including notification, containment and cleanup of spills ....  | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | .. 8. Watch and shift arrangements ....  | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | .. 9. Notification before leaving stations ....  | <input checked="" type="checkbox"/> |

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

- |                                     |  |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | .. 1. Warning signs and read warning signals (35.35-30). |
| <input checked="" type="checkbox"/> | .. 2. Repair work authorization (35.35-30).              |
| <input checked="" type="checkbox"/> | .. 3. Boiler and galley fires safety (35.35-30).         |
| <input checked="" type="checkbox"/> | .. 4. Fires or open flames (35.35-30).                   |
| <input checked="" type="checkbox"/> | .. 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		PERSON IN CHARGE OF FACILITY	
	Time 0830 Date 11-9-23		Time 0830 Date 11-09-23

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



**DECLARATION OF INSPECTION PRIOR TO BULK CARGO TRANSFER**

Date: 11-9-23	Location: GIS Port Fouchon		
Facility/Vehicle Number:	Start Time	End Time	
Vessel Name: Brandon Bordelone			
Vessel Official Number:	Vessel Capacity (Total) (bbls): 705		
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

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





Pre-Transfer Conference and Agreement (Continued)			
<input checked="" type="checkbox"/>	TOPIC	PIC Delivering	PIC Receiving
<b>§ Inspect discharge containment equipment for oil &amp; hazardous liquids - 33CFR 154.545</b>			
	Verify booming for oil or hazmat transfer (if required by COTP).	<i>[initials]</i>	<i>JB</i>
	Verify adequate amount of equipment and/or absorbent material for initial response	<i>[initials]</i>	<i>JB</i>
	Inspect condition of response equipment stored on facility (if applicable).	<i>[initials]</i>	<i>JB</i>
	Verify availability of at least 200 feet of containment boom onsite within 1 hour.	<i>[initials]</i>	<i>JB</i>
	Verify means of deployment.	<i>[initials]</i>	<i>JB</i>
<b>§ Means of Communication - 33 CFR 154.560</b>			
	Verify continuous two-way voice communication between vessel and facility PICs.	<i>[initials]</i>	<i>JB</i>
<b>Communications must meet the following requirements...</b>			
<b>Portable Radio:</b>			
	IF Flammable or Combustible Liquids	<i>[initials]</i>	<i>JB</i>
	1. Marked or documented as intrinsically safe.	<i>[initials]</i>	<i>JB</i>
	2. Certified as intrinsically safe by national testing labor certification organization.	<i>[initials]</i>	<i>JB</i>
<b>Voice</b>			
	1. Be audible.	<i>[initials]</i>	<i>JB</i>
	Test communications. SAT <input checked="" type="checkbox"/> UNSAT <input type="checkbox"/>	<i>[initials]</i>	<i>JB</i>
<b>§ Inspect lighting systems - 33 CFR 154.570</b>			
	Verify portable lighting for operations between sunrise and sunset (if applicable).	<i>[initials]</i>	<i>JB</i>
	At transfer operations work areas for facility and vessel	<i>[initials]</i>	<i>JB</i>
	At transfer connection points for facility and vessel	<i>[initials]</i>	<i>JB</i>
	Verify sufficient number of fire extinguishers.	<i>[initials]</i>	<i>JB</i>
	Verify protective equipment is ready to operate.	<i>[initials]</i>	<i>JB</i>
	Verify warning signs are adequate.	<i>[initials]</i>	<i>JB</i>
<b>§ VESSEL ONLY - 155.730 Compliance with VESSEL TRANSFER PROCEDURES §</b>			
	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		
<b>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.</b>			
		11-9-23	
		DATE	TIME
		11-09-23	
		DATE	TIME
<b>TRANSFER COMPLETED:</b>			
		AMOUNT (GALLONS)	DATE TIME

(FORM UPDATED April 15 2019)



PD # 56

	<b>SAFETY MANAGEMENT SYSTEM</b>	
	Job Hazard Analysis	

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



11-09-23

SUMMARY OF POTENTIAL HAZARDS (Check applicable)		
<input checked="" type="checkbox"/> Heavy or awkward lifting / movement	<input checked="" type="checkbox"/> Pinch Points or caught between	<input checked="" type="checkbox"/> Working and walking surfaces; slip, trip, fall
<input type="checkbox"/> New / Inexperienced employees	<input checked="" type="checkbox"/> Spill / containment	<input checked="" type="checkbox"/> Heat stress environment
<input checked="" type="checkbox"/> Struck by or crush hazard	<input checked="" type="checkbox"/> Noise levels (>85 dBA)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Hazardous liquids, vapors, waste	<input checked="" type="checkbox"/> Elevated surfaces / Fall / Ladders	<input type="checkbox"/>
APPLICABLE REGULATION / SOPS / ALERTS		
<input type="checkbox"/> SMS 19.2 Vacuum Trucks	<input type="checkbox"/>	<input type="checkbox"/>
MINIMUM PERSONAL PROTECTIVE EQUIPMENT (Check applicable)		
<input type="checkbox"/> Level A	<input checked="" type="checkbox"/> Hard Hat	<input type="checkbox"/> High Visibility Vest
<input type="checkbox"/> Level B	<input checked="" type="checkbox"/> Safety Glasses	<input checked="" type="checkbox"/> Long Sleeves / Coveralls
<input type="checkbox"/> Level C	<input type="checkbox"/> Face Shield	<input type="checkbox"/> Chemical protective clothing
<input checked="" type="checkbox"/> Level D	<input checked="" type="checkbox"/> Hearing Protection	<input type="checkbox"/> Respirator:
		<input checked="" type="checkbox"/> Leather Steel Toe Boots
		<input type="checkbox"/> Disposable boot covers
		<input type="checkbox"/> Neoprene Steel Toe Boots
		<input checked="" type="checkbox"/> Gloves:
		<input checked="" type="checkbox"/> PFD / Work vest

**JOB HAZARD ANALYSIS**

1 Job Steps	2 Potential Hazards	3 Preventive Measures / Special PPE
1. Pre-job Meetings Behavior Based Safety	<ul style="list-style-type: none"> <li>Personnel do not understand the operational plan, relevant hazards or their roles/responsibilities</li> <li>Personnel do not stop work when hazards are identified</li> <li>Personnel do not report injuries, illnesses, near misses or incidents</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>Immediate supervisor will remind their crews of their Authority and Responsibility to Stop work and contact their supervisor if they discover a hazard</li> <li>Personnel will be instructed to report any injuries, illnesses, near misses or incidents</li> </ul>
2. Site Survey and Equipment Set-up	<ul style="list-style-type: none"> <li>Uneven working surfaces and trip hazards.</li> <li>Equipment not certified, not tested or damaged</li> <li>Improper set-up due to untrained or unqualified personnel</li> </ul>	<ul style="list-style-type: none"> <li>Inspect site for correctable walking surface hazards. Flag or correct unsafe conditions. Position equipment and hoses away from travel paths. Identify "no-go" areas.</li> <li>All equipment will be inspected for current certifications, testing and serviceable working condition prior to work</li> <li>Personnel will be pre-selected to perform tasks based on verified competency</li> </ul>
3. Vehicle movements	<ul style="list-style-type: none"> <li>Personnel, equipment or hoses struck or crushed by moving vehicles or equipment</li> <li>Vehicles not inspected prior to movements. Unsafe for travel.</li> <li>Unsecured items create dropped object or road hazards.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Vehicles will be inspected by drivers prior to travel and after travel for potential damage.</li> <li>Vehicles will be inspected to ensure that there are no loose items and that loads are secured properly.</li> </ul>
4. Mooring Vessel and working near water	<ul style="list-style-type: none"> <li>Personnel struck by thrown lines or caught in "line of fire".</li> <li>Personnel pinched or crushed during vessel movements.</li> <li>Personnel fall into the water. Man overboard.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>When mooring the vessel, keep hands, fingers, arms, and all other body parts from between the mooring line and the bits on the dock</li> <li>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.</li> </ul>
5. Connecting hoses	<ul style="list-style-type: none"> <li>Personnel crushed or pinched while connecting transfer hoses.</li> <li>Personnel suffer back strain or other ergonomic related injuries during connections or moving hoses</li> <li>Slip/trip/fall hazards while working</li> </ul>	<ul style="list-style-type: none"> <li>Identify, communicate and avoid all crush/pinch points: including cam-lock connections, vehicles and other moving parts or equipment</li> <li>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</li> <li>Observe good housekeeping and maintain situational</li> </ul>



	<b>SAFETY MANAGEMENT SYSTEM</b>  <b>Job Hazard Analysis</b>	 <b>Revision: 08/2015</b>
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● Job Steps	● Potential Hazards	● Preventive Measures / Special PPE
6. Working in potentially hazardous atmospheres	<ul style="list-style-type: none"> <li>• Personnel exposed to hazards related to hazardous atmospheres.</li> <li>• Ignition sources create potential for explosive conditions</li> <li>• Personnel not equipped to suppress incipient fire</li> </ul>	<p>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</p> <ul style="list-style-type: none"> <li>• 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</li> <li>• 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.</li> <li>• Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.</li> </ul>
7. Energizing pneumatic equipment	<ul style="list-style-type: none"> <li>• Personnel injured when struck by hoses or pressure during hose connection or fitting failure.</li> <li>• Air leaks or blowout causing pressure related injuries.</li> <li>• Hearing loss/injury due to noise levels above 85 decibels</li> </ul>	<ul style="list-style-type: none"> <li>• All pressurized hoses will have whip checks and safety clips installed prior to energizing. All pneumatic hoses will be inspected prior to use.</li> <li>• Pumping operations will be stopped immediately if leaks are detected during operations. Defective hoses will be replaced with new hoses/whips.</li> <li>• Hearing protection will be worn in all areas where high-noise machinery and equipment is being operated.</li> </ul>
8. Transfer of recovered crude oil	<ul style="list-style-type: none"> <li>• Personnel contacted by crude oil spray or environmental release.</li> <li>• Overfilling tank resulting in spills</li> <li>• Personnel overcome by potentially hazardous vapors</li> </ul>	<ul style="list-style-type: none"> <li>• 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. <b>The DOI Declaration of Inspection will be completed prior to operations.</b></li> <li>• 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.</li> <li>• 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.</li> <li>• If personnel will work at heights above 6': fall protection will be worn and a rescue plan will be in place.</li> <li>• Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.</li> </ul>
9. Transfer of oil into transporter	<ul style="list-style-type: none"> <li>• Personnel contacted by crude oil spray or environmental release</li> <li>• Overfilling transportation vessel resulting in spills</li> <li>• Personnel overcome by potentially hazardous vapors</li> <li>• Fall hazards present if personnel are working above 6 feet</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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</li> </ul>



<b>NRC</b>	<b>SAFETY MANAGEMENT SYSTEM</b>	<b>SAFETY</b> IT'S THE WAY TO GO
<b>Job Hazard Analysis</b>		<b>Revision: 08/2015</b>



1 Job Steps	2 Potential Hazards	3 Preventive Measures / Special PPE
		<p>detected. PPE will be upgraded according to the concentration of hazards detected.</p> <ul style="list-style-type: none"> <li>If personnel will work at heights above 6': fall protection will be worn and a rescue plan will be in place.</li> <li>Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.</li> </ul>
10. Prolonged exposure to elements (Heat Stress)	<ul style="list-style-type: none"> <li>Inadequate hydration</li> <li>Extended work periods without rest resulting in heat stress</li> </ul>	<ul style="list-style-type: none"> <li>Personnel will be encouraged to hydrate frequently. Water to sports drink ratio will be 3:1 (1 sports drink to 3 waters consumed).</li> <li>Work to rest schedules will be determined based on the ambient temperature, acclimatization of personnel and work being performed. Heat stress potential and signs/symptoms will be discussed at all safety meetings, tailgate meetings and during breaks. Personnel will be encouraged to self-report any early symptoms of heat stress. All personnel will be advised that stop work authority applies to potential heat stress symptoms they may be experiencing, (or that they suspect with co-workers).</li> </ul>
11. Break time	<ul style="list-style-type: none"> <li>Potential for ingestion of petroleum product or other contaminants.</li> <li>Fire hazards from unrestricted smoking</li> <li>Direct sun reduces recovery time for workers during breaks</li> <li>Inadequate water</li> </ul>	<ul style="list-style-type: none"> <li>Personnel will wash hands before smoking, eating, drinking or any other activity where contaminants might be ingested. This hazard will be stressed in break areas.</li> <li>Only smoke in designated areas.</li> <li>Ensure that break areas have adequate shade and cooling potential for personnel</li> <li>Personnel are more likely to hydrate when cool water is available. Ensure an adequate supply and include sports drinks with electrolytes to be consumed sparingly.</li> </ul>
12. Decontaminate Personnel	<ul style="list-style-type: none"> <li>Potential for secondary contamination by absorption, injection, or ingestion</li> </ul>	<ul style="list-style-type: none"> <li>Follow decontamination plan for clothing removal and disposal when protective outerwear is required and becomes contaminated.</li> <li>Only use safety scissors (never knives) to cut Tyvek from personnel.</li> <li>Ensure that workers wash hands and face thoroughly.</li> </ul>
<b>NRC INCIDENT REPORTING POLICY</b>	<ul style="list-style-type: none"> <li>First Aid</li> <li>OSHA recordable</li> <li>Illness/Injury</li> <li>Near Miss</li> <li>Equipment/Vehicle Damage</li> </ul>	<ul style="list-style-type: none"> <li>NRC employees and subcontractors are required to immediately report all incidents to their supervisor.</li> <li>The immediate supervisor will immediately report the incident to the site safety professional, HSEQ Manager, and Project Manager.</li> <li>As soon as possible the affected employee will complete the required form, if an injury then the first report of injury; if near miss, then a near miss / safety suggestion form will be completed.</li> <li>The supervisor will complete a root cause analysis of all reported incidents and submit to the HSEQ manager within 8 hours of an incident.</li> <li>Determination will be made regarding need for post-incident drug and alcohol testing based on NRC policy.</li> <li>Contact HSEQ Manager for proper USCG reports, if needed and what report is needed.</li> </ul>

#### REVIEW

Development Team	Position/Title	Reviewed By	Position/Title	Date
			<i>PM / PDC</i>	7/27/20
				11-09-23

#### ACKNOWLEDGEMENT



Employee Name	Signature	Date
		11-09-23
		11-09-23

	<p align="center"><b>SAFETY MANAGEMENT SYSTEM</b></p>	
	<p align="center">Job Hazard Analysis</p>	<p>Revision: 08/2015</p>

<div style="background-color: black; width: 100%; height: 100%;"></div>		11-9-23
		11-9-23



PO # 56

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

11-09-23

NRC PROJECT PERSONNEL AND EMERGENCY CONTACTS	
Shore side NRC Project Manager	Jesse Bridges (985) 502-7190
Director of Marine Ops	David Kendall (281) 914-6577
Director of Operations	Ray Mc Coy (631) 236-2512
Yard Manager	Darryl Prout (985) 396-4518
H&S Program Manager	Peter Brause, CSP (310) 387-2639
VP Health & Safety	Ken Koppler, CIH, CSP (971) 285-0450
Hospital / Medical Intervention	Lady of the Sea Hospital: Galliano, LA (985) 632-6401

<b>Date:</b> <u>11-09-23</u>	<b>Start Time:</b> <u>0700</u>	<b>Job Number:</b> <u>19-0182</u>
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☐ Land Emergency Response
 ☐ Marine Emergency Response
 ☐ Land Service
 ☒ Marine Service

### SITE DESCRIPTION / WORK SUMMARY

The site is the Port Fourchon Facility: 554 Dudley Bernard Rd. Port Fourchon, LA. 70357 (985) 396-4518



NRC will facilitate removing recovered crude oil from the well located at MC20 project. The M/V BOB has been collecting crude oil from the location and storing it on Marine Portable Tanks (MPTs) located on her deck. The vessel 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 Port Fourchon 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 BOB 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 vessel 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 Port Fourchon 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.

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### EQUIPMENT

<ul style="list-style-type: none"> <li>Air Compressor (One aboard the M/V <u>BB</u> – One on Port Fourchon Facility Properties)</li> <li>4-inch pneumatic diaphragm pumps</li> <li>Petroleum Duty transfer hoses rated and inspected accordingly</li> <li>Safety Clips for Cam-lock connections and Chicago fittings</li> <li>Containment pans for diaphragm pumps and each hose connection (on the deck of the M/V as well as the Port Fourchon Facility Dock)</li> <li>Sorbent pads / Polly to wrap around each hose connection as spill prevention</li> <li>Whip Checks for each air line connection coming from the air compressor</li> <li>Intrinsically safe handheld VHF radios (Means of Communication between PIC of vessel and PIC of dock)</li> <li><b>Supplied Air Breathing System</b></li> </ul>
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### ATTACHMENTS

Attachment	TITLE	Attachment	TITLE
A	Safety Data Sheets	F	Diagram of dock layout
B	SMS 8.1.5 Daily Safety Meeting form - Maritime		
C	SMS 13.2 Respiratory Protection		
D	Incident / Near Miss / RCA		
E	DOI		





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### CHEMICAL INFORMATION

CHEMICAL / CAS	CHEMICAL PROPERTIES	EXPOSURE LIMITS Action Levels	ROUTES OF ENTRY	SYMPTOMS
Crude Oil	VP (mmHg): 2.6-6.2lbs @ 100F VD (Air=1): >1 BP: -54 to 1100F SG: 0.8939 PV: 1-50 <b>FP: &lt;24 F Estimated</b> LEL: 1.1 UEL: 7.3 Appearance; thick light yellow to dark black	Oil Mist, If Generated ACGIH TWA: 5mg/m3 STEL: 10mg/m3 OSHA TWA: 5mg/m3 NIOSH IDLH:2500mg/m3	X Inhalation X Ingestion X Contact	May include eye, nose and throat irritation, digestive tract, nausea, vomiting, diarrhea, headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue
Hydrogen Sulfide	Strong rotten egg odor at low levels, rapidly deadens the sense of smell at higher concentrations. Highly flammable - LEL is 4.3%	10 PPM – OSHA PEL Above 10 PPM – Level B PPE required in work area.  IDLH = 100 PPM	X Inhalation <input type="checkbox"/> Ingestion <input type="checkbox"/> Absorption <input type="checkbox"/> Contact	Headache, Nausea, irritation to the eyes, nose, or throat.  Death if exposed to high concentrations of Hydrogen Sulfide.
Benzene / 71-43-2	S.G. = 0.88 FP = 12 F LEL: 1.2% UEL = 7.8%	ACGIH TWA: 0.5 ppm OSHA TWA: 1 ppm IDLH: 500ppm	X Inhalation X Ingestion X Absorption X Contact	Irritation to the eyes, skin, nose and respiratory system.  Dizziness, headache, nausea, staggered gait; bone marrow depressive.





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### AIR MONITORING / ACTION LEVELS

Chemical Hazard	Instrument	Action Level	Action
Oxygen (O <sub>2</sub> )	4-gas	<19.5% or >23.5%	<ul style="list-style-type: none"> <li>Stop work, determine source of hazard and apply engineering control (ventilation) until reading can be brought to 21% +/- 1%.</li> </ul>
Carbon Monoxide (CO)	4-gas	25 ppm	<ul style="list-style-type: none"> <li>Stop work, determine source of hazard and apply engineering controls. Upgrade PPE as necessary.</li> </ul>
Lower Explosion Limit (LEL)	4-gas	>10%	<ul style="list-style-type: none"> <li>Stop work, determine source of hazard and apply engineering control (ventilation) until reading can be brought below 10%.</li> </ul>
Hydrogen Sulfide (H <sub>2</sub> S)	4-gas	10 ppm >10 ppm	<ul style="list-style-type: none"> <li>OSHA PEL</li> <li>SCBA / Supplied Air Respiratory Protection</li> </ul>
PID/VOC	PID	10 - 750 ppm  >750	<ul style="list-style-type: none"> <li>Don level C PPE APR w/OV cartridge (Check Benzene Levels, if Benzene levels are below 0.5 Respiratory protection may be reduced</li> <li>SCBA / Supplied Air Respiratory Protection</li> </ul>
Benzene	Colorimetric Tube	<0.5 PPM 0.5 – 25 PPM >25 PPM	<ul style="list-style-type: none"> <li>No Respiratory requirement</li> <li>Full Face APR with OV Cartridges</li> <li>SCBA / Supplied Air Respiratory Protection</li> </ul>





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### ACTIVITY HAZARD ANALYSIS / SUMMARY

ITEM	HAZARD	PREVENTION
Behavioral Based Safety	Hazard Identification Stop Work Authority Near Miss	<ul style="list-style-type: none"> <li>Immediate supervisor will remind their crews of their Authority and Responsibility to Stop work and contact their supervisor if they discover a hazard</li> <li>Safety officer to coordinate with work crew safety leads</li> <li>Daily HASP / Tailgate meetings will be conducted with the crew.</li> <li>Report all near misses, at risk conditions on the job site, or at-risk actions by crew member. Discuss all reported near misses during the post job briefing and during Daily HASP / Tailgate meetings.</li> </ul>
Mooring M/V	Struck by Pinched by Fall into water	<ul style="list-style-type: none"> <li>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.</li> <li>When mooring the vessel, keep hands, fingers, arms, and all other body parts from between the mooring line and the bits on the dock.</li> <li>Never perform this task alone and all personnel within 5' of the docks edge are required to wear a USCG approved PFD.</li> </ul>
Connecting Hoses	Caught / pinched by Back / muscle strain Slip / Trip / Fall	<ul style="list-style-type: none"> <li>Identify, communicate, and avoid all pinch / crush points including, but not limited to - cam lock connections, trucks backing / parking, other mobile equipment on the dock.</li> <li>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.</li> <li>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.</li> </ul>
Energizing pneumatic equipment	Hose whipping Air Leak Noise levels above 85 decibels	<ul style="list-style-type: none"> <li>Ensure all connections have whip checks and safety clips in place prior to energizing air lines.</li> <li>If hissing is hear there is a leak in the line and the compressor should be de-energized and the leaking hoses / connections should be replaced prior to continuing operation.</li> <li>Hearing protection required for pneumatic equipment.</li> </ul>
Transfer of recovered crude oil	Spill / spray crude oil on employee. Overfilling of frac tank Overcome by vapors Hydrogen Sulfide (H <sub>2</sub> S) Detected during transfer.	<ul style="list-style-type: none"> <li>All hose connections shall be secured with safety clips, then wrapped in sorbent pads and duct tape and rope to prevent spills or contamination of individuals. There will be no hose connections over water and all connections will also be in secondary containment.</li> <li>Prior to transfer the amount of product that can be accepted will be calculated and the PIC of the dock facility will ensure that there is ample room to handle the transferred product.</li> <li>Crude oil is a mixture of all sorts of hydrocarbons. Among them can be benzene, hydrogen sulfide, and other chemicals. There will be a properly calibrated and bump tested 4-gas meter with PID on site during transfer to ensure vapors aren't present. If vapors become an issue, all work will stop and PPE will be upgraded according to the chart found on page 5 of this document.</li> <li>All personnel involved in the transfer process will be wearing a personal H<sub>2</sub>S Detector worn in their breathing zone.</li> <li>If H<sub>2</sub>S is detected above 5 PPM, the operations will stop, and all essential personnel will don their Supplied Air Respiratory Protection (SAR) and evacuate all non-essential</li> </ul>



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ITEM	HAZARD	PREVENTION
		<p>personnel from the area during the transfer. There will be support personnel upwind with SAR capabilities on site for rescue purposes during this operation.</p> <ul style="list-style-type: none"> <li>If H2S is detected above the IDLH (100 PPM) then stop work authority will be used, all personnel will evacuate the work area and move to an upwind, safe location until the levels are below 100 PPM.</li> </ul>
Transfer of oil into transporter	<p>Spill / spray crude oil on employee.</p> <p>Overfilling of frac tank</p> <p>Overcome by vapors</p>	<ul style="list-style-type: none"> <li>All hose connections shall be secured with safety clips, then wrapped in sorbent pads and duct tape and rope to prevent spills or contamination of individuals. There will be no hose connections over water and all connections will also be in secondary containment.</li> <li>Prior to transfer the amount of product that can be accepted will be calculated and the PIC of the dock facility will ensure that there is ample room to handle the transferred product.</li> <li>Crude oil is a mixture of all sorts of hydrocarbons. Among them can be benzene, hydrogen sulfide, and other chemicals. There will be a properly calibrated and bump tested 4-gas meter with PID on site during transfer to ensure vapors aren't present. If vapors become an issue, all work will stop and PPE will be upgraded according to the chart found on page 5 of this document.</li> </ul>
Incident Reporting	<p>First Aid</p> <p>OSHA Recordable</p> <p>Medical Only</p> <p>Near Miss</p>	<ul style="list-style-type: none"> <li>Employees immediately report all incidents to their immediate supervisor.</li> <li>The immediate supervisor will immediately report the incident to the site safety professional, HSEQ Manager, and Project Manager.</li> <li>As soon as possible the affected employee will complete the required form, if an injury then the first report of injury; if near miss, then a near miss / safety suggestion form will be completed.</li> <li>The supervisor will complete a root cause analysis of all reported incidents and submit to the HSEQ manager within 8 hours of an incident.</li> <li>Determination will be made regarding need for post-incident drug and alcohol testing based on NRC policy.</li> <li>Contact HSEQ Manager for proper USCG reports, if needed and what report is needed.</li> </ul>
Prolonged exposure to elements	<p>Dehydration</p> <p>Hypothermia</p> <p>Hyperthermia</p>	<ul style="list-style-type: none"> <li>If Tyvek is not required, long sleeve shirts should be worn to cover skin.</li> <li>Rain suits should be worn in lieu of chemical protective coveralls during inclement weather</li> <li>Drink plenty of fluids.</li> <li>Appropriate clothing should be worn based on weather conditions.</li> </ul>
Break time	<p>Ingestion</p> <p>Fire</p>	<ul style="list-style-type: none"> <li>Thoroughly wash hands before eating, drinking, smoking, or applying sun screen</li> <li>Do not smoke near petroleum products (ONLY IN DESIGNATED AREA)</li> </ul>
Decontaminate Personnel	<p>Absorption</p> <p>Contamination</p>	<ul style="list-style-type: none"> <li>Follow decontamination plan for clothing removal / disposal.</li> <li>Do not use knives to cut PPE / use safety scissors</li> <li>Wash hands and face thoroughly.</li> </ul>
COVID 19 Protocol	<p>Personnel infected with COVID-19 could spread it to others in the work area.</p>	<ul style="list-style-type: none"> <li>Employees will follow all CDC, Local, State, and Federal guidance regarding Social Distancing. All personnel must remain at least 6' from one another on the worksite at all times. Only personnel essential to the operation will be allowed in the work area.</li> <li>If any employee is displaying symptoms related to COVID19</li> </ul>



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ITEM	HAZARD	PREVENTION
		<p>they will be removed from work and follow the US Ecology / NRC return to work guidance issued by corporate.</p> <ul style="list-style-type: none"> <li>• The Symptoms in question are Fever (Above 100.4F, Dry Cough, and Shortness of breath)</li> <li>• Dockside personnel will not interact with personnel aboard the M/V during transfer operations. If an emergency were to arise where dockside personnel need to board the M/V they will be wearing proper PPE and will decontaminate anything touched while on board the vessel.</li> <li>• All trucks, handles, switches, controls, doors, etc. (frequently touched items) will be decontaminated frequently, at minimum prior to use and once the work task is complete. All personnel on site will have adequate supplies to decontaminate frequently touched surfaces such as disinfectant wipes, hand sanitizer, and a cleaner approved for use as a virucide.</li> <li>• All breaks will be taken individually, or employees will set themselves at least 6 feet away from one another to accomplish the social distancing demand due to the current pandemic.</li> </ul>
<b>NRC INCIDENT REPORTING POLICY</b>	<ul style="list-style-type: none"> <li>• First Aid</li> <li>• OSHA recordable</li> <li>• Illness/Injury</li> <li>• Near Miss</li> <li>• Equipment/Vehicle Damage</li> </ul>	<ul style="list-style-type: none"> <li>• NRC employees and subcontractors are required to immediately report all incidents to their supervisor.</li> <li>• The immediate supervisor will immediately report the incident to the site safety professional, HSEQ Manager, and Project Manager.</li> <li>• As soon as possible the affected employee will complete the required form, if an injury then the first report of injury; if near miss, then a near miss / safety suggestion form will be completed.</li> <li>• The supervisor will complete a root cause analysis of all reported incidents and submit to the HSEQ manager within 8 hours of an incident.</li> <li>• Determination will be made regarding need for post-incident drug and alcohol testing based on NRC policy.</li> <li>• Contact HSEQ Manager for proper USCG reports, if needed and what report is needed.</li> </ul>
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	<b>SAFETY MANAGEMENT SYSTEM</b>	
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### MINIMUM SAFETY EQUIPMENT REQUIRED

✓	Eyewash	✓	Decon Pool / Supplies See itemization list under Decon		Tinted faceshield, leathers, gauntlets, hot-work cutting gear
✓	First Aid Kit	✓	Fire Extinguisher, Dry Chemical		Barricades / Traffic Cones / Delineators / Banner Tape
			Fire Extinguisher, Water	✓	Ladders
	Harnesses		Lanyards / rope		Confined space entry equipment
✓	PPE (Task specific)				

### TRAINING / DOCUMENTATION REQUIREMENTS

✓	HAZWOPER 40	✓	Hazwoper Supervisor	✓	Current 8 Hour Refresher
✓	First Aid /CPR		Confined Space Supervisor	✓	Current Medical Fitness For Duty
	NRC Confined Space Entrant				NRC Confined Space Rescue
✓	API Safe Rigging Practices			✓	Documentation of compliance with Drug Free Work Place
	Competent Fire Watch Designated Personnel				Qualified Pressure Washer Operator

 Form 8.1.7	<p align="center"><b>SAFETY MANAGEMENT SYSTEM</b></p> <p align="center">Site Specific Safety Plan</p> Project Name: <u>MC20 Recovered Crude Oil Transfer</u>	 Revision: 08/2019
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## DECONTAMINATION AND DISPOSAL

DECONTAMINATION EQUIPMENT	
<input type="checkbox"/> Visqueen on Ground <input type="checkbox"/> Carpet on Ground <input type="checkbox"/> Wooden Pallets <input checked="" type="checkbox"/> Decon Pool / wash boots <input type="checkbox"/> Boot brushes <input type="checkbox"/> Decon Pool Rinse Boots <input checked="" type="checkbox"/> Respirator wash bucket <input checked="" type="checkbox"/> Respirator rinse bucket <input checked="" type="checkbox"/> Drying stands or platforms for respirators after washing <input checked="" type="checkbox"/> Wipe rags to clean respirators	<input checked="" type="checkbox"/> Rags for cleaning - wiping <input type="checkbox"/> Labeled Drums for disposal items <input checked="" type="checkbox"/> Chairs to sit on for PPE removal <input type="checkbox"/> Plastic zip-lock bags for personal sample pumps <input checked="" type="checkbox"/> Water to wash face / hands <input type="checkbox"/> Decontamination Assistant <input type="checkbox"/> Barrier stands <input checked="" type="checkbox"/> Caution tape to designate decon area <input type="checkbox"/> Shower
PERSONNEL DECONTAMINATION PLAN	
<input type="checkbox"/> Establish two stage contamination reduction zone with small decon area just inside of containment area <input type="checkbox"/> Provide wet rags (not saturated) to personnel to wipe exterior of PPE prior to dry decon (stage 1 decon) <input type="checkbox"/> Place empty lined drums for contaminated PPE with liners removed to waste bin at end of each shift <input type="checkbox"/> Untape gloves and boots – discard tape <input type="checkbox"/> Sit on chair prior to removing boots or outer PPE <input type="checkbox"/> Remove boots and outer gloves (boots will be reused and leather outer gloves may be reuse if still in good condition) <input type="checkbox"/> Unzip suit / pull off hood <input type="checkbox"/> Roll down suit / inside out and place into labeled container <input type="checkbox"/> Remove respirator <input type="checkbox"/> Use wipes to clean <input type="checkbox"/> Store respirators in plastic bags after drying <input type="checkbox"/> Remove inner gloves <input type="checkbox"/> PPE and debris will be bagged, accounted for, and bulked into the applicable waste bin or container <input type="checkbox"/> Store respirators in individual plastic bags with employee names <input type="checkbox"/> _____	
WASTE MANAGEMENT PLAN	
<input type="checkbox"/> Contaminated disposable PPE & debris from operation shall be placed in an approved container <input type="checkbox"/> _____ <input type="checkbox"/> _____	

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### SITE LAYOUT

Sketch the work area or attach a schematic drawing. Please include the following:

Evacuation Route	Control Entry Point	Exclusion Zone (red security tape)
Decontamination Point (red tape)	Support Zone (yellow caution tape)	Fire Extinguishers
Eyewash / Showers		

**See Facility Map**



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### EMERGENCY MEDICAL TREATMENT AND FIRST AID



TYPE CONTACT	FIRST AID
<b>Eyes</b>	<ul style="list-style-type: none"> <li>• Flush each eye continuously for 15 minutes</li> <li>• Tilt head to side to ensure liquid runs onto floor not other eye</li> <li>• Refer to EMT for evaluation</li> </ul>
<b>Skin</b>	<ul style="list-style-type: none"> <li>• Remove contaminated clothing immediately</li> <li>• Wash skin continuously for 15 minutes</li> <li>• Refer to physician if redness, swelling, or pain persists after washing</li> </ul>
<b>Not Breathing</b>	<ul style="list-style-type: none"> <li>• Call 911</li> <li>• Remove to fresh air immediately if respiratory distress develops</li> <li>• Begin CPR until EMT arrives</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>• Aspiration hazard</li> <li>• Do not induce vomiting</li> <li>• Do not give anything by mouth</li> </ul>

### ACCIDENT REPORTING

FIRST AID INJURIES REQUIRING MEDICAL TREATMENT VEHICLE ACCIDENT NEAR MISS	<input type="checkbox"/> Employees immediately report all accidents or incidents to the Site Project Manager / Safety Officer <input type="checkbox"/> Site Project Supervisor will immediately notify the NRC Project Manager via cell phone. If unable to reach the Project Manager, call the NRC Safety Manager. If you get a voice mail; call their cell phones <input type="checkbox"/> NRC Safety Manager will provide employee disposition guidelines and coordinate an accident investigation either by himself or Project Supervisor <input type="checkbox"/> NRC Project Manager will relay information to Project Site Superintendent <input type="checkbox"/> Accident reporting forms are included in <b>Attachment D</b> <input type="checkbox"/> Determination will be made regarding need for post accident drug testing
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### EMERGENCY RESPONSE PLAN

ELEMENT	LOCATION, SPECIFICATION OR REASON FOR USE
<b>NEAREST HOSPITAL</b>	Our Lady of the Sea General Hospital, (985) 632-6401 200 W 134th Pl, Cut Off, LA 70345
<b>NEAREST PHONE</b>	Port Fourchon Facility Phone
<b>FIRST AID KIT</b>	Deck of M/V Brandon Bordelon and the M/V Connor Bordelon/ Fourchon Dock side as well
<b>FIRE EXTINGUISHER</b>	Deck of the vessel discharging product Port Fourchon Facility Dock
<b>EYEWASH STATION</b>	Stage Portable Eyewash Station in Support Zone
<b>EVACUATION ROUTE / MEETING POINT</b>	See site map and follow established emergency procedure

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## Hospital Route

Google Maps

Gis Dock to LADY OF THE SEA GENERAL HOSPITAL

Drive 28.1 miles, 35 min



via LA-1 and LA-3235

35 min

Fastest route, the usual traffic

28.1 miles





This route has restricted usage or private roads.







	<b>SAFETY MANAGEMENT SYSTEM</b>	
	Job Hazard Analysis	



**TASK DESCRIPTION: MC 20 Recovered Crude Oil / Vessel to Shore Transfer** 11-29-23

SUMMARY OF POTENTIAL HAZARDS (Check applicable)		
<input checked="" type="checkbox"/> Heavy or awkward lifting / movement	<input checked="" type="checkbox"/> Pinch Points or caught between	<input checked="" type="checkbox"/> Working and walking surfaces; slip, trip, fall
<input type="checkbox"/> New / Inexperienced employees	<input checked="" type="checkbox"/> Spill / containment	<input checked="" type="checkbox"/> Heat stress environment
<input checked="" type="checkbox"/> Struck by or crush hazard	<input checked="" type="checkbox"/> Noise levels (>85 dBA)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Hazardous liquids, vapors, waste	<input checked="" type="checkbox"/> Elevated surfaces / Fall / Ladders	<input type="checkbox"/>
APPLICABLE REGULATION / SOPS / ALERTS		
<input type="checkbox"/> SMS 19.2 Vacuum Trucks	<input type="checkbox"/>	<input type="checkbox"/>
MINIMUM PERSONAL PROTECTIVE EQUIPMENT (Check applicable)		
<input type="checkbox"/> Level A	<input checked="" type="checkbox"/> Hard Hat	<input type="checkbox"/> High Visibility Vest
<input type="checkbox"/> Level B	<input checked="" type="checkbox"/> Safety Glasses	<input checked="" type="checkbox"/> Long Sleeves / Coveralls
<input type="checkbox"/> Level C	<input type="checkbox"/> Face Shield	<input type="checkbox"/> Chemical protective clothing
<input checked="" type="checkbox"/> Level D	<input checked="" type="checkbox"/> Hearing Protection	<input type="checkbox"/> Respirator: _____
		<input checked="" type="checkbox"/> Leather Steel Toe Boots
		<input type="checkbox"/> Disposable boot covers
		<input type="checkbox"/> Neoprene Steel Toe Boots
		<input checked="" type="checkbox"/> Gloves: _____
		<input checked="" type="checkbox"/> PFD / Work vest
		<input type="checkbox"/> _____
		<input type="checkbox"/> _____



**JOB HAZARD ANALYSIS**

① Job Steps	② Potential Hazards	③ Preventive Measures / Special PPE
1. Pre-job Meetings Behavior Based Safety	<ul style="list-style-type: none"> <li>Personnel do not understand the operational plan, relevant hazards or their roles/responsibilities</li> <li>Personnel do not stop work when hazards are identified</li> <li>Personnel do not report injuries, illnesses, near misses or incidents</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>Immediate supervisor will remind their crews of their Authority and Responsibility to Stop work and contact their supervisor if they discover a hazard</li> <li>Personnel will be instructed to report any injuries, illnesses, near misses or incidents</li> </ul>
2. Site Survey and Equipment Set-up	<ul style="list-style-type: none"> <li>Uneven working surfaces and trip hazards.</li> <li>Equipment not certified, not tested or damaged</li> <li>Improper set-up due to untrained or unqualified personnel</li> </ul>	<ul style="list-style-type: none"> <li>Inspect site for correctable walking surface hazards. Flag or correct unsafe conditions. Position equipment and hoses away from travel paths. Identify "no-go" areas.</li> <li>All equipment will be inspected for current certifications, testing and serviceable working condition prior to work</li> <li>Personnel will be pre-selected to perform tasks based on verified competency</li> </ul>
3. Vehicle movements	<ul style="list-style-type: none"> <li>Personnel, equipment or hoses struck or crushed by moving vehicles or equipment</li> <li>Vehicles not inspected prior to movements. Unsafe for travel.</li> <li>Unsecured items create dropped object or road hazards.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Vehicles will be inspected by drivers prior to travel and after travel for potential damage.</li> <li>Vehicles will be inspected to ensure that there are no loose items and that loads are secured properly.</li> </ul>
4. Mooring Vessel and working near water	<ul style="list-style-type: none"> <li>Personnel struck by thrown lines or caught in "line of fire".</li> <li>Personnel pinched or crushed during vessel movements.</li> <li>Personnel fall into the water. Man overboard.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>When mooring the vessel, keep hands, fingers, arms, and all other body parts from between the mooring line and the bits on the dock</li> <li>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.</li> </ul>
5. Connecting hoses	<ul style="list-style-type: none"> <li>Personnel crushed or pinched while connecting transfer hoses.</li> <li>Personnel suffer back strain or other ergonomic related injuries during connections or moving hoses</li> <li>Slip/trip/fall hazards while working</li> </ul>	<ul style="list-style-type: none"> <li>Identify, communicate and avoid all crush/pinch points: including cam-lock connections, vehicles and other moving parts or equipment</li> <li>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</li> <li>Observe good housekeeping and maintain situational</li> </ul>



	<p style="text-align: center;"><b>SAFETY MANAGEMENT SYSTEM</b></p> <p style="text-align: center;">Job Hazard Analysis</p>	 <p>Revision: 08/2015</p>
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① Job Steps	② Potential Hazards	③ Preventive Measures / Special PPE
<p>6. Working in potentially hazardous atmospheres</p>	<ul style="list-style-type: none"> <li>Personnel exposed to hazards related to hazardous atmospheres.</li> <li>Ignition sources create potential for explosive conditions</li> <li>Personnel not equipped to suppress incipient fire</li> </ul>	<p>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</p> <ul style="list-style-type: none"> <li>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</li> <li>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.</li> <li>Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.</li> </ul>
<p>7. Energizing pneumatic equipment</p>	<ul style="list-style-type: none"> <li>Personnel injured when struck by hoses or pressure during hose connection or fitting failure.</li> <li>Air leaks or blowout causing pressure related injuries.</li> <li>Hearing loss/injury due to noise levels above 85 decibels</li> </ul>	<ul style="list-style-type: none"> <li>All pressurized hoses will have whip checks and safety clips installed prior to energizing. All pneumatic hoses will be inspected prior to use.</li> <li>Pumping operations will be stopped immediately if leaks are detected during operations. Defective hoses will be replaced with new hoses/whips.</li> <li>Hearing protection will be worn in all areas where high-noise machinery and equipment is being operated.</li> </ul>
<p>8. Transfer of recovered crude oil</p>	<ul style="list-style-type: none"> <li>Personnel contacted by crude oil spray or environmental release.</li> <li>Overfilling tank resulting in spills</li> <li>Personnel overcome by potentially hazardous vapors</li> </ul>	<ul style="list-style-type: none"> <li>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. <b>The DOI Declaration of Inspection will be completed prior to operations.</b></li> <li>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.</li> <li>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.</li> <li>If personnel will work at heights above 6': fall protection will be worn and a rescue plan will be in place.</li> <li>Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.</li> </ul>
<p>9. Transfer of oil into transporter</p>	<ul style="list-style-type: none"> <li>Personnel contacted by crude oil spray or environmental release</li> <li>Overfilling transportation vessel resulting in spills</li> <li>Personnel overcome by potentially hazardous vapors</li> <li>Fall hazards present if personnel are working above 6 feet</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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</li> </ul>

	<b>SAFETY MANAGEMENT SYSTEM</b>	
	<b>Job Hazard Analysis</b>	<b>Revision: 08/2015</b>

① Job Steps	② Potential Hazards	③ Preventive Measures / Special PPE
		<p>detected. PPE will be upgraded according to the concentration of hazards detected.</p> <ul style="list-style-type: none"> <li>If personnel will work at heights above 6': fall protection will be worn and a rescue plan will be in place.</li> <li>Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.</li> </ul>
10. Prolonged exposure to elements (Heat Stress)	<ul style="list-style-type: none"> <li>Inadequate hydration</li> <li>Extended work periods without rest resulting in heat stress</li> </ul>	<ul style="list-style-type: none"> <li>Personnel will be encouraged to hydrate frequently. Water to sports drink ratio will be 3:1 (1 sports drink to 3 waters consumed).</li> <li>Work to rest schedules will be determined based on the ambient temperature, acclimatization of personnel and work being performed. Heat stress potential and signs/symptoms will be discussed at all safety meetings, tailgate meetings and during breaks. Personnel will be encouraged to self-report any early symptoms of heat stress. All personnel will be advised that stop work authority applies to potential heat stress symptoms they may be experiencing, (or that they suspect with co-workers).</li> </ul>
11. Break time	<ul style="list-style-type: none"> <li>Potential for ingestion of petroleum product or other contaminants</li> <li>Fire hazards from unrestricted smoking</li> <li>Direct sun reduces recovery time for workers during breaks</li> <li>Inadequate water</li> </ul>	<ul style="list-style-type: none"> <li>Personnel will wash hands before smoking, eating, drinking or any other activity where contaminants might be ingested. This hazard will be stressed in break areas.</li> <li>Only smoke in designated areas.</li> <li>Ensure that break areas have adequate shade and cooling potential for personnel</li> <li>Personnel are more likely to hydrate when cool water is available. Ensure an adequate supply and include sports drinks with electrolytes to be consumed sparingly.</li> </ul>
12. Decontaminate Personnel	<ul style="list-style-type: none"> <li>Potential for secondary contamination by absorption, injection, or ingestion</li> </ul>	<ul style="list-style-type: none"> <li>Follow decontamination plan for clothing removal and disposal when protective outerwear is required and becomes contaminated.</li> <li>Only use safety scissors (never knives) to cut Tyvek from personnel.</li> <li>Ensure that workers wash hands and face thoroughly.</li> </ul>
<b>NRC INCIDENT REPORTING POLICY</b>	<ul style="list-style-type: none"> <li>First Aid</li> <li>OSHA recordable</li> <li>Illness/Injury</li> <li>Near Miss</li> <li>Equipment/Vehicle Damage</li> </ul>	<ul style="list-style-type: none"> <li>NRC employees and subcontractors are required to immediately report all incidents to their supervisor.</li> <li>The immediate supervisor will immediately report the incident to the site safety professional, HSEQ Manager, and Project Manager.</li> <li>As soon as possible the affected employee will complete the required form, if an injury then the first report of injury; if near miss, then a near miss / safety suggestion form will be completed.</li> <li>The supervisor will complete a root cause analysis of all reported incidents and submit to the HSEQ manager within 8 hours of an incident.</li> <li>Determination will be made regarding need for post-incident drug and alcohol testing based on NRC policy.</li> <li>Contact HSEQ Manager for proper USCG reports, if needed and what report is needed.</li> </ul>



#### REVIEW

Development Team	Position/Title	Reviewed By	Position/Title	Date
				7/27/20 11-29-23

#### ACKNOWLEDGEMENT



Employee Name	Signature	Date
		11-29-23
		11-29-23



	<p align="center"><b>SAFETY MANAGEMENT SYSTEM</b></p>	
	<p align="center">Job Hazard Analysis</p>	<p align="right">Revision: 08/2015</p>

[Redacted]	11-29-23
	11-29-23
	2023-11-29

2 Trucks PO# 56

	<b>SAFETY MANAGEMENT SYSTEM</b>	
	<b>Job Hazard Analysis</b>	

**TASK DESCRIPTION: MC 20 Recovered Crude Oil / Vessel to Shore Transfer** 11-30-23

SUMMARY OF POTENTIAL HAZARDS (Check applicable)		
<input checked="" type="checkbox"/> Heavy or awkward lifting / movement	<input checked="" type="checkbox"/> Pinch Points or caught between	<input checked="" type="checkbox"/> Working and walking surfaces; slip, trip, fall
<input type="checkbox"/> New / Inexperienced employees	<input checked="" type="checkbox"/> Spill / containment	<input checked="" type="checkbox"/> Heat stress environment
<input checked="" type="checkbox"/> Struck by or crush hazard	<input checked="" type="checkbox"/> Noise levels (>85 dBA)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Hazardous liquids, vapors, waste	<input checked="" type="checkbox"/> Elevated surfaces / Fall / Ladders	<input type="checkbox"/>
APPLICABLE REGULATION / SOPS / ALERTS		
<input type="checkbox"/> SMS 19.2 Vacuum Trucks	<input type="checkbox"/>	<input type="checkbox"/>
MINIMUM PERSONAL PROTECTIVE EQUIPMENT (Check applicable)		
<input type="checkbox"/> Level A	<input checked="" type="checkbox"/> Hard Hat	<input type="checkbox"/> High Visibility Vest
<input type="checkbox"/> Level B	<input checked="" type="checkbox"/> Safety Glasses	<input checked="" type="checkbox"/> Long Sleeves / Coveralls
<input type="checkbox"/> Level C	<input type="checkbox"/> Face Shield	<input type="checkbox"/> Chemical protective clothing
<input checked="" type="checkbox"/> Level D	<input checked="" type="checkbox"/> Hearing Protection	<input type="checkbox"/> Respirator: _____
		<input checked="" type="checkbox"/> Leather Steel Toe Boots
		<input type="checkbox"/> Disposable boot covers
		<input type="checkbox"/> Neoprene Steel Toe Boots
		<input checked="" type="checkbox"/> PFD / Work vest
		<input type="checkbox"/> _____
		<input type="checkbox"/> _____
		<input checked="" type="checkbox"/> Gloves: _____

**JOB HAZARD ANALYSIS**

● Job Steps	● Potential Hazards	● Preventive Measures / Special PPE
1. Pre-job Meetings Behavior Based Safety	<ul style="list-style-type: none"> <li>Personnel do not understand the operational plan, relevant hazards or their roles/responsibilities</li> <li>Personnel do not stop work when hazards are identified</li> <li>Personnel do not report injuries, illnesses, near misses or incidents</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>Immediate supervisor will remind their crews of their Authority and Responsibility to Stop work and contact their supervisor if they discover a hazard</li> <li>Personnel will be instructed to report any injuries, illnesses, near misses or incidents</li> </ul>
2. Site Survey and Equipment Set-up	<ul style="list-style-type: none"> <li>Uneven working surfaces and trip hazards.</li> <li>Equipment not certified, not tested or damaged</li> <li>Improper set-up due to untrained or unqualified personnel</li> </ul>	<ul style="list-style-type: none"> <li>Inspect site for correctable walking surface hazards. Flag or correct unsafe conditions. Position equipment and hoses away from travel paths. Identify "no-go" areas.</li> <li>All equipment will be inspected for current certifications, testing and serviceable working condition prior to work</li> <li>Personnel will be pre-selected to perform tasks based on verified competency</li> </ul>
3. Vehicle movements	<ul style="list-style-type: none"> <li>Personnel, equipment or hoses struck or crushed by moving vehicles or equipment</li> <li>Vehicles not inspected prior to movements. Unsafe for travel.</li> <li>Unsecured items create dropped object or road hazards.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Vehicles will be inspected by drivers prior to travel and after travel for potential damage.</li> <li>Vehicles will be inspected to ensure that there are no loose items and that loads are secured properly.</li> </ul>
4. Mooring Vessel and working near water	<ul style="list-style-type: none"> <li>Personnel struck by thrown lines or caught in "line of fire".</li> <li>Personnel pinched or crushed during vessel movements.</li> <li>Personnel fall into the water. Man overboard.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>When mooring the vessel, keep hands, fingers, arms, and all other body parts from between the mooring line and the bits on the dock</li> <li>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.</li> </ul>
5. Connecting hoses	<ul style="list-style-type: none"> <li>Personnel crushed or pinched while connecting transfer hoses.</li> <li>Personnel suffer back strain or other ergonomic related injuries during connections or moving hoses</li> <li>Slip/trip/fall hazards while working</li> </ul>	<ul style="list-style-type: none"> <li>Identify, communicate and avoid all crush/pinch points: including cam-lock connections, vehicles and other moving parts or equipment</li> <li>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</li> <li>Observe good housekeeping and maintain situational</li> </ul>



	<b>SAFETY MANAGEMENT SYSTEM</b>  <b>Job Hazard Analysis</b>	  <b>Revision: 08/2015</b>
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● Job Steps	● Potential Hazards	● Preventive Measures / Special PPE
6. Working in potentially hazardous atmospheres	<ul style="list-style-type: none"> <li>Personnel exposed to hazards related to hazardous atmospheres.</li> <li>Ignition sources create potential for explosive conditions</li> <li>Personnel not equipped to suppress incipient fire</li> </ul>	<p>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</p> <ul style="list-style-type: none"> <li>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</li> <li>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.</li> <li>Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.</li> </ul>
7. Energizing pneumatic equipment	<ul style="list-style-type: none"> <li>Personnel injured when struck by hoses or pressure during hose connection or fitting failure.</li> <li>Air leaks or blowout causing pressure related injuries.</li> <li>Hearing loss/injury due to noise levels above 85 decibels</li> </ul>	<ul style="list-style-type: none"> <li>All pressurized hoses will have whip checks and safety clips installed prior to energizing. All pneumatic hoses will be inspected prior to use.</li> <li>Pumping operations will be stopped immediately if leaks are detected during operations. Defective hoses will be replaced with new hoses/whips.</li> <li>Hearing protection will be worn in all areas where high-noise machinery and equipment is being operated.</li> </ul>
8. Transfer of recovered crude oil	<ul style="list-style-type: none"> <li>Personnel contacted by crude oil spray or environmental release.</li> <li>Overfilling tank resulting in spills</li> <li>Personnel overcome by potentially hazardous vapors</li> </ul>	<ul style="list-style-type: none"> <li>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. <b>The DOI Declaration of Inspection will be completed prior to operations.</b></li> <li>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.</li> <li>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.</li> <li>If personnel will work at heights above 6': fall protection will be worn and a rescue plan will be in place.</li> <li>Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.</li> </ul>
9. Transfer of oil into transporter	<ul style="list-style-type: none"> <li>Personnel contacted by crude oil spray or environmental release</li> <li>Overfilling transportation vessel resulting in spills</li> <li>Personnel overcome by potentially hazardous vapors</li> <li>Fall hazards present if personnel are working above 6 feet</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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</li> </ul>





# SAFETY MANAGEMENT SYSTEM



## Job Hazard Analysis

Revision: 08/2015

● Job Steps	● Potential Hazards	● Preventive Measures / Special PPE
		<p>detected. PPE will be upgraded according to the concentration of hazards detected.</p> <ul style="list-style-type: none"> <li>If personnel will work at heights above 6': fall protection will be worn and a rescue plan will be in place.</li> <li>Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.</li> </ul>
10. Prolonged exposure to elements (Heat Stress)	<ul style="list-style-type: none"> <li>Inadequate hydration</li> <li>Extended work periods without rest resulting in heat stress</li> </ul>	<ul style="list-style-type: none"> <li>Personnel will be encouraged to hydrate frequently. Water to sports drink ratio will be 3:1 (1 sports drink to 3 waters consumed).</li> <li>Work to rest schedules will be determined based on the ambient temperature, acclimatization of personnel and work being performed. Heat stress potential and signs/symptoms will be discussed at all safety meetings, tailgate meetings and during breaks. Personnel will be encouraged to self-report any early symptoms of heat stress. All personnel will be advised that stop work authority applies to potential heat stress symptoms they may be experiencing, (or that they suspect with co-workers).</li> </ul>
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12. Decontaminate Personnel	<ul style="list-style-type: none"> <li>Potential for secondary contamination by absorption, injection, or ingestion</li> </ul>	<ul style="list-style-type: none"> <li>Follow decontamination plan for clothing removal and disposal when protective outerwear is required and becomes contaminated.</li> <li>Only use safety scissors (never knives) to cut Tyvek from personnel.</li> <li>Ensure that workers wash hands and face thoroughly.</li> </ul>
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### REVIEW

Development Team	Position/Title	Reviewed By	Position/Title	Date
			PM	7/27/20
				11-30-23

### ACKNOWLEDGEMENT

Employee Name	Signature	Date
		11-30-23
		11-30-23
		11-30-23

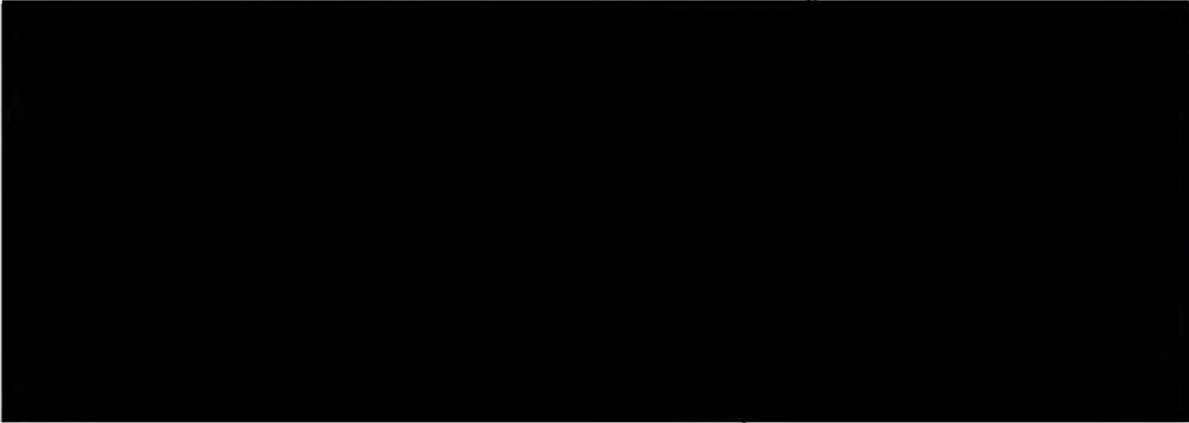


SAFETY MANAGEMENT SYSTEM



Job Hazard Analysis

Revision: 08/2015



11-30-23  
11-30-23  
2023.11.30



11-30-23  
11-30-23  
11-30-23



2 Trucks

10/15/16

12-01-23

	<b>SAFETY MANAGEMENT SYSTEM</b>	
	<b>Job Hazard Analysis</b>	<b>Revision: 08/2015</b>



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

SUMMARY OF POTENTIAL HAZARDS (Check applicable)		
<input checked="" type="checkbox"/> Heavy or awkward lifting / movement	<input checked="" type="checkbox"/> Pinch Points or caught between	<input checked="" type="checkbox"/> Working and walking surfaces; slip, trip, fall
<input type="checkbox"/> New / Inexperienced employees	<input checked="" type="checkbox"/> Spill / containment	<input checked="" type="checkbox"/> Heat stress environment
<input checked="" type="checkbox"/> Struck by or crush hazard	<input checked="" type="checkbox"/> Noise levels (>85 dBA)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Hazardous liquids, vapors, waste	<input checked="" type="checkbox"/> Elevated surfaces / Fall / Ladders	<input type="checkbox"/>
APPLICABLE REGULATION / SOPS / ALERTS		
<input type="checkbox"/> SMS 19.2 Vacuum Trucks	<input type="checkbox"/>	<input type="checkbox"/>
MINIMUM PERSONAL PROTECTIVE EQUIPMENT (Check applicable)		
<input type="checkbox"/> Level A	<input checked="" type="checkbox"/> Hard Hat	<input type="checkbox"/> High Visibility Vest
<input type="checkbox"/> Level B	<input checked="" type="checkbox"/> Safety Glasses	<input checked="" type="checkbox"/> Long Sleeves / Coveralls
<input type="checkbox"/> Level C	<input type="checkbox"/> Face Shield	<input type="checkbox"/> Chemical protective clothing
<input checked="" type="checkbox"/> Level D	<input checked="" type="checkbox"/> Hearing Protection	<input type="checkbox"/> Respirator: _____
		<input checked="" type="checkbox"/> Leather Steel Toe Boots
		<input type="checkbox"/> Disposable boot covers
		<input type="checkbox"/> Neoprene Steel Toe Boots
		<input checked="" type="checkbox"/> Gloves: _____
		<input checked="" type="checkbox"/> PFD / Work vest
		<input type="checkbox"/> _____
		<input type="checkbox"/> _____

**JOB HAZARD ANALYSIS**



● Job Steps	● Potential Hazards	● Preventive Measures / Special PPE
1. Pre-job Meetings Behavior Based Safety	<ul style="list-style-type: none"> <li>Personnel do not understand the operational plan, relevant hazards or their roles/responsibilities</li> <li>Personnel do not stop work when hazards are identified</li> <li>Personnel do not report injuries, illnesses, near misses or incidents</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>Immediate supervisor will remind their crews of their Authority and Responsibility to Stop work and contact their supervisor if they discover a hazard</li> <li>Personnel will be instructed to report any injuries, illnesses, near misses or incidents</li> </ul>
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	<p style="text-align: center;"><b>SAFETY MANAGEMENT SYSTEM</b></p> <p style="text-align: center;">Job Hazard Analysis</p>	<div style="text-align: center;">  </div> <p style="text-align: right;">Revision: 08/2015</p>
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● Job Steps	● Potential Hazards	● Preventive Measures / Special PPE
6. Working in potentially hazardous atmospheres	<ul style="list-style-type: none"> <li>Personnel exposed to hazards related to hazardous atmospheres.</li> <li>Ignition sources create potential for explosive conditions</li> <li>Personnel not equipped to suppress incipient fire</li> </ul>	<p>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</p> <ul style="list-style-type: none"> <li>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</li> <li>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.</li> <li>Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.</li> </ul>
7. Energizing pneumatic equipment	<ul style="list-style-type: none"> <li>Personnel injured when struck by hoses or pressure during hose connection or fitting failure.</li> <li>Air leaks or blowout causing pressure related injuries.</li> <li>Hearing loss/injury due to noise levels above 85 decibels</li> </ul>	<ul style="list-style-type: none"> <li>All pressurized hoses will have whip checks and safety clips installed prior to energizing. All pneumatic hoses will be inspected prior to use.</li> <li>Pumping operations will be stopped immediately if leaks are detected during operations. Defective hoses will be replaced with new hoses/whips.</li> <li>Hearing protection will be worn in all areas where high-noise machinery and equipment is being operated.</li> </ul>
8. Transfer of recovered crude oil	<ul style="list-style-type: none"> <li>Personnel contacted by crude oil spray or environmental release.</li> <li>Overfilling tank resulting in spills</li> <li>Personnel overcome by potentially hazardous vapors</li> </ul>	<ul style="list-style-type: none"> <li>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. <b>The DOI Declaration of Inspection will be completed prior to operations.</b></li> <li>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.</li> <li>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.</li> <li>If personnel will work at heights above 6': fall protection will be worn and a rescue plan will be in place.</li> <li>Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.</li> </ul>
9. Transfer of oil into transporter	<ul style="list-style-type: none"> <li>Personnel contacted by crude oil spray or environmental release</li> <li>Overfilling transportation vessel resulting in spills</li> <li>Personnel overcome by potentially hazardous vapors</li> <li>Fall hazards present if personnel are working above 6 feet</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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</li> </ul>



	<p align="center"><b>SAFETY MANAGEMENT SYSTEM</b></p> <p align="center"><b>Job Hazard Analysis</b></p>	 <p align="center">Revision: 08/2015</p>
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● Job Steps	● Potential Hazards	● Preventive Measures / Special PPE
		<p>detected. PPE will be upgraded according to the concentration of hazards detected.</p> <ul style="list-style-type: none"> <li>• If personnel will work at heights above 6': fall protection will be worn and a rescue plan will be in place.</li> <li>• Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.</li> </ul>
10. Prolonged exposure to elements (Heat Stress)	<ul style="list-style-type: none"> <li>• Inadequate hydration</li> <li>• Extended work periods without rest resulting in heat stress</li> </ul>	<ul style="list-style-type: none"> <li>• Personnel will be encouraged to hydrate frequently. Water to sports drink ratio will be 3:1 (1 sports drink to 3 waters consumed).</li> <li>• Work to rest schedules will be determined based on the ambient temperature, acclimatization of personnel and work being performed. Heat stress potential and signs/symptoms will be discussed at all safety meetings, tailgate meetings and during breaks. Personnel will be encouraged to self-report any early symptoms of heat stress. All personnel will be advised that stop work authority applies to potential heat stress symptoms they may be experiencing, (or that they suspect with co-workers).</li> </ul>
11. Break time	<ul style="list-style-type: none"> <li>• Potential for ingestion of petroleum product or other contaminants.</li> <li>• Fire hazards from unrestricted smoking</li> <li>• Direct sun reduces recovery time for workers during breaks</li> <li>• Inadequate water</li> </ul>	<ul style="list-style-type: none"> <li>• Personnel will wash hands before smoking, eating, drinking or any other activity where contaminants might be ingested. This hazard will be stressed in break areas.</li> <li>• Only smoke in designated areas.</li> <li>• Ensure that break areas have adequate shade and cooling potential for personnel</li> <li>• Personnel are more likely to hydrate when cool water is available. Ensure an adequate supply and include sports drinks with electrolytes to be consumed sparingly.</li> </ul>
12. Decontaminate Personnel	<ul style="list-style-type: none"> <li>• Potential for secondary contamination by absorption, injection, or ingestion</li> </ul>	<ul style="list-style-type: none"> <li>• Follow decontamination plan for clothing removal and disposal when protective outerwear is required and becomes contaminated.</li> <li>• Only use safety scissors (never knives) to cut Tyvek from personnel.</li> <li>• Ensure that workers wash hands and face thoroughly.</li> </ul>
<b>NRC INCIDENT REPORTING POLICY</b>	<ul style="list-style-type: none"> <li>• First Aid</li> <li>• OSHA recordable</li> <li>• Illness/Injury</li> <li>• Near Miss</li> <li>• Equipment/Vehicle Damage</li> </ul>	<ul style="list-style-type: none"> <li>• NRC employees and subcontractors are required to immediately report all incidents to their supervisor.</li> <li>• The immediate supervisor will immediately report the incident to the site safety professional, HSEQ Manager, and Project Manager.</li> <li>• As soon as possible the affected employee will complete the required form, if an injury then the first report of injury; if near miss, then a near miss / safety suggestion form will be completed.</li> <li>• The supervisor will complete a root cause analysis of all reported incidents and submit to the HSEQ manager within 8 hours of an incident.</li> <li>• Determination will be made regarding need for post-incident drug and alcohol testing based on NRC policy.</li> <li>• Contact HSEQ Manager for proper USCG reports, if needed and what report is needed.</li> </ul>

**REVIEW**

Development Team	Position/Title	Reviewed By	Position/Title	Date
				7/27/20
			PM	12-1-23

**ACKNOWLEDGEMENT**

Employee Name	Signature	Date
		12-1-23
		12-1-23



# SAFETY MANAGEMENT SYSTEM



Job Hazard Analysis

Revision: 08/2015



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