

Couvillion Group, LLC MC 20 Hydrocarbon Pump-Off #46 Results Report

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Revision	Date	Ву	Check	Approve	Remarks
0	1/31/2022				Initial
					Document

Summary:

Couvillion Group's Rapid Response Collection System initiated its forty-sixth collection cycle on 12/2/2022 and completed the cycle on 1/5/2023 resulting in a collection duration of 34.1 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 1/7/2023, with 709.7 bbl of hydrocarbon fluids transferred to onshore frac tanks 1-3 according to NRC frac tank strapping.

On 1/25/2023, Couvillion Group confirmed the initial measurement of 709.7 bbl of hydrocarbon fluids in frac tanks 1-3 via strap measurements. After a confirmation measurement was recorded, the decanting process began. From frac tanks 1-3, a total of 37.6 bbl of water was decanted. This 37.6 bbl of water was sent to the fourth frac tank for disposal at a later time. A gross total of 632.8 bbl of fluids according to NRC strapping measurements was sent to Acadiana oil using tank trucks from frac tanks 1-3. After temperature and BS&W deductions a net total of 618.4 bbl of oil was transferred from tanks 1-3 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 MC20 Response Disposal Plan with associated documentation pertaining to custody transfer and hydrocarbon fluids measurements for this report are in Appendix I. Appendix II includes the NRC waste handling documentation.

Execution:

Offshore Collection of Hydrocarbon Fluids at MC 20 Site:

The Brandon Bordelon OSV moved in place on location at MC20 on 1/5/2023 at 00:50 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 1/5/2023 the ATI/BTI were closed at 03:27, marking the end of the 46th collection cycle. Pumping commenced at 12:30 on 1/5/2023 and ended at 20:30 on 1/5/2023. 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 719.7 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 1/7/2023. On the morning of 1/7/2023 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 OSV Brandon Bordelon were empty. Tankermen from Team Services verified that the MPT tanks onboard the vessel was emptied, then an NRC representative strapped the dockside frac tanks to determine **the total quantity transferred which was 709.7 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 1/26/2023 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 137.9 bbls, the second truck received 132.9 bbls, and the third truck received 124.3 bbls of hydrocarbon fluids. The second day of truck transfers began on 1/27/2023 at 07:00. The fourth truck received 135.2 bbls and final truck of pumpoff 46 received 102.5 bbls of hydrocarbon fluids. There was a total of 39.3 bbls of residual fluids which remained in frac tanks 1-3 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 1-3 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 709.7 bbl of hydrocarbon fluid was transferred from the Brandon Bordelon into an onshore frac tank. Tank trucks transported a gross total of 632.8 bbl to the Acadiana Oil Company, which netted out to a total of 618.4 bbl. From a total fluid reconciliation standpoint, measurements at different site locations were within 0.0% for frac tanks 1-3. The calculated flow rate during the 34.1-day collection cycle offshore was 18.1 bbl/day or 760.2 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 1,181,413.8 gallons of salvaged crude oil has been contained from the MC-20 site.

Oil Tally

					Truck 1				Truck 2				Truck 3				Truck 4					Running
Oil Tally	Date	Total Fluid	Total Fluid		Total Fluids	Total Fluid			Total Fluids	Total Fluid			Total Fluids	Total Fluid			Total Fluids	Total Fluid			Total	Total
		Transfer	Frac	%	to Acadiana	at	%	Net	to Acadiana	at	%	Net	to Acadiana	at	%	Net	to Acadiana	at	%	Net	Net	Net
		by	Tank Strap		NRC Frac	Acadiana			NRC Frac	Acadiana			NRC Frac	Acadiana			NRC Frac	Acadiana				
		Siemens	by NRC	Diff	Strap	by strap	Diff	Oil	Strap	by strap	Diff	Oil	Strap	by strap	Diff	Oil	Strap	by strap	Diff	Oil	Oil	Oil
		(bbl)	(bbl)		(bbl)	(bbl)		(bbl)	(bbl)	(bbl)		(bbl)	(bbl)	(bbl)		(bbl)	(bbl)	(bbl)		(bbl)	(bbl)	(bbl)
Pump Off #1	4/26/2019	220.0	215.7	-2.0																		
	5/6/2019				113.7	110.0	3.3	108.8	97.0	87.4	9.9	78.6									187.4	187.4
Pump Off #2	5/3/2019	246.3	223.5	-10.2																		
	5/8/2019				101.3	102.0	-0.7	99.7	82.8	83.8	-1.2	81.9									181.6	369.0
Pump Off #3	5/13/2019	335.0	331.2	-1.1																		
	5/16/2019				103.2	89.1	13.7	82.9	126.4	136.4	-7.9	132.1	108.5	99.5	8.3	80.7					295.7	664.8
Pump Off #4	6/19/2019	901.7	905.5	0.4	139.4	145.8	-4.6	143.0	138.7	139.4	-0.5	137.4										
	6/20/2019				137.7	136.2	1.1	113.0	140.7	141.4	-0.5	139.4	140.6	141.4	-0.6	134.2	144.1	141.4	1.9	138.4		
	6/21/2019				48.5	47.1	2.8	44.6													850.0	1,514.8
Pump Off #5	7/31/2019	1200.2	1196.6	-0.3	139.2	138.3	0.6	133.7	142.7	150.0	-5.1	146.5										
1	8/1/2019				139.1	145.7	-4.7	135.1	140.7	138.4	1.6	131.9	146.0	142.0	2.7	81.3	138.0	142.0	-2.9	140.0		
L	8/2/2019				99.8	112.9	-13.1	111.0	101.1	105.6	-4.5	104.2				Щ.	<u> </u>				983.7	2,498.5
Pump Off #6	8/26/2019	848.0	874.6	3.0	141.7	138.4	2.3	134.6	140.3	145.7	-3.8	140.6	141.5	145.7	-3.0	143.2						
	8/27/2019				140.5	138.4	1.5	135.5	137.2	142.0	-3.5	139.1	61.3	65.6	-7.0	64.2						
1					1	l															757.2	3,255.7
Pump Off #7	9/23/2019	891.9	880.4	-1.3	138.0	134.7	2.4	132.4	144.3	151.8	-5.2	148.9	142.6	142.0	0.4	139.7						
	9/24/2019				144.4	142.0	1.7	139.1	143.7	138.4	3.7	135.5	55.3	54.6	1.3	53.7					749.3	4,005.0
Pump off #8	10/21/2019	790.9	787.4	-0.4																		.,
rump on no	10/22/2019	750.5	707.4	0.4	143.9	131.0	9.0	129.1	154.3	151.9	1.5	149.7	144.0	136.2	5.4	134.2						
	10/23/2019				137.7	141.4	-2.7	139.2	130.0	125.7	3.3	123.6	244.0	150.2	3.4	154.2						
Residual Tank	10/23/2019	 	205.1			141.4		133.2	150.0		3.3	123.0	125.4	125.7	-0.2	123.6	 				799.4	4,804.4
Pump off #9	11/11/2019	772.3	757.8	-1.9									123.4	123.7	-0.2	123.0					755.4	4,004.4
Pump on #9	11/11/2019	//2.3	/5/.8	-1.9	142.3	156.5	-10.0	153.6	143.8	131.0	8.9	128.8	145.3	142.0	2.3	139.9						
							0.0				-2.8	93.3	143.3	142.0	2.3	135.5					CEO 1	F 463 F
0 ((40	11/20/2019	940.7	942.8	0.2	145.6 142.0	145.6 138.4		143.6 136.9	92.1 71.4	94.6 69.2	3.1	68.5	146.4	145.7	0.5	144.2	-				659.1	5,463.5
Pump off #10	12/17/2019	940.7	942.8	0.2			2.5							-	0.5		47.4			47.0	040.5	6 202 4
- "	12/18/2019				146.4	138.4	5.5	136.8	144.3	145.7	-1.0	144.4	144.0	142.0	1.4	140.8	47.4	47.4	0.0	47.0	818.6	6,282.1
Pump off #11	1/9/2020	697.7	691.0	-1.0	128.7	131.1	-1.9	128.3	128.0	131.1	-2.4	129.3	129.8	131.1	-1.0	129.6						
	1/10/2020				79.4	91.0	-14.6	90.0	92.6	91.1	1.6	90.0			 -		 		ļ			
Residual Tank	1/8/2020				141.9	142.0	-0.1	140.0													707.2	6,989.3
Pump off #12	2/12/2020	725.4	722.5	-0.4	120.8	123.8	-2.5	115.8	102.1	101.9	0.2	100.4	99.0	101.9	-2.9	97.5						
	2/13/2020		L		149.5	160.2	-7	154	114.2	101.92	10.8	61.1			Ļ		 					
Residual Tank	2/17/2020				108.2	105.6	2.4	101.3													630.1	7,619.4
Pump off #13	3/11/2020	583.7	570.2	-2.4																		
	3/12/2020				114.5	115.2	-0.6	112.7	138.3	136.2	1.5	134.3										
	3/13/2020				93.6	94.3	-0.7	91.9	120.0	120.4	-0.3	117.5									456.4	8,075.8
Pumpoff #14	4/16/2020	966.7	928.8	-4.1	147.2	146.5	0.5	144.6	145.2	141.2	2.8	139.4	148.0	146.5	1.0	143.7						
	4/17/2020	↓	L		144.9	146.5	-1.1	144.3	144.1	141.2	2.0	139.1	87.4	88.9	-1.7	87.3	ļl		 	l	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	798.4	783.1	-1.9	150.3	145.8	3.0	143.4	148.0	153.1	-3.4	149.4	145.2	142.1	2.1	138.7						
	5/8/2020				147.2	149.4	-1.5	147.6	131.7	131.2	0.4	128.6									707.7	9,714.2
Pump off #16	5/28/2020	598.8	583.3	-2.7	142.1	140.3	1.3	137.5														
	5/29/2020				138.0	138.5	-0.4	134.1	135.1	134.8	0.2	131.7	115.0	116.6	-1.4	109.7	<u> </u>				513.0	10,227.2
Pumpoff #17	7/8/2020	970.1	956.3	1.4																		
	7/9/2020				149.1	149.9	-0.5	146.8	148.8	145.5	2.2	142.5	149.2	149.9	-0.5	146.8						
	7/10/2020				150.7	149.6	0.7	146.6	137.1	138.0	-0.7	135.2	119.9	119.0	0.8	116.5					834.4	11,061.4
Pumpoff #18	7/22/2020	658.4	642.6	-2.5																		
. ,	7/27/2020			-	129.9	129.9	0.0	127.8	140.6	140.6	0.0	137.7	138.2	138.2	0.0	135.7	139.8	139.8	0.0	137.5		
	7/28/2020				66.0	66.0	0.0	62.8													601.5	11,663.1
Residual Tank	7/28/2020	t	 -			00.0	- 5.5	- 02.0	113	113	0.0	110.7	 		 	 	t		 -		110.7	11,773.8
Pumpoff #19	9/1/2020	901.6	886.4	-1.7	128.2	128.2	0.0	125.6	135.5	135.5	0.0	132.6									110.7	11,,,5.0
. ampon #15	9/2/2020	501.0	000.4	-1.7	131.2	131.2	0.0	128.3	136.8	136.8	0.0	134.0	134.8	134.8	0.0	132.0	135.9	135.9	0.0	133.0	785.5	12.559.3
	5/2/2020				131.2	131.2	0.0	120.3	130.0	130.0	0.0	134.0	134.0	134.0	0.0	132.0	133.5	133.5	0.0	133.0	/03.3	12,333.3
	1	1			1			1														

Oil Tally Contd.

Columbia						Truck 1				Truck 2				Truck 3				Truck 4					Running
Part	Oil Tally	Date	Total Fluid	Total Fluid			Total Fluid				Total Fluid				Total Fluid				Total Fluid			Total	
Persistent Per					%			%	Net			%	Net			%	Net			%	Net	Net	Net
Second Field March				Tank Strap	,-		Acadiana				Acadiana	,			Acadiana	,-			Acadiana	,-			
Personal Field Pers					Diff	l .		Diff	Oil			Diff	Oil			Diff	Oil			Diff	Oil	Oil	Oil
					5			5	(hhl)			J	-			J	(hhl)			J	_		-
Marchell 1989 1997 1998	Pumpoff #20	0/20/2020			2.0			2 0	,			2.4		(661)	(001)		(001)	(551)	(551)		(551)	(661)	(661)
Part	rumpon #20		404.2	430.3	-2.5					143.3	140.0	2.4	137.5									257 /	12 016 7
	Desident Teels		 								 -	 											
March Marc			620.0	C10.1	1.0			_		445.3	445.0	0.2	142.1									128.6	13,045.3
	Pumpott #21		620.9	610.1	-1.8																		40 500 6
1317/17000 1 1312 1300 24 1243 1 1200 25 1373 1468 1400 26 1314 1317 1317 1317 1318																						548.3	13,593.6
	Pumpoff #22		685.6	673.2	-1.8					143.4	142.0	1.0	140.1	146.4	140.0	4.4	128.3						
1273/12700 1.0																						532.4	14,126.0
Figure Str. 1927/2021 196.5 19.5 12.9 1.9 12.9 1.9 12.9 1.0	Pumpoff #23		781.7	784.3	0.3	146.1	140.0	4.2	137.3	146.8	140.0			145.2	137.0	5.6	133.9						
1/28/2021 1/28		12/31/2020				145.3	141.0	3.0	138.4	113.9	111.0	2.5	107.2									655.4	14,781.4
Section Part	Pumpoff # 24	1/27/2021	676.5	663.9	-1.9	123.9	*	*	*														
219/20021 10.09 10.05 10.09		1/28/2021				141.0	*	*	*	140.2	140.0	0.1	137.7	146.8		*	*						
Promofit #87 20/20/2031 Promofit #87 20/20/2032 Promofit #87 20/20/2032 Promofit #87 20/20/2032 Promofit #87 20/20/2032						146.0	135.0	7.5	133.7	150.7	141.0	6.4	139.0	115.3	112.0	2.9	107.05					517.5	15.298.9
	Residual Tank		t								t	1				1							
Marcol M			759 7	738 1	-2.0					146.5	1/13 0	2.4	1/11 7	1/6 0	1/0.0	41	137 /						
Numpoff 497 471/2001 480.2 472.6 5.4 143.7 136.2 5.2 148.8 142.6 136.4 146.7 140.3 12.1 140.4 12.1	. unipon #25		, 33.7	730.1	2.5									140.0	140.0		137.4					324.7	10,015.5
A72/2002 S51.0 S44 -1.6 122.5 129.7 -5.0 128.0 146.4 146.7 -2.1 146.5 144.1 142.0 1.5 189.9	Dumnoff #26 27		400.2	472.6	E 4									1		\vdash	-			\vdash	\vdash		
Accordance	rumport #26-27													144.1	142.0	1.5	120.0						
Pumpoff #83 Pumpoff #83 Pumpoff #83 Pumpoff #83 Pumpoff #84 Pumpoff #84 Pumpoff #84 Pumpoff #85	1		553.0	544.3	-1.6	123.5	129.7	-5.0	128.0					144.1	142.0	1.5	139.9					702.0	46.042.2
Emport #28 \$75/2021 \$75/2021 \$14.4 \$14.6									 -	111.4	109.1	2.1	106.3			ļ							
S727/2021 1445 1406 27 35.3 31.1 33.0 15 36.6 143.3 140.4 2 137.9 565.2 17,594.5						132.5	131	1.1	127.0			—				—				Щ		127.0	16,939.3
S788/2001	Pumpoff #28		716.0	706.1	-1.4				1	1	1	1	l			1	l						
Pumpoff #39 7/14/2021 648	1													143.3	140.4	2	137.9					565.2	17,504.5
Pumpoff #39 715/2021 763.0 750.2 750		5/28/2021				81.1	78.0	3.8	76.1	88.7	82.0	7.6	78.3										
Pumpoff #83 18/2021 75.02 75.0		7/14/2021																					
Pumpoff #83 18/2021 75.02 75.0	Pumpoff #29	7/15/2021	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
Dumpoff 830 8/5/2021 763.0 763	·																						•
Pumpoff #81 17/2021 18/2	Pumpoff #30		763.0	750.2	-17	115 3	115.0	0.3	112 9	112.6	111.0	1 4	109.0	106.8	105.0	17	103.2					673.4	18705 3
Pumporff 831 3/23/2021 616.2 598.4 -3.0 1416.6 27.1 140.0 142.9 141.9 3.1 129.2	r umpon noo		705.0	750.2	2.7																	075.1	10705.5
Pumpoff 83 1/3/2021 1/26 3 1/3	Dumnoff #21		616.2	F00.4	2.0									124.5	125.0	1.0	110.0					F20.0	10226.1
Pumpoff #32 11/3/2021 11/3/2021 11/4/2021 11	Pullipuli #51		010.2	396.4	-5.0																	330.6	19230.1
114/2021 152.5 149.0 2.3 147.0 154.6 145.0 6.2 142.2	D ff #22		052.4	027.4	1.6																		
11/5/2021	Pumpott #32		952.4	937.1	-1.6																		
Pumpoff #83 11/30/2011 787.9 786.2 -0.2 142.9 140.5 17. 139.5 144.0 140.9 2.2 139.9 149.6 145.3 2.9 143.6 688.0 20765.0										154.6	145.0	6.2	142.2										
Pumpoff #83 11/30/2021 787.9 786.2 -0.2 142.9 140.5 17 139.5 144.0 140.9 12.2 139.9 149.6 145.3 2.9 143.6 688.0 20765.0																							
Pumpoff #35 1/2/1/202 686.6 673.8 -1.9 1.96 61.1 1.95								_														840.9	20077.0
Pumpoff #34 1/6/202 686.6 673.8 -1.9 149.6 140.5 6.1 138.9 144.0 148.3 3.0 146.1 152.3 148.5 147.2 518.5 21283.5	Pumpoff #33	11/30/2021	787.9	786.2	-0.2	142.9	140.5	1.7	139.5	144.0	140.9	2.2	139.9	149.6	145.3	2.9	143.6						
Numpoff #35 1/7/2022 564.2 551.9 -2.2 144.1 144.0 0.1 142.7 140.2 136.2 2.9 140.2 140.2 136.2 12.9 136.2 136.2 12.9 136.2 13		12/1/2021				141.5	138.5	2.1	137.8	130.9	128.0	2.2	127.2									688.0	20765.0
Pumpoff #35 2/16/2022 564.2 551.9 -2.2 144.1 144.0 0.1 142.7 140.2 136.2 2.9 140.2 142.3 142.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 145.8 1	Pumpoff #34	1/6/2022	686.6	673.8	-1.9	149.6	140.5	6.1	138.9	144.0	148.3	-3.0	146.1	152.3	148.5		147.2						
Residual Tank		1/7/2022				86.4	87.0	-0.7	86.3													518.5	21283.5
Residual Tank	Pumpoff #35	2/16/2022	564.2	551.9	-2.2	144.1	144.0	0.1	142.7	140.2	136.2	2.9	140.2										
Pumpoff #36 3/23/2022 690.7 678.5 -1.8 152.5 148.3 2.8 147.4 152.7 147.9 3.1 145.8 144.6	·					125.5	120.0	4.4	118.3	121.8	114.6	5.9	112.3									513.5	
Pumpoff #36 3/23/2022 690.7 678.5 -1.8 152.5 148.3 2.8 147.4 152.7 147.9 3.1 145.8 144.6	Residual Tank					94.0	88.0	6.4	70.1													70.1	21867.1
Name		3/23/2027	690.7	678.5	-1.8	152.5		2.8		152.7	147.9	3.1	145.8										
Pumpoff #37 5/4/2022 882.7 868.2 -1.7 146.0 144.0 1.4 141.4 151.5 146.6 3.2 143.9 156.2 153.0 2.0 150.8 768.5 23214.5																						578.9	22446.0
Pumpoff #38 6/2/022 685.4 674.0 -1.7 145.2 142.0 2.3 141.3 127.3 125.0 1.8 123.7 70.4 68.3 3.0 67.4 768.5 23214.5	Pumpoff #37		882.7	868.2	-1 7									156.2	153 N	2 0	150 g					2.3.3	
Pumpoff #88 6/1/2022 685.4 674.0 -1.7 145.2 142.0 2.2 139.9 150.3 146.7 2.4 144.6	. dilipoli #3/		002.7	000.2	1.,																	762 5	232145
Pumpoff #39 6/2/2022 545.5 539.3 -1.3 145.7 136.9 6.0 134.1 143.6 140.7 2.0 137.7 137.9 137.0 1.5 142.0 139.5 1.8 136.7 49.8 49.0 1.6 46.6 4.5 4.6 4.5	Dumnoff #20		60F 4	674.0	17									70.4	00.3	5.0	07.4			\vdash	\vdash	,00.5	23214.3
Pumpoff #439 6/29/2022 545.5 539.3 -1.3 145.7 136.9 6.0 134.1 143.6 49.8 49.0 1.6 46.6 46.6 455.1 24212.6 455.1 24212.6 459.8 49.0 1.6 46.6 4.6	rullipoli #38		065.4	0/4.0	-1./																	E42.0	22757 5
Pumpoff #40 7/28/2022 707.2 702.1 -0.7 139.1 137.0 1.5 134.4 144.9 140.7 2.9 137.6 135.9 133.2 2.0 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130.2 130	D ((u = -			500.0	4.0											-						543.U	23/5/.5
Pumpoff #40 7/28/2022 707.2 702.1 -0.7 139.1 137.0 1.5 134.4 144.9 140.7 2.9 137.6 135.9 133.2 2.0 130.2	Pumpott #39		545.5	539.3	-1.3											1	l						2424
Pumpoff #41 1/22/2022 565.5 581.8 0.8 141.8 138.1 2.6 135.2 86.8 83.3 4.0 81.8																<u> </u>				H		455.1	24212.6
Pumpoff #41 8/26/2022 461.4 459.8 -0.3 149.6 146.2 2.3 143.8 149.9 146.6 2.2 144.0 163.3 102.1 4.0 99.8	Pumpoff #40		707.2	702.1	-0.7									135.9	133.2	2.0	130.2						
Residual Tank 3/21/2022 577.3 581.8 0.8 143.8 139.5 145.6 143.4 1.5 145.6 143.4 1.5 141.5 141.6 143.4 1.5 141.5 141.6 143.4 1.5 141.5 141.6 143.4 1.5 141.5 141.6 143.4 1.5 141.5 141.6 143.4 1.5 141.6 143.4 1.5 141.5 141.6 143.4 1.5 141.5 141.6 143.4 1.5 141.5 141.6 143.4 1.5 141.5 141.6 143.4 1.5 141.5 141.6 143.4 1.5 141.5 141.5 141.6 143.4 1.5 141.5 143.4 1.5 141.5 143.4 1.5 141.5 143.4 1.5 143.								_		86.8	83.3	4.0	81.8									619.2	24831.8
Pumpoff #42 9/20/2022 565.9 563.9 -0.4 151.5 147.6 2.6 144.6 151.9 149.9 1.3 146.9 153.7 153.0 0.5 150.0 75.0 75.0 0.0 73.4 514.9 25734.3 25871.3	Pumpoff #41		461.4	459.8	-0.3		146.2	2.3		1	l	1	l			1	l						\neg
Pumpoff #42 9/20/2022 565.9 563.9 -0.4 151.5 147.6 2.6 144.6 151.9 149.9 1.3 146.9 153.7 153.0 0.5 150.0 75.0 0.0 73.4 514.9 25734.3 25871.3	L	8/29/2022	<u> </u>			149.9	146.6	2.2	144.0	106.3	102.1	4.0	99.8	<u> </u>		L	L			L.	L_	387.6	25219.4
Section Sect	Pumpoff #42	9/20/2022	565.9	563.9	-0.4	151.5	147.6	2.6	144.6														
Residual Tank 9/21/2022										153.7	153.0	0.5	150.0	75.0	75.0	0.0	73.4					514.9	25734.3
Pumpoff #43 10/26/2022 577.3 581.8 0.8 143.8 139.5 146.6 143.4 1.5 143.4 1.5 141.5	Residual Tank		t					5.0						t		T						137.0	
Pumpoff #44 11/22/2022 58.2 58.2 -0.5 138.3 127.6 7.7 126.5 132.4 137.7 -4.0 136.5 136.4 136.5 141.0 57.7 136.5 141.0 57.7 136.5 141.0 57.7 136.5 141.0 57.7 136.5 141.0 57.7 138.0 141.0 57.7 138.0 141.0 57.7 138.0 141.0 57.7 138.0 141.0 57.7 138.0 141.0 57.7 138.0 141.0 1			577 3	581.8	0.8									i		t							
Pumpoff #44 11/22/2022 583.2 580.2 -0.5 138.3 127.6 7.7 126.5 132.4 137.7 -4.0 136.5	. unipon #43		3,,.3	301.0	0.0																	498 6	26360 0
11/23/2022 148.0 140.4 5.1 138.7 133.2 129.6 2.7 128.5	Dumnoff #44		E02.2	E00.2	0.5											-						+20.0	20303.3
Pumpoff #45 12/20/2022 625.5 621.7 -0.6 144.9 140.0 3.4 137.0 150.3 140.0 6.9 137.0 149.5 141.0 5.7 138.0 549.0 27449.1	rumporr #44		583.2	580.2	-0.5		-			-	-											F20.2	20000.4
12/21/2022 145.7 140.0 3.9 137.0			co	co: -													40			\vdash	\vdash	530.2	26900.1
Residual Tank 12/21/2022 62.5 62.7 -0.3 61.4 61.4 27510.5	Pumpoff #45		625.5	621.7	-0.6					150.3	140.0	6.9	137.0	149.5	141.0	5.7	138.0						
Pumpoff #46 1/26/2023 719.7 709.7 -1.4 137.9 137.9 0.0 137.0 128.8 3.1 127.8 124.3 120.1 3.4 119.2			 	ļ	L						 	 	ļ	 		 	ļ			ļ	├		
																						61.4	27510.5
1/27/2023 135.2 131.9 2.4 131.1 102.5 109.0 -6.3 103.3 618.4 28128.9	Pumpoff #46		719.7	709.7	-1.4	137.9	137.9	0.0	137.0	132.9				124.3	120.1	3.4	119.2						
		1/27/2023	<u> </u>			135.2	131.9	2.4	131.1	102.5	109.0	-6.3	103.3	<u> </u>		L	L			L.	L_	618.4	28128.9

Total Fluid Reconciliation

				Truck 1	Truck 2	Truck 3	Truck 4			
		Total Fluid	Water Decanted	Total Fluids	Total Fluids	Total Fluids	Total Fluids	Residual	Total of Fluid	
		Frac Tank Strap	From Frac Tank	to Acadiana NRC	to Acadiana NRC	to Acadiana	to Acadiana NRC	left in	From Trucks,	
		at Port Fourchon by NRC	Using Strap Measurement	Frac Strap	Frac Strap	NRC Frac Strap	Frac Strap	Frac Tanks	Residual & Decant	%
	Date	(bbl)	(bbl)	(bbl)	(bbl)	(bbl)	(bbl)	(bbl)	(bbl)	Diff
Pump Off #1	4/26/2019 5/6/2019	215.7	0.0	113.7	97.0	0.0	0.0	5.2	215.9	0.1
Pump Off #2	5/3/2019	223.5	15.6							
Pump Off #3	5/8/2019 5/13/2019	331.2	0.0	101.3	82.8	0.0	0.0	17.6	217.3	-2.8
	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 6/21/2019			137.7 48.5	140.7 0.0	140.6 0.0	144.1 0.0	0.6	563.1 49.1	
	PO4: Total			46.5	0.0	0.0	0.0	0.0	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
Pump Off #6	PO5: Total 8/26/2019	874.6	56.8	141.7	140.3	141.5			1188.0 480.3	
Pullip Oil #6	8/27/2019	6/4.6	30.6 *	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	
2 200 112	P07: Total			1				*	864.9	-1.8
Pump Off #8	10/21/2019 10/22/2019	787.4	27.2	143.9	154.3	144.0			27.2 442.2	
	10/23/2019			137.7	130.0	144.0			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	293.3 756.7	-0.1
Pump Off #10	PO9: Total 12/17/2019	942.8	33.4	142.0	71.4	146.4			393.2	-0.1
Tump on #10	12/18/2019	342.0	33.4	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	
5 - 11 - 17 - 1	1/10/2020	207.0		79.4	92.6	 	 	424.7	172.0	
Residual Tank	1/8/2020 PO11: Total	307.0	81.5	141.9				121.7	345.1 1015.5	1.8
Pumpoff #12	2/11/2020	722.5	49.1						49.1	
	2/12/2020		2.7	120.8	102.1	99.0			324.6	
	2/13/2020 PO12: Total		3.9	149.5	114.2			87.5 *	355.1 728.8	0.9
Residual tank	2/17/2020	265.8	93.6	108.2	 				201.8	
	2/18/2020		23.5					121.7	145.2	
Pumpoff #13	Resid Total	570.2	39.6						347 39.6	-1.8
Pullipuli #15	3/11/2020 3/12/2020	570.2	2.8	114.5	138.3				255.6	
	3/13/2020			93.6	120.0			63.7	277.3	
D	PO13: Total	020.0	55.4						572.5	0.4
Pumpoff #14	4/15/2020 4/16/2020	928.8	55.1	147.2	145.2	148			55.1 440.4	
	4/17/2020			144.9	144.1	87.4		65.4	441.8	
	PO14:Total					 	 		937.3	0.9
Residual tank	4/13/2020 4/14/2020	244.1	67.6	149.9				26.6	67.6 176.5	
	4/ 14/ 2020			143.3				20.0	244.1	0.0
Pumpoff #15	5/6/2020	783.1	18.3						18.3	
	5/7/2020 5/8/2020		1.2	150.3 147.2	148.0 131.7	145.2		40.0	444.7 318.9	
	PO15: Total			147.2	131.7			40.0	781.9	-0.2
Pumpoff #16	5/27/2020	583.3	25.3						25.3	
	5/28/2020			142.1	125.4	445.0		27.0	142.1	
	5/29/2020 PO16: Total			138.0	135.1	115.0		27.8	415.9 583.3	0.0
Residual tank	5/27/2020		67.2	<u> </u>				153.6		
Pumpoff #17	7/8/2020	956.3	23.6	4:0:	440.0	440.0		-	23.6	
	7/9/2020 7/10/2020		2.4	149.1 150.7	148.8 137.1	149.2 119.9		63.3	449.5 471	
	PO17: Total			130.7	157.1	113.3		55.5	944.1	-1.3
Pumpoff #18	7/22/2020	642.6	14.3							
	7/27/2020		13.6	129.9 66.0	140.6	138.2	139.8	0.0	642.4	0.0
Residual Tank	7/28/2020 7/22/2020	299.6	67.2	00.0	 	 	 		642.4	0.0
	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	125.0	124.0	76.3	005.5	
Residual Tank	9/2/2020 8/31/2020	292.6	102.9	131.2	135.9	135.9	134.8	76.2 189.7	885.5 189.7	-0.1
nesiduai lalik	0/ 21/ 2020	232.0	104.3	1	1	l	1	105.7	105.7	1

Total Fluid Reconciliation Contd.

				Truck 1	Truck 2	Truck 3	Truck 4]		
		Total Fluid	Water Decanted	Total Fluids	Total Fluids	Total Fluids	Total Fluids	Residual	Total of Fluid	
		Frac Tank Strap	From Frac Tank	to Acadiana	to Acadiana	to Acadiana	to Acadiana	left in	From Trucks,	
		at Port Fourchon	Using Strap	NRC	NRC	NRC	NRC	Frac	Residual &	%
	Date	by NRC (bbl)	Measurement (bbl)	Frac Strap (bbl)	Frac Strap (bbl)	Frac Strap (bbl)	Frac Strap (bbl)	Tanks (bbl)	Decant (bbl)	% Diff
Pumpoff #20	9/29/2020 9/30/2020	450 9	52.9	144.0 85.7	143.5	(551)	(551)	24.8	450 9	0.0
Residual Tank	9/30/2020	273 2	116.1		·					
Pumpoff #21	10/1/2020 10/15/2020	610.1	2.7 14.0	136.5 139.0	145.3			17.9	273 2	0.0
rumpon nzi	10/16/2020	010.1		147.2	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	673 2	68.7	146.5	143.4	146.4				
D ((1122	11/17/2020	70.1.0	2.7	133.2	115.0	445.0		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
	1/27/2021	663 9	23.3							
Pumpoff #24	1/28/2021 2/19/2021		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	150.7	1133	 	32.8	164 8	0.0
Pumpoff # 25	3/3/2021	738.1	26.1							
	3/8/2021		5.7	144.6	146.5	146 0				
Pumpoff # 26-27	3/9/2021 4/1/2021	1016.9	73.8	144.1	77 3			47.8	738.1	0.0
1 umpon # 20-27	4/20/2021	1010.5	60.2							
	4/21/2021			143.7	142.6					
	4/22/2021 4/23/2021		6.4	123.5 111.4	146.4	144.1		62.2	1014.3	-0 3
Residual Tank	4/21/2021	216 9	9.4	132.5	+	 	 	23.8		-03
	4/22/2021		18.2							
	4/23/2021		32.6						216 5	-0 2
Pumpoff #28	5/26/2021	706.1	72.5	144.5	141.4	142.2				
	5/27/2021 5/28/2021			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	750 2	20.4							
	8/5/2021			115.3	112.6	106 8				
D # 1124	8/6/2021	500.4	46.7	118.5	118.4	124 3		33.9	750 2	0.0
Pumpoff #31	9/22/2021 9/23/2021	598.4	16.7	145.6	142.9					
	9/24/2021		28.2	126.3	138.7				598.4	0.0
Pumpoff #32	11/3/2021	937.1	31.7	147.8	148.7					
	11/4/2021			152.5	154.6					
	11/5/2021 11/9/2021			150.2 118.8				32.0	936 3	-0.1
Pumpoff #33	11/29/2021	786 2	56.0	110.0				52.0	350 3	0.1
·	11/30/2021			142.9	144.0	149.6				
Dunan off #2.6	12/1/2021	672.0	107.4	141.5	130.9			21.3	786 2	0.0
Pumpoff #34	1/5/2022 1/6/2022	673 8	107.1	149.6	144.0	152 3				
	1/7/2022			86.4	144.0	132 3		34.2	673.6	-0.6
Pumpoff #35	2/8/2022	551 9	6.2					8 3	555.4	
	2/15/2022		9.3	144.1	140.3]		
	2/16/2022 2/17/2022			144.1 125.5	140.2 121.8]		0.6
Residual Tank	2/8/2022	207.1	104.8		+	†	 	 		0.0
	2/17/2022		1.5	94.0				6 8	207.1	0.0
Pumpoff #36	2/21/2022	678 5	54.9							
	3/18/2022 3/23/2022		54.9 3.1	152.5	152.7			31.6	700.4	
	3/24/2022	<u> </u>		148	157.6	<u>L</u>	<u></u>			3.1
Residual Tank	3/18/2022	27.7	27.7					0	27.7	0.0
Pumpoff #37	4/6/2022	868 2	22.0]		
	4/22/2022 5/4/2022		22.9 2.8	146	151.5	156 2				
	5/6/2022		2.0	145.7	127.3	70.4		46.2	869 0	0.1
Pumpoff #38	5/15/2022	674								
	5/31/2022		69.2		450 -]		
	6/1/2022 6/2/2022		3.9	145.2 140.2	150.3 136.6			28.6	674 0	0.0
Pumpoff #39	6/28/2022	538 3	39.3	140.2	130.0	<u> </u>		20.0	0740	0.0
	6/29/2022			145.7	143.6					
	6/30/2022			142	49 8			22.0	542.4	0.2

Total Fluid Reconciliation Contd.

				Truck 1	Truck 2	Truck 3	Truck 4			
		Total Fluid	Water Decanted	Total Fluids	Total Fluids	Total Fluids	Total Fluids	Residual	Total of Fluid	
		Frac Tank Strap	From Frac Tank	to Acadiana	to Acadiana	to Acadiana	to Acadiana	left in	From Trucks,	
		at Port Fourchon	Using Strap	NRC	NRC	NRC	NRC	Frac	Residual &	
		by NRC	Measurement	Frac Strap	Frac Strap	Frac Strap	Frac Strap	Tanks	Decant	%
	Date	(bbl)	(bbl)	(bbl)	(bbl)	(bbl)	(bbl)	(bbl)	(bbl)	Diff
Pumpoff #40	7/27/2022	702.1	15.4							
	7/28/2022			139.1	144.9	135.9				
	7/29/2022			141.8	86.8			38.2	702.1	0.0
Pumpoff #41	8/25/2022	459.8	36.5							
	8/26/2022			149.6						
	8/29/2022			149.9	106.3			17.5	459.8	0.0
Pumpoff #42	9/5/2022	563.9	16.6							
	9/20/2022			151.5						
	9/21/2022			151.9	153.7	75.0		15.5	564.2	0.1
Residual Tank	9/21/2022	203.3	16.0	74.2	86.5			26.6	203.3	0.0
Pumpoff #43	10/4/2022	581.8	19.5							
	10/26/2022			143.8	145.6					
	10/27/2022			146.6	83.9			42.6	582.0	0.0
Pumpoff #44	11/5/2022	580.2	15.2							
	11/22/2022			138.3	132.4					
	11/23/2022			148.0	133.2			18.2	585.3	0.9
Pumpoff #45	12/3/2022	621.7	18.5							
	12/20/2022			144.9	150.3	149.5				
	12/21/2022			145.7				12.8	621.7	0.0
Residual Tank	12/21/2022	209.5	135.2	62.5				11.8	209.5	0.0
Pumpoff #46	1/7/2023	709.7	37.6							
	1/26/2023			137.9	132.9	124.3				
	1/27/2023			135.2	102.5			39.3	709.7	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)	of	on Rate Oil n/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		3/2/2020	02:00	31.3	456.4	14.6	612.4	gallons/day
Collection Duration for 14th Trip	3/2/2020		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		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	024.7	-	005.0	- ganons, aay
Collection Duration for 27th Trip	3/15/2021	22:25	4/8/2021	12:35	23.6				
Collection Duration for 26-27th	2/21/2021	11:30	4/8/2021	12:35	46.0	792.8	17.2	722.4	gallons/day
Trip								444	
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 Duraiton 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			(2)	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	1/13/2022	23:30	30.4	513.5	16.9	709.8	gallons/day
Collection Duration for 36th Trip	1/13/2022	23:30	2/18/2022	17:25	35.8	578.9	16.2	680.4	gallons/day
Collection Duration for 37th Trip	2/18/2022		4/4/2022	17:56	45.0	768.5	17.1	718.2	gallons/day
Collection Duration for 38th Trip	4/4/2022	17:56	5/11/2022	16:43	36.9	547.6	14.8	621.6	gallons/day
Collection Duration for 39th Trip	5/11/2022	16:43	6/7/2022	15:50	26.9	455.1	16.9	709.8	gallons/day
Collection Duration for 40th Trip	6/7/2022	15:50	7/14/2022	05:15	36.6	619.2	16.9	709.8	gallons/day
Collection Duration for 41st Trip	7/14/2022		8/5/2022	01:45	21.9	387.6	17.7	743.4	gallons/day
Collection Duration for 42nd Trip	8/5/2022	01:45	9/2/2022	14:35	28.5	514.9	18.1	760.2	gallons/day
Collection Duration for 43rd Trip	9/2/2022		10/1/2022	18:16	29.2	498.6	17.1	718.2	gallons/day
Collection Duration for 44th Trip	10/1/2022		11/2/2022	10:40	31.7	530.2	16.7	701.4	gallons/day
Collection Duration for 45th Trip	11/2/2022	10:40	12/2/2022	02:09	29.6	549.0	18.5	777.0	gallons/day
Collection Duration for 46th Trip	12/2/2022	02:09	1/5/2023	03:27	34.1	618.4	18.1	760.2	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)	of	ion Rate Oil n/day)
Average collection to date less residual tank	4/12/2019	00:00	1/5/2023	03:27	1364.1	26,905.5	19.7	827.4	gallons/day
Total Collection to date	4/12/2019	00:00	1/5/2023	03:27	1364.1	28,128.9	20.6	865.2	gallons/day

Totals from Pumpoff 1-46

	Bbl	Gal
Net Oil collected	28,128.9	1,181,413.8
Total Oily fluids collected:	31,636.8	1,328,745.6

Appendix 1

MC20 Product Removal and Transportation with Completed Documentation





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

Date: _	1-1	1-25		
Time Ti	ransfer	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	0.0	Port 339.1	245.2	245.2	
Tank 2	0.0	STBD 380.6	227.8	727.8	
Tank 3	0.0		236.7	236.7	
Total	0.0	719.7	709.7	709.7	-1.4

Note: If the %	6 Difference is gr	eater than 3% please atten	ppt to explain the difference:	
Sign-off by:	USCG Rep	Signed Name:	Printed Name	Bate: 1-7-23
		Signed Name:	rinted Name	hate: 1-7-23
	Ligends A. Siemens Rep	Signed Name:	Printed Name	Date: 1-7-23
	NRC Rep	Signed Name:	Printed Name	Date: 1/7/23

Page 7 of 15





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

Date: 1-25-22	T:	
	Time:	_
Time Measurements begin after V	essel Offloading in hours:	

	Column A	Column B	Column C	Column D
	Tank Strap from Offloading (Initially use Column C from Attach A and on subsequent decants use Column D from this form) bbl	Today's Interim Tank Strap Measurement bbl	Tank Strap Measurement after Decanting bbl	Oily Water Mixture Volume Column (B-C) bbl
Tank 1	245.2	245.2	227.4	17.8
Tank 2	227.8	227.8	220.8	7.0
Tank 3	236.7	236.7	223.9	12.8
Total	709.7	709.7	672.1	37.6

Sign-off by: USCG Rep (optional) Signed Name:	. , Printed Name	Date: 1-25.23
Couvillion Rep	Signed Name:	Printed Name	Date: 1.25.23
NRC Rep	Signed Name:	. Printed Name	Date: 1-25-23





Attachment D: Decanted Water from Frac Tanks to Disposal Facility

Date: 1-25-22

	Column A	Column B	Column C
	Beginning Tank Strap Measurement bbl	Decant and then Tank Strap Measurement bbl	Volume of oily water transferred to Disposal Facility Column B - Colum using Strap Measurement bbl
Tank I	245.2	227.4	17.8
Tank 2	227.8	220.8	7.0
Tank 3	236.7	223.9	12.8

Residual Volume left in Tanks

	Strap Measurement bbl
Tank I	227.4
Tank 2	220.8
Tank 3	223.9

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

Couvillion Rep Signed Name:

NRC Rep Signed Name:

Printed Name

Printed Name

Date: 1.25.23

Printed Name

Date: 1.25.23

Page 12 of 15





Attachment C: WASTE MANAGEMENT TRACKING FORM

Oily Water Transportation and Net Crude Oil

Start Shipments Date: 1-26-23

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)
	ACC	2001-03	1.26.23	AOC	137.9		
Z	ACC	2001-02	1-26-23	AOC	132.9		
3	AOC AOC	2001-01	1.26.23	AOC	124.3		
-							
		Total Ve	olumes Shi	pped by Gallons/bbls			

Sign of	Thurston Don (Onti-	0.61 121	1	1 Date: 1/26/23
Sign-or	f by:USCG Rep (Optio	nai) Signed Name	Printed Name	Date: 1/26/23
	Couvillion Rep	Signed Name:	Printed Name	Date: 1.26.23
	NRC Rep	Signed Name:	Printed Name	Date_ 1-26-23





Attachment C: WASTE MANAGEMENT TRACKING FORM Residual Frac Tank Bottoms

Date: 1-26-23

Residual Volume left in Tanks

	Strap Measurement after Trucks Loaded in each tank bbls
Tank 1	14.9
Tank 2	38.2
Tank 3	223.9

Sign-off by:USCG Rep (Optio	nal) Signed Name	Deinsterd Marrie	Date: 1/26/23
Couvillion Rep	Signed Name:	. Printed Name	Date: (-26-2)
NRC Rep	Signed Name:	Printed Name	Date_1-26-23

Page 10 of 15





Attachment C: WASTE MANAGEMENT TRACKING FORM

Oily Water Transportation and Net Crude Oil

Start Shipments Date: 1-27-23

Manifest Number	Transporter	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)
4	HOC	2001-01	1-27-23	ACC	135.2		
5	ACC	2001-02	1.27.23	ACC	107.5		
			1				
-							
		Total V	olumes Shi	pped by Gallons/bbls			

Sign-off by:US	CG Rep (Option	nal) Signed Name:	Printed Name	_Date: 1 · 27 · 23
Cou	willion Rep	Signed Name:	Printed Name	_Date: 1.27.23
NRO	C Rep	Signed Name:	Printed Name	Date 1/27/23





Attachment C: WASTE MANAGEMENT TRACKING FORM <u>Transportation Tracking of Petroleum Contaminated Solids</u>

Manifest Number	Transporter	Shipment Date	Receiving Facility	Manifested Volume (Yard)	Scaled Weight (Lb)	Comments (Box Numbers, etc.)
	1	5	olids			

		And the second		1000
Sign-o	ff by:USCG Rep(Option	nal) Signed Name:	Printed Name	_Date: 1-27-23
	Couvillion Rep	Signed Name:	Printed Name	Date: 1.27-77
	NRC Rep	Signed Name:	Printed Name	Date 1-27223
		1		

Page 11 of 15





Attachment C: WASTE MANAGEMENT TRACKING FORM Residual Frac Tank Bottoms

	1-77-73
Date:	1-61-67
Date	

Residual Volume left in Tanks

	Strap Measurement after Trucks Loaded in each tank bbls					
Tank 1	14.9					
Tank 2	15.7					
Tank 3	8.7					

Sign-off by:USCG Rep (Optio	nal) Signed Name:	. Printed Name	Date: 1-27-23
Couvillion Rep	Signed Name:	, Printed Name	
NRC Rep	Signed Name:	. Printed Name	Date 1-27-23

response telephone number under "Emergency Response Phone Original—Not Negotiable To: Consignee Street Destination Route: Hw 90 Vahicle No. Shipping Units Value of Packaging, Description of Articles Special Marks and Exceptions	Shipper Courlin Dode Street: 554 Dudley B 2001-03 SCAC En	er Noer Noe
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"If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading C.O.D. TO: state whether weight is "carrier's or shipper's weight." ADDRESS 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. The by the shipper to be not exceeding.	COLLECTO \$	TOTAL CHARGES:
S Per REDEIVED, subject to the classifications and lawfully filed tariffs in effect on an ordinary of contents of packages unknown), marked, consigned, and destined restriction in possession of the property under the contract genes to carry the the contract genes to carry the tributally agreed as to each confer or all or any of, said property that every service to be performed hereunder shall be subject to all the terms terms and conditions of the said bill of lading, set forth in the classification or lark with "RCI" if appropriate to designed hard his essigns. Lark with "RCI" if appropriate to designed Hazardous Meterials as defined in the U.S. Dependent of the performent of the performance of the perf	[Signature of Consignor] e of the issue of this Bill of Lading, the property described above in apparatual place of delivery as described above which said corrier (this word cerrier being understood throug use) place of delivery as delivery asid destination, if on its route, otherwise to delivory as of the Uniform Demostic Streight Bill of Lading set forth (1) in the corrier shipment. Shipper carrier shipment. Shipper which governs the transportation of this shipment, and the said terms as	rent good oro about this cor- rer to another Lime interest Uniform Freig hereby cartific ha conditions
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man abeliev, and are in proper condition for transportation according applicable regulations of the U.S. Department of Transportation.	d. Carrier ecknowledges receipt of packages and any required placards. Contion was made available and/or carrier has the U.S. Department of Trans or equivalent documentation in the vehicle. Property described above is n	rier certifies e sportation em eceived in god

ACADIANA VIL & ENVIRONMENTAL CORPORATION TRANSPORT MANIFEST 1206 Lemaire St. • New Iberia, LA 70560 Lease Run Ticket 337-560-5573 24728 EMERGENCY RESPONSE CONTACT: ES&H 985-851-5055 Coulding Lease No. Operator CG Lease Name Field BS&W LEVEL OIL LEVEL TANK INCHES INCHES TEMP 1st 2nd TANK NO SIZE EST GALLONS °F SERIAL NUMBERS OBSERVED TEMPERATURE OF OIL IN TANK PERCENT BS & W OFFICE USE ONLY LOG NUMBER GRAVITY CORR. TO 80 °F TIME 1st TIME DEPARTED 4:00 2nd Central Crade GROSS BARREIS DELIVERY Gilsen FACTOR TEMP. FACTOR BS & X FACTOR NET BBLS. PER RUN TIC GROSS DRIVER OPERATOR'S WITNESS C LOS

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	Temp			45
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"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 TRANSPORTATION."

Shipper: Mike LeBlanc Jr. Date:

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ACADIANA OIL & ENVIRONMENTAL CORPORATION

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

TRANSPORT MANIFEST

Lease Run Ticket

25137

EMERGENCY RESPONSE CONTACT:

ES&	H		
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Operator CDUL

C G Lease No.

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

Shipper: Mike LeBlanc Jr.

NET

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	ion from the requirement is provided in th	e Regulation for a par	ticular moterial	and subsidiary classic	5	0		14/0
SHIPPER								
C Ti	and labeled, and are in proper conditi	on for traesportable	on according to the	tion was made avail	leble and/burca	rier has t	ne U.S. Department o	of Transportation e
applicable	and labeled, and are in proper condit a regulations of the U.S. Department of	f Transportation.		or equivalent docum	nentation in the	vehicle. Pr	roperty described abo	ye is received in g

Lease Run Ticket 1206 Lemaire St. . New Iberia, LA 70560 337-560-5573 EMERGENCY RESPONSE CONTACT: ES&H 985-851-5055 Operator (Lease No. Lease Name Field OIL LEVEL **BS&W LEVEL** TANK INCHES TEMP 1st 2nd TANK NO SIZE EST. GROSS GALLONS °F SERIAL NUMBERS OBSERVED GRAVITY OLD PERCENT TEMPERATURE OF OIL BS & W IN TANK OFFICE USE ONLY LOG NUMBER GRAVITY CORR. TO 60 °F TIME AM PM 1st TIME DEPARTED 2nd GROSS BARRELS DELIVERY STATION X TEMP. FACTOR X FACTOR NET BBLS. PER RUN TIC DRIVER OPERATOR'S WITNESS I.D. PROPER HAZARD PG TOTAL NUMBER SHIPPING NAME CLASS BBLS UN PETROLEUM 3 111 1267 CRUDE OIL

ACADIANA OIL & ENVIRONMENTAL

CORPORATION

TRANSPORT MANIFEST

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

Shipper: Mike LeBlanc Jr. Date:

TO: Consignee	Andrew	01/1	(Name	of Carrier) FROM:		-	//www.f	er No	7
Street	1875	Piver Pol	7	Shipper	-	Sull	1 los	IZ-	
Destination	Remiel	Zip Code	708	42 Origin		2 1 4	71	p Code	7
Route:	Huy "	70 Vehicle I	No. 208	1-01	SCAC		E	mergency hone Nur	
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carrier by water, the	law requires that the bill of I t is "carrier's or shipper's we	ading C.O.D. TO:		Amt. \$		C.D.O. FEE: PREPAID COLLECT	\$	CHAR	
Note-Where the ra	te is dependent on value, si writing the agreed or declare	hippers are required to	Subject to Section	n 7 of the condition consignor, the cons	s, if this shi	ipment is to be	delivered to the o		
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\$	per				(Signatur	re of Consignari			
RECEIVED, subj	ect to the classifications and	lawfully filed tariffs in effe	ect on the data of estined as indicate	the issue of this Bi	of Lading,	the property d	escribed above in	apparent (good ord
e terms and condition	ect to the classifications and nots of packages unknown), in tession of the property under ually agreed as to each carrie to be performed hereunder is a rail or a rail-wester ship or broad and his assign or broad a	the contract agrees to er of all or any of, said p shall be subject to all the oment or (2) in the applia set forth in the classific	carry to its usual property over all or ne terms and cond cable motor carrie etion or tariff whice	place of delivery at any portion of said itions of the Uniform classification or ta b governs the trans	said destine route to d Domestic riff, if this portation p	stron, if on its restination and a Straight Bill of its a motor car of this shipment.	outs, otherwise to set to each perty: Lading set forth rier shipment. Sh	d deliver to at any time (1) in Unifo tipper here	another interestorm Freight Certifications
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i optional method for id- ode of Federal Regulation escribed in section 172	s governing the transportation of entifying hexardous materials on E Also when shipping hexardous 1.204(a) of the Federa Regulation of from the requirement is provided	Bills of Lading per 172,201() materials, the shipper's cer is, as indicated on the Bill of	a)(1) (iii) of Title 49 tification statement	pany interpretation p 172, Subpart C-Ship tions 172,201 (Haz Proper shipping rem	f requirement ping Papers andous Mate	ts as described in Such description o rial Table) and Ser	49 Code of Federal crisists of the follow tions 172,202 and	Regulations ing per Sec- 1 172 203:	or d may Unite
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1 moltafile	egulations of the U.S. Departm	ent of Transportation,	raced multiple the	or equivalent docu	mentation in	or correct has the the vehicle. Pro	Department perty described of	of Transpo bove is rece	ortation e eived in g

ACADIANA UIL & ENVIRUNMENTAL TRANSPORT MANIFEST CORPORATION Lease Run Ticket 1206 Lemaire St. . New Iberia, LA 70560 337-560-5573 24623 EMERGENCY RESPONSE CONTACT: Date 1-27 ES&H 985-851-5055 Lease No. Lease Name Field BS&W LEVEL OIL LEVEL TANK INCHES TEMP INCHES ist 2nd SIZE TANK NO EST GROSS GALLONS SERIAL NUMBERS OBSERVED GRAVITY OLD TEMPERATURE PERCENT OF OIL BS & W IN TANK OFFICE USE ONLY LOG NUMBER GRAVITY CORR GROSS BARRELS FACTOR TEMP. FACTOR X FACTOR NET BBLS. PER RUN TIC. .99310 DRIVER OPERATOR'S WITNESS CLOWE I.D. PROPER HAZARD PG TOTAL NUMBER SHIPPING NAME CLASS BBLS UN PETROLEUM 3 111 1267 CRUDE OIL

"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 APPLICABLE REGULATIONS OF THE APPLICABLE REGULATIONS OF THE APPLICABLE REGULATIONS.

Shipper: Mike LeBlanc Jr. Date:

Tonsignae Street Scheet Street School Street Str	NOTICE: Shippers of hazardous materials must enter 24-hor response telephone number under "Emergency Response Driginal—Not Negotiable	ur emergency hone Number	Date	27-23		Lading No.
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IPPER R T	Griped in section 179 204(a) of the Endown Destroy	ification statement Leding does apply	tions 172.201 [Hazardous A	ers. Such description cons Naterial Teble) and Section	ists of the following ps is 172,202 and 170	P Sier-
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ACADIANA OIL & ENVIRONMENTAL CORPORATION

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

TRANSPORT MANIFEST

Lease Run Ticket

25138

EMERGENCY RESPONSE CONTACT:

ES&H Date 985-851-5055 Operator Cost Allison Lease No. CG Lease Name

A T	OIL LEV	EL			BS&V	LEVEL	. TANK
AUGE TO	FEET	INCHES		F	FT.	INCHES	TEMP
1st							
2nd							
	TANK NO.		SIZE			-	
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I.D. NUMBER	PROPER SHIPPING NAME	HAZARD CLASS	PG	BBLS
UN 1267	PETROLEUM CRUDE OIL	3	111	103.28
	Temp			- 82
	Virus			1 01

OPERATOR'S WITNESS

DRIVER

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

Shipper: Mike LeBlanc Jr. Date:

Appendix II

NRC Waste Handling Documentation

PO #46

Fra Took dequive



SAFETY MANAGEMENT SYSTEM

SAFETY ILSTHI WAY 10 GOJ Revision: 08/2015

Job Hazard Analysis

TASK DESC	RIPTION: MC	20 Recove	red Crude Oil / Vessel t	to Shore	Transfer 0/	104/23
		SI	UMMARY OF POTENTIAL HAZA	RDS (Check	The second second	104 123
Heavy or av	wkward lifting/		Pinch Points or caught between	een Working and walking surfaces; slip, trip, fall		
New / Inex	perienced employe	es 🛛	Spill / containment			
Struck by o	r crush hazard		Noise levels (>85 dBA)			
Hazardous	liquids, vapors, wa	ste 🛛	Elevated surfaces / Fall / Ladd	ers		
			APPLICABLE REGULATION		LERTS	
☐ SMS 19.2 V	acuum Trucks				To	
			UM PERSONAL PROTECTIVE EC	DUIPMENT	(Check applicable)	
Level A Level B Level C Level D		es 🖂	High Visibility Vest Long Sleeves / Coveralls	□ Leath □ Dispo	er Steel Toe Boots sable boot covers rene Steel Toe Boots	PFD / Work vest
			JOB HAZARD AI			
O Jo	b Steps	0	Potential Hazards		Preventive Mea	asures / Special PPE
	b Meetings vior Based Safety	operati or their • Person hazard • Person	nel do not understand the ional plan, relevant hazards reles/responsibilities nel do not stop work when s are identified nel do not report injuries, es, near misses or incidents	• 1	to all involved personne will be encouraged to a any project details immediate supervisor will Authority and Responsil supervisor if they discov	ted to report any injuries, illnesses,
	urvey and ment Set-up	hazard: Equipm or dam Improp	nent not certified, not tested	correct unsafe conditions. Position equipment an away from travel paths. Identify "no-go" areas. • All equipment will be inspected for current certific		ons. Position equipment and hoses is. Identify "no-go" areas. spected for current certifications, e working condition prior to work
3. Vehic	e movements	struck ovehicle Vehicle movem unsecu	nel, equipment or hoses or crushed by moving s or equipment es not inspected prior to nents. Unsafe for travel. ured items create dropped or road hazards.	• (Non-essential personne path will be confirmed /ehicles will be inspecte after travel for potential /ehicles will be inspecte	sed for equipment movements. el will clear the travel path. Travel as clear prior to movements. ed by drivers prior to travel and al damage. ed to ensure that there are no ads are secured properly.
worki	ing Vessel and ng near water	caughtPerson during	nel struck by thrown lines or in "line of fire". nel pinched or crushed vessel movements. nel fall into the water. Man ard.	• \	When tossing the moorin to fall on the ground an catch mooring lines from When mooring the vesse other body parts from botts on the dock vever work alone. All per are required to wear a l	Ig lines to the shore allow the lines of pick them up. Do not attempt to the M/V. I, keep hands, fingers, arms, and all between the mooring line and the resonnel within 5' of the docks edge USCG approved PFD. Always discussedures prior to work. Have life ring
5. Conne	ecting hoses	while c Person other e during hoses	nel crushed or pinched connecting transfer hoses. nel suffer back strain or ergonomic related injuries connections or moving p/fall hazards while working	•	dentify, communicate ar including cam-lock conn parts or equipment Transfer hoses can be h hoses employees shall u including keeping your l as lifting with your knee	nd avoid all crush/pinch points: nections, vehicles and other moving eavy and when handling these use proper ergonomic practices back as straight as possible as well



SAFETY MANAGEMENT SYSTEM



Job Hazard Analysis

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



SAFETY MANAGEMENT SYSTEM



Job Hazard Analysis

Potential Hazards	Preventive Measures / Special PPE
	 detected. PPE will be upgraded according to the concentration of hazards detected. If personnel will work at heights above 6': fall protection will be wom and a rescue plan will be in place. fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.
 Inadequate hydration Extended work periods without rest resulting in heat stress 	 Personnel will be encouraged to hydrate frequently. Water to sports drink ratio will be 3:1 (1 sports drink to 3 waters consumed). 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, tallgate 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 coworkers).
Potential for ingestion of petroleum product or other contaminants. Fire hazards from unrestricted smoking Direct sun reduces recovery time for workers during breaks Inadequate water	 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. Only smoke in designated areas. Ensure that break areas have adequate shade and cooling potential for personnel 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.
Potential for secondary contamination by absorption, injection, or ingestion	 Follow decontamination plan for clothing removal and disposal when protective outerwear is required and becomes contaminated. Only use safety scissors (never knives) to cut Tyvek from personnel. Ensure that workers wash hands and face thoroughly.
First Aid OSHA recordable Illness/Injury Near Miss Equipment/Vehicle Damage	 NRC employees and subcontractors are required to immediately report all incidents to their supervisor. The immediate supervisor will immediately report the incident to the site safety professional, HSEQ Manager, and Project Manager. 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. The supervisor will complete a root cause analysis of all reported incidents and submit to the HSEQ manager within hours of an incident. Determination will be made regarding need for post-incidend drug and alcohol testing based on NRC policy. Contact HSEQ Manager for proper USCG reports, if needed
	Inadequate hydration Extended work periods without rest resulting in heat stress Potential for ingestion of petroleum product or other contaminants. Fire hazards from unrestricted smoking Direct sun reduces recovery time for workers during breaks Inadequate water Potential for secondary contamination by absorption, injection, or ingestion First Aid OSHA recordable Illness/Injury Near Miss

REVIEW

Development Team	Position/Title	Reviewed By	Position/Title	Date
Development ream	Position/ Title	neviewed by	rosition, ritle	8/14/2019
				8/14/2019
			D M	11-4-9

Employee Name	01	Signature	Date
			1-4-23
			1-4-23
		3	



SAFETY MANAGEMENT SYSTEM

SAFETY

Revision: 08/2015

Job Hazard Analysis

1-4-23

1 11 -0

DECLARATION OF INSPECTION PORT FORECHEN GTS/COUNTION DOCK DATE TRANSFER OPERATIONS STARTS NAME OF VESSEL Brandon Bord 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 $(\sqrt{})$, in the appropriate spaces, that the specific requirement has been met. FACILITY VESSEL A. The mooring lings are adequate for all anticipated conditions. C. Cargo hoses are adequately supported to prevent undue strain on the couplings..... D. The transfer system is properly lined up for discharging or receiving oil. (Additional checks shall E. Each flange connection on the cargo system not being used during the transfer operation is blanked or shut off. 4 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. H. Adequate spill containments have been provided for couplings..... M. Qualified and designated personnel are in charge and on duty at the terminal and vessel control stations. . N. One person at the vessel control station is present who fluently speaks the language of the terminal control station. 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..... P. Adequate lighting of the vessel and terminal work areas and manifold areas is provided..... Q. Persons in charge have held a conference to assure the mutual understanding of the following transfer operations: ...5. Particulars of the transferring and receiving systems6. Starting, stripping, topping and shutdown have been discussed and understood 8. Watch and shift arrangements9. Notification before leaving stations The following items are to be filled out by Vessel personnel only.

...1. Warning signs and read warning signals (35.35-30).
...2. Repair work authorization (35.35-30).
...3. Boiler and galley fires safety (35.35-30).

...4. Fires or open flames (35.35-30).

...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	
VESSEE	Time 9:30	Date 1-7-23	- TACABITA	Time 9:30 Date 1-7-23

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



DECLARATION OF INSPE	GIS DOCK	CARGO	KANSFER
Facility/Vehicle Number:	- 7 0 000 0	Start Time	End Time
Vessel Name: Brandon Bor Act	ion	06:00	
Vessel Official Number:		ity (Total) (bbls):	1250
Product Transferred: Craft	Est. Transfer	Volume (bbls):	
Note For Emergen	cy Notification Discharge amounts	(Gallons):	
Average most probable:			
Maximum mast nechables			

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).

	<u>TOPIC</u>	PIC Delivering	PIC Receiving
	Verify PIC designation/qualification 33 CFR 154.710, 154.730, 154.740(b)	CE.	30
	Person In Charge (PIC): In Immediate Vicinity and Available	CE	30
	Personnel: Capable/Unimpaired	CF	10
	Name, title and location of each person participating in the transfer operation	CF	13
	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	CF	<i>J</i> B
	Watch and shift arrangements discussed	CE	JB.
	Cargo is Authorized for transfer to or from tanks	SE	73
	Discuss if transfer will need to stopped to change tanks – supply or receiving facility		73
	Discuss transfer rates and max allowable to receiving facility	CK	73
	(Facility/Vessel) properly vented (monitoring vacuum and positive tanks pressure)	CF	73
	Communications & No Language Barrier	CK	73
§ H	oses and Connection - 33CFR 154.500		
	Nonmetallic hoses usable for oil or hazardous material service	CF	78
	Proper connections (must be one of the following):	C/E	33
	Fusion 100 hammer union connections	CF.	70
	Quick-disconnect coupling present on suction side of pump	CF	703
	Examine transfer hose markings or records.	CF	SB
	Name of product handled; example "OIL SERVICE," or "HAZMAT SERVICE"	CF	70
§ E	xamine Transfer Hose condition - 33CFR 156.170		
	No unrepaired kinks, bulges, soft spots, loose covers, other defects	CF	23
	No cuts, slashes, or gouges that penetrate the first layer of hose reinforcement	CE	73
	No external/internal deterioration	OF	20
§ E	mergency shutdown - 33CFR 156.170		
	Test emergency shutdown - 33CFR 154.550 - who controls the emergency shutdown	CK	79
	Communication system continuously operated.	CK	13
	Verify operating properly (Electric, pneumatic, or mechanical link to facility; electronic voice)	CF	JB
	Record test info in physical information.	CF	33
§ E	xamine closure device - 33CFR 154.520		
	Verify enough to blank off ends of each hose /loading arm not connected for transfer	15	53
§ In	spect Small Discharge Containment - 33CFR 154.530	U.	
0	Inspect handling area and verify capacity (not less than 5 gallons).	VF-	73
Co	uv-MC20-O&M-RPT-DOC-00070	36	of 69



	Pre-Transfer Conference and Agreement (Continued)	, , , , , , , , , , , , , , , , , , ,	
V	<u>TOPIC</u>	PIC Delivering	PIC Receiving
§ In	spect discharge containment equipment for oil & hazardous liquids - 33CFR 154.5		
0	Verify booming for oil or hazmat transfer (if required by COTP).	CF	JB
	Verify adequate amount of equipment and/or absorbent material for initial response	æ	38
	Inspect condition of response equipment stored on facility (if applicable).	CF-	33
	Verify availability of at least 200 feet of containment boom onsite within 1 hour.	ĈE.	53
	Verify means of deployment.	CF-	53
§ M	eans of Communication - 33 CFR 154.560		
	Verify continuous two-way voice communication between vessel and facility PICs.	CF	23
	Communications must meet the following requirements		
	Portable Radio:		
	IF Flammable or Combustible Liquids	CF	73
	Marked or documented as intrinsically safe.	CC	73
2 - 6	2. Certified as intrinsically safe by national testing labor certification organization.	cr	33
	Voice		
	1. Be audible.	CF	73
	Test communications. SAT ☐ UNSAT ☐	CF	70
§ In	spect lighting systems - 33 CFR 154.570		
	Verify portable lighting for operations between sunrise and sunset (if applicable).	OF	73
	At transfer operations work areas for facility and vessel	CF.	73
	At transfer connection points for facility and vessel	15	3
	Verify sufficient number or fire extinguishers.	CK	33
	Verify protective equipment is ready to operate.	CF	73 78
	Verify warning signs are adequate.	C+	73
	§ VESSEL ONLY - 155.730 Compliance with VESSEL TRANSFER PI	ROCEDURES §	
	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 op	eration	
	Appropriate tank level monitoring (visual, gauging, indicators, etc.)		
	Arrangements to monitor draft marks during transfer		19
	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 15		
	Procedures for tending the vessel's moorings during the transfer of oil or hazardous m		
	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	nsfer	
	I do certify that I have personally inspected this facility or vessel with refere	nce to the requiren	nents
	aforementioned and that I have indicated that the regulations have been con		
		1 20	100
			36':00
		DATE	TIME
		-7-23	0945
		DATE	TIME
	TRANSFER COMPLETED:		
	AMOUNT (GALLONS)	DATE	TIME



Ī	DECLARATION OF INSPECTION PRIOR T	O BULK CAI	RGO TR	ANSFER	
Date	e: 1-5-23 Location: MC-20				
	lity/Vehicle Number:	Ste	art Time	End Time	
			(2)	21:00	
_					
		ssel Capacity (To		1250	
Prod	luct Transferred: Crude Est.	. Transfer Volun	ne (bbls):	720	
	Note For Emergency Notification Dischar	ge amounts (Gallo	ons):		
Avera	age most probable:				
-	imum most probable:				
	st case discharge:				
		22 CED 486 480	1.46 CT		
7	The following list refers to requirements set forth in detail i	n 33 CFR 156.150	and 46 CF	R 35.35-30.	
A	The spaces on the left are to be reviewed by ALL PIC's invol-	ved in the transfer	and checked	d in agreement.	
1.0	The right hand columns are to be initialed by the appropriate				
	그는 하고 있다면 그 집에 어린다고 있다. 그 사람들이 하고 있는 것이 되었다면 하지 않아 나를 하게 되었다.			able with (IV/A).	
>	Items on the list are provided to indicate that the detailed requ	irements have bee	n met		
	manya		PIC	C PIC	
\square	<u>TOPIC</u>		Delive	ering Receiving	
	Verify PIC designation/qualification 33 CFR 154.710, 154.730, 154	4.740(b)	Co	CF	
		Person In Charge (PIC): In Immediate Vicinity and Available			
	Personnel: Capable/Unimpaired		ch	CE	
	Name, title and location of each person participating in the transfer		00	CF-	
	MC 20 Subsea Storage Offloading Operations & Maintenance Man				
	procedures and particulars of the transfer and receiving systems to l	be followed and veri	fied A	are.	
	with key personnel involved in these operations Watch and shift arrangements discussed		40	CF	
	Cargo is Authorized for transfer to or from tanks		-CA	CF	
-	Discuss if transfer will need to stopped to change tanks – supply or	washing facility	- CP	ae	
	Discuss it transfer will need to stopped to change tanks – supply or Discuss transfer rates and max allowable to receiving facility	receiving Juciny	CB	a de	
	(Facility/Vessel) properly vented (monitoring vacuum and positive	tanke pressure)	eB.	Œ.	
	Communications & No Language Barrier	taliks pressure)	-68	Cr	
8 но			-CD	LOP .	
8 110	oses and Connection - 33CFR 154.500 Nonmetallic hoses usable for oil or hazardous material service		02	100	
	Proper connections (must be one of the following):		CA	CE CE	
	Fusion 100 hammer union connections		-9		
	Quick-disconnect coupling present on suction side of pump		Ca	CT	
	Examine transfer hose markings or records.		- 02	CF CF	
	Name of product handled; example "OIL SERVICE," or "HAZMA	T SERVICE"	18		
8 Ex	amine Transfer Hose condition - 33CFR 156.170			CF	
3 -	No unrepaired kinks, bulges, soft spots, loose covers, other defects		102	CF	
	No cuts, slashes, or gouges that penetrate the first layer of hose rein	nforcement	88	UT	
	No external/internal deterioration	Horomone	18	co	
8 Em	nergency shutdown - 33CFR 156.170				
.0	Test emergency shutdown - 33CFR 154.550 - who controls the er	mergency shutdown	CB.	ce	
	Communication system continuously operated.	norgonity same	B	CF	
	Verify operating properly (Electric, pneumatic, or mechanical link t	to facility; electronic			
	voice)	in the Carl & Warren . Attended	CB	CF	
	Record test info in physical information.		CO	CK	
§ Ex	amine closure device - 33CFR 154.520				
	Verify enough to blank off ends of each hose /loading arm not conn	ected for transfer	MA	04	

§ Inspect Small Discharge Containment - 33CFR 154.530

Inspect handling area and verify capacity (not less than 5 gallons).



	Pre-Transfer Conference and Agreement (Continued)		
	TOPIC	PIC Delivering	PIC Receiving
8 In	spect discharge containment equipment for oil & hazardous liquids - 33CFR 154.545		
0	Verify booming for oil or hazmat transfer (if required by COTP).	PR	CF
	Verify adequate amount of equipment and/or absorbent material for initial response	18	cr
	Inspect condition of response equipment stored on facility (if applicable).	60	er
	Verify availability of at least 200 feet of containment boom onsite within 1 hour.	62	000
	Verify means of deployment.	CA	06
M	eans of Communication - 33 CFR 154.560	· ·	IC .
112	Verify continuous two-way voice communication between vessel and facility PICs.	CO	or
	Communications must meet the following requirements		10
	Portable Radio:	0.0	
	IF Flammable or Combustible Liquids	ap	a
	Marked or documented as intrinsically safe.	00	OC-
	2. Certified as intrinsically safe by national testing labor certification organization.	CB	a
	Voice	19	
	1. Be audible.	18	CE
	Test communications. SAT UNSAT UNSAT	CB.	ce
In	spect lighting systems - 33 CFR 154.570		
	Verify portable lighting for operations between sunrise and sunset (if applicable).	CR	or
	At transfer operations work areas for facility and vessel	Ca	ce
	At transfer connection points for facility and vessel	72	CE
	Verify sufficient number or fire extinguishers.	16	Cr
	Verify protective equipment is ready to operate.	La Contraction	A Three Control
	Verify warning signs are adequate.	CB	GF-
	§ VESSEL ONLY - 155.730 Compliance with VESSEL TRANSFER PROCI		
	PIC for vessel/operator is required by §155.720 to have current transfer procedures	3	CF
-	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		CF CF
	Legibly printed language(s) understood by personnel engaged in transfer operation		Cr
	Permanently posted or available and used by members of crew engaged in transfer operation	n	CF
	Appropriate tank level monitoring (visual, gauging, indicators, etc.)		CE
	Arrangements to monitor draft marks during transfer		CF
	Transfer Piping Line diagram, location of each valve, pump, control device, vent, and over	low	
	Shutoff valve location or isolation device separating bilge or ballast from the transfer system		CF
	Adequate containment on the vessel at loading or discharge connection		Cor
	Drains, Scuppers and overboard discharges closed		
	The number of persons required to be on duty during transfer operations;		6
	Procedures for emptying discharge containment system required by §§155.310 and 155.320)	Cr
	Procedures for tending the vessel's moorings during the transfer of oil or hazardous materia		CF
	Procedures for emergency shutdown/communications required by §§155.780 and 155.785		-
	Procedures for topping off tanks		CF
	Procedures ensuring all valves used during transfer are closed upon completion of transfer		CK
	I do certify that I have personally inspected this facility or vessel with reference to	the require	
	aforementioned and that I have indicated that the regulations have been complied		
	1	F-22	Dalas
	15	>-25	00.00
		DATE	TIME
		F 30	00'00
		DATE	00.00
	20-	A	ALIVILL
	TRANSFER COMPLETED:	2-22	00,00
	AMOUNT (GALLONS)	DATE	TIME



Revision: 08/2015

40 of 69

Job Hazard Analysis

TASK DESC	RIPTION: MC	20 Recovered Crude Oil / Vesse	to Shore Transfer 1-7-23
		SUMMARY OF POTENTIAL HA	
Heavy or av	wkward lifting /	Pinch Points or caught betw	een Working and walking surfaces; slip, trip, fall
☐ New / Inex	perienced employe	ees Spill / containment	
Struck by o	r crush hazard	☑ Noise levels (>85 dBA)	
	liquids, vapors, was	ste 🛛 Elevated surfaces / Fall / Lac	dders
		APPLICABLE REGULATION	ON / SOPS / ALERTS
SMS 19.2 V	acuum Trucks		
		MINIMUM PERSONAL PROTECTIVE	EQUIPMENT (Check applicable)
Level A Level B Level C Level D	⋈ Hard Hat⋈ Safety Glasse⋈ Face Shield⋈ Hearing Protest	Chemical protective clothing	⊠ Gloves:
@ lo	b Steps	JOB HAZARD	Preventive Measures / Special PPE
1. Pre-jo	b Steps bb Meetings vior Based Safety	Personnel do not understand the operational plan, relevant hazards or their roles/responsibilities Personnel do not stop work when hazards are identified Personnel do not report injuries, illnesses, near misses or incidents	The operational plan, hazards and controls will be explained to all involved personnel in Safety/Ops meeting. Personnel will be encouraged to ask questions if they are unsure of any project details Immediate supervisor will remind their crews of their Authority and Responsibility to Stop work and contact their supervisor if they discover a hazard Personnel will be instructed to report any injuries, illnesses, near misses or incidents
Equipment Set-up		hazards. Equipment not certified, not tested or damaged	 Inspect site for correctable walking surface hazards. Flag of correct unsafe conditions. Position equipment and hoses away from travel paths. Identify "no-go" areas. All equipment will be inspected for current certifications, testing and serviceable working condition prior to work. Personnel will be pre-selected to perform tasks based on verified competency
3. Vehic	le movements	 Personnel, equipment or hoses struck or crushed by moving vehicles or equipment Vehicles not inspected prior to movements. Unsafe for travel. Unsecured items create dropped object or road hazards. 	 Ground guides will be used for equipment movements. Non-essential personnel will clear the travel path. Travel path will be confirmed as clear prior to movements. Vehicles will be inspected by drivers prior to travel and after travel for potential damage. Vehicles will be inspected to ensure that there are no loose items and that loads are secured properly.
4. Mooring Vessel and working near water		caught in "line of fire". Personnel pinched or crushed during vessel movements.	 to fall on the ground and pick them up. Do not attempt to catch mooring lines from the M/V. When mooring the vessel, keep hands, fingers, arms, and al other body parts from between the mooring line and the bits on the dock Never work alone. All personnel within 5' of the docks edge are required to wear a USCG approved PFD. Always discuss "man overboard" procedures prior to work. Have life ring and recovery plan in place.
5. Conn	ecting hoses	Personnel crushed or pinched while connecting transfer hoses. Personnel suffer back strain or other ergonomic related injuries during connections or moving hoses Slip/trip/fall hazards while working	 Identify, communicate and avoid all crush/pinch points: including cam-lock connections, vehicles and other moving parts or equipment Transfer hoses can be heavy and when handling these hoses employees shall use proper ergonomic practices including keeping your back as straight as possible as well as lifting with your knees and not your back Observe good housekeeping and maintain situational

1



Revision: 08/2015

Job Hazard Analysis

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



Revision: 08/2015

Job Hazard Analysis

O Job Steps	Potential Hazards	Preventive Measures / Special PPE
		detected. PPE will be upgraded according to the concentration of hazards detected. If personnel will work at heights above 6': fall protection wi be worn and a rescue plan will be in place. Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.
 Prolonged exposure to elements (Heat Stress) 	 Inadequate hydration Extended work periods without rest resulting in heat stress 	 Personnel will be encouraged to hydrate frequently. Water sports drink ratio will be 3:1 (1 sports drink to 3 waters consumed). 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 coworkers).
11. Break time	 Potential for ingestion of petroleum product or other contaminants. Fire hazards from unrestricted smoking Direct sun reduces recovery time for workers during breaks Inadequate water 	 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. Only smoke in designated areas. Ensure that break areas have adequate shade and cooling potential for personnel 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.
12. Decontaminate Personnel	 Potential for secondary contamination by absorption, injection, or ingestion 	 Follow decontamination plan for clothing removal and disposal when protective outerwear is required and becomes contaminated. Only use safety scissors (never knives) to cut Tyvek from personnel. Ensure that workers wash hands and face thoroughly.
NRC INCIDENT REPORTING POLICY	First Aid OSHA recordable Illness/Injury Near Miss Equipment/Vehicle Damage	 NRC employees and subcontractors are required to immediately report all incidents to their supervisor. The immediate supervisor will immediately report the incident to the site safety professional, HSEQ Manager, and Project Manager. 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. The supervisor will complete a root cause analysis of all reported incidents and submit to the HSEQ manager within a hours of an incident. Determination will be made regarding need for post-incident drug and alcohol testing based on NRC policy. Contact HSEQ Manager for proper USCG reports, if needed and what report is needed.

REVIEW

Development Team	Position/Title	Reviewed By	Position/Title	Date
				7/27/20
			Pm	1-7

Employee Name	Signature	Date
		1-7-23
		1/7/27



SAFETY IT'S THE WAY TO GO!

Job Hazard Analysis

Revision: 08/2015

1-7-23

PO#46



SAFETY MANAGEMENT SYSTEM

SAFETY IT'S THE WAY TO GO!

Site Specific Safety Plan

Project Name: MC20 Recovered Crude Oil Transfer

Revision: 08/2019

THE PARTY	JECT PERSONNEL AND E	MERGENCY CONTACTS				
Shore side NRC Project Manager	Jesse Bridges (985) 502-71	190				
Director of Marine Ops	David Kendall (281) 914-65	577				
Director of Operations	Ray Mc Coy (631) 236-251	2				
Yard Manager	Darryl Prout (985) 396-4518					
H&S Program Manager	Peter Brause, CSP (310) 387-2639					
VP Health & Safety	Ken Koppler, CIH, CSP (97					
Hospital / Medical Intervention	Lady of the Sea Hospital: C					
Date: 1-7-2023	Start Time:	Job Number:				
The site is the Port Fourchon Facility: NRC will facilitate removing recovered	d crude oil from the well located	d at MC20 project. The M/V_33 has been				
NRC will facilitate removing recovered collecting crude oil from the location be moored to the dock at the above	d crude oil from the well located and storing it on Marine Portabl	d at MC20 project. The M/V_33 has been				
NRC will facilitate removing recovered collecting crude oil from the location be moored to the dock at the above walled frac tanks on the dockside. Once the frac tanks on the Port Four	d crude oil from the well located and storing it on Marine Portabl location and transfer the recove chon docks are ready for transfe	d at MC20 project. The M/V_BB_ has been le Tanks (MPTs) located on her deck. The vessel will				
NRC will facilitate removing recovered collecting crude oil from the location be moored to the dock at the above walled frac tanks on the dockside.	d crude oil from the well located and storing it on Marine Portabl location and transfer the recove chon docks are ready for transfe	d at MC20 project. The M/V_BB has been le Tanks (MPTs) located on her deck. The vessel will ered crude from the MPTs on her deck to double er the crude will then be transferred into bulk				
NRC will facilitate removing recovered collecting crude oil from the location be moored to the dock at the above walled frac tanks on the dockside. Once the frac tanks on the Port Four transporter trailers to be sent to its fixed to the frac tanks on the port Four transporter trailers to be sent to its fixed to the frac tank vessel will transfer the crude oil in her tan operator will open the next manifold valvonce the transfer is complete a 1-inch air	d crude oil from the well located and storing it on Marine Portable location and transfer the recover chon docks are ready for transfer and destination. SCOPE OF WO O' section of 3-inch petroleum duty anifold. The manifold has one inlet as. Once the connections are securally using a 4-inch pneumatic diapher and close the active one. This profine with the proper fitting will be one of the secural security will be one of the secural security.	d at MC20 project. The M/V_BB has been le Tanks (MPTs) located on her deck. The vessel will ered crude from the MPTs on her deck to double er the crude will then be transferred into bulk				





Site Specific Safety Plan

Project Name: MC20 Recovered Crude Oil Transfer

Revision: 08/2019

EQUIPMENT

		21	2		
•	Air Compressor (One aboard the M/V	101		One on Port Fourchon Facility Prop	perties)

· 4-inch pneumatic diaphragm pumps

Petroleum Duty transfer hoses rated and inspected accordingly

Safety Clips for Cam-lock connections and Chicago fittings

- Containment pans for diaphragm pumps and each hose connection (on the deck of the M/V as well as the Port Fourchon Facility Dock)
- Sorbent pads / Polly to wrap around each hose connection as spill prevention
- Whip Checks for each air line connection coming from the air compressor
- Intrinsically safe handheld VHF radios (Means of Communication between PIC of vessel and PIC of dock)

· Supplied Air Breathing System

ATTACHMENTS

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





Site Specific Safety Plan

Project Name: MC20 Recovered Crude Oil Transfer

Revision: 08/2019

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 FP: <24 F Estimated 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 Ingestion Absorption 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



SAFETY IT'S THE WAY TO GO

Site Specific Safety Plan

Project Name: MC20 Recovered Crude Oil Transfer

Revision: 08/2019

PERSONAL PROTECTIVE EQUIPMENT

TASK	Level	MASK / CARTRIDGE / AIR	ADDITIONAL PPE
Mooring Vessel	D	N/A	Level D PPE with the addition of an approved PFD when working within 5' of the docks edge
Connecting hoses	D	N/A	Level D PPE with the addition of an approved PFD when working within 5' of the docks edge
Completing inspection	D	N/A	Level D PPE with the addition of an approved PFD when working within 5' of the docks edge
Transfer operations	D	Level C or Level B may be needed based on air monitoring results.	Level D PPE (unless readings indicate a need to upgrade PPE to level C respiratory protection) with the addition of an approved PFD when working within 5' of docks edge. If H2S is detected above 5 ppm Level B PPE (supplied air respirators) will be used. Operations will be suspended if H2S levels reach 100ppm.

RESPIRATORY PROTECTION PLAN

The NRC SMS Procedure 13.2 for Respiratory Protection is provided in **Attachment_C**.





Site Specific Safety Plan

Project Name: MC20 Recovered Crude Oil Transfer

Revision: 08/2019

AIR MONITORING / ACTION LEVELS

Chemical Hazard	Instrument	Action Level	Action
Oxygen (O₂)	4-gas	<19.5% or >23.5%	 Stop work, determine source of hazard and apply engineering control (ventilation) until reading can be brought to 21% +/- 1%.
Carbon Monoxide (CO)	4-gas	25 ppm	 Stop work, determine source of hazard and apply engineering controls. Upgrade PPE as necessary.
Lower Explosion Limit (LEL)	4-gas	>10%	 Stop work, determine source of hazard and apply engineering control (ventilation) until reading can be brought below 10%.
Hydrogen Sulfide (H2S)	4-gas	10 ppm >10 ppm	OSHA PEL SCBA / Supplied Air Respiratory Protection
PID/VOC	PID	10 - 750 ppm >750	Don level C PPE APR w/OV cartridge (Check Benzene Levels, if Benzene levels are below 0.5 Respiratory protection may be reduced SCBA / Supplied Air Respiratory Protection
Benzene	Colorimetric Tube	<0.5 PPM 0.5 – 25 PPM >25 PPM	 No Respiratory requirement Full Face APR with OV Cartridges SCBA / Supplied Air Respiratory Protection





Site Specific Safety Plan

Project Name: MC20 Recovered Crude Oil Transfer

Revision: 08/2019

ACTIVITY HAZARD ANALYSIS / SUMMARY

ITEM	HAZARD	PREVENTION			
Behavioral Based Safety	Hazard Identification Stop Work Authority Near Miss	 Immediate supervisor will remind their crews of their Authority and Responsibility to Stop work and contact their supervisor if they discover a hazard Safety officer to coordinate with work crew safety leads Daily HASP / Tailgate meetings will be conducted with the crew. 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. 			
Mooring M/V Struck by Pinched by Fall into water Connecting Hoses Caught / pinched by Back / muscle strain Slip / Trip / Fall		 When tossing the mooring lines to the shore allow the lines to fall on the ground and pick them up. Do not attempt to catch mooring lines from the M/V. When mooring the vessel, keep hands, fingers, arms, and all other body parts from between the mooring line and the bits on the dock. Never perform this task alone and all personnel within 5' of the docks edge are required to wear a USCG approved PFD. 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. 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. 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. 			
Transfer of recovered crude oil	Spill / spray crude oil on employee. Overfilling of frac tank Overcome by vapors Hydrogen Sulfide (H2S) Detected during transfer.	 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. 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. 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. All personnel involved in the transfer process will be wearing a personal H2S Detector worn in their breathing zone. If H2S 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 			





Site Specific Safety Plan

Project Name: MC20 Recovered Crude Oil Transfer

Revision: 08/2019

ITEM	HAZARD	PREVENTION
		 personnel from the area during the transfer. There will be support personnel upwind with SAR capabilities on site for rescue purposes during this operation. 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.
Transfer of oil into transporter	Spill / spray crude oil on employee. Overfilling of frac tank Overcome by vapors	 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. 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. 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.
Incident Reporting First Aid OSHA Recordable Medical Only Near Miss		 Employees immediately report all incidents to their immediate supervisor. The immediate supervisor will immediately report the incident to the site safety professional, HSEQ Manager, and Project Manager. 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. The supervisor will complete a root cause analysis of all reported incidents and submit to the HSEQ manager within 8 hours of an incident. Determination will be made regarding need for post-incident drug and alcohol testing based on NRC policy. Contact HSEQ Manager for proper USCG reports, if needed and what report is needed.
Prolonged exposure to elements	Dehydration Hypothermia Hyperthermia	 If Tyvek is not required, long sleeve shirts should be worn to cover skin. Rain suits should be worn in lieu of chemical protective coveralls during inclement weather Drink plenty of fluids. Appropriate clothing should be worn based on weather conditions.
Break time	Ingestion Fire	 Thoroughly wash hands before eating, drinking, smoking, or applying sun screen Do not smoke near petroleum products (ONLY IN DESIGNATED AREA)
Decontaminate Personnel	Absorption Contamination	Follow decontamination plan for clothing removal / disposal. Do not use knives to cut PPE / use safety scissors Wash hands and face thoroughly.
COVID 19 Protocol	Personnel infected with COVID-19 could spread it to others in the work area.	 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. If any employee is displaying symptoms related to COVID19





Site Specific Safety Plan

Project Name: MC20 Recovered Crude Oil Transfer

Revision: 08/2019

ITEM	HAZARD	PREVENTION
		 they will be removed from work and follow the US Ecology / NRC return to work guidance issued by corporate. The Symptoms in question are Fever (Above 100.4F, Dry Cough, and Shortness of breath) 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. 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. 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.
NRC INCIDENT REPORTING POLICY	 First Aid OSHA recordable Illness/Injury Near Miss Equipment/Vehicle Damage 	 NRC employees and subcontractors are required to immediately report all incidents to their supervisor. The immediate supervisor will immediately report the incident to the site safety professional, HSEQ Manager, and Project Manager. 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. The supervisor will complete a root cause analysis of all reported incidents and submit to the HSEQ manager within 8 hours of an incident. Determination will be made regarding need for post-incident drug and alcohol testing based on NRC policy. Contact HSEQ Manager for proper USCG reports, if needed and what report is needed.
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Site Specific Safety Plan

Project Name: MC20 Recovered Crude Oil Transfer

Revision: 08/2019

MINIMUM SAFETY EQUIPMENT REQUIRED

1	Eyewash	1	Decon Pool / Supplies See itemization list under Decon		Tinted faceshield, leathers, gauntlets, hot-work cutting gear
1	First Aid Kit	1	Fire Extinguisher, Dry Chemical		Barricades / Traffic Cones / Delineators / Banner Tape
7			Fire Extinguisher, Water	1	Ladders
R	Harnesses	7	Lanyards / rope		Confined space entry equipment
1	PPE (Task specific	c)			

TRAINING / DOCUMENTATION REQUIREMENTS

1	HAZWOPER 40	1	Hazwoper Supervisor	1	Current 8 Hour Refresher
1	First Aid /CPR		Confined Space Supervisor	1	Current Medical Fitness For Duty
	NRC Confined Space	e Entran	t		NRC Confined Space Rescue
✓ API Safe Rigging Practices		1	Documentation of compliance with Drug Free Work Place		
	Competent Fire Wa	tch Desig	gnated Personnel	- 1	Qualified Pressure Washer Operator





Site Specific Safety Plan
Project Name: MC20 Recovered Crude Oil Transfer

Revision: 08/2019

DECONTAMINATION AND DISPOSAL

DECONTAMINAT	ION EQUIPMENT
Visqueen on Ground Carpet on Ground Wooden Pallets Decon Pool / wash boots Boot brushes Decon Pool Rinse Boots Respirator wash bucket Respirator rinse bucket Drying stands or platforms for respirators after washing Wipe rags to clean respirators	 ☐ Rags for cleaning - wiping ☐ Labeled Drums for disposal items ☐ Chairs to sit on for PPE removal ☐ Plastic zip-lock bags for personal sample pumps ☐ Water to wash face / hands ☐ Decontamination Assistant ☐ Barrier stands ☐ Caution tape to designate decon area ☐ Shower
PERSONNEL DECON	TAMINATION PLAN
Unzip suit / pull off hood Roll down suit / inside out and place into labeled containe Remove respirator Use wipes to clean Store respirators in plastic bags after drying Remove inner gloves PPE and debris will be bagged, accounted for, and bulked Store respirators in individual plastic bags with employee	terior of PPE prior to dry decon (stage 1 decon) is removed to waste bin at end of each shift I leather outer gloves may be reuse if still in good condition) er I into the applicable waste bin or container names
Contaminated disposable DDE % debris from energition of	
Contaminated disposable PPE & debris from operation sha	all be placed in an approved container





Site Specific Safety Plan

Project Name: MC20 Recovered Crude Oil Transfer

Revision: 08/2019

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



SAFETY IT'S THE WAY TO GO!

Site Specific Safety Plan

Project Name: MC20 Recovered Crude Oil Transfer

Revision: 08/2019

EMERGENCY MEDICAL TREATMENT AND FIRST AID

TYPE CONTACT	FIRST AID
Eyes	 Flush each eye continuously for 15 minutes Tilt head to side to ensure liquid runs onto floor not other eye Refer to EMT for evaluation
Skin	 Remove contaminated clothing immediately Wash skin continuously for 15 minutes Refer to physician if redness, swelling, or pain persists after washing
Not Breathing	 Call 911 Remove to fresh air immediately if respiratory distress develops Begin CPR until EMT arrives
Ingestion	 Aspiration hazard Do not induce vomiting Do not give anything by mouth

ACCIDENT REPORTING

FIRST AID INJURIES REQUIRING MEDICAL TREATMENT VEHICLE ACCIDENT NEAR MISS	 Employees immediately report all accidents or incidents to the Site Project Manager / Safety Officer 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 NRC Safety Manager will provide employee disposition guidelines and
	coordinate an accident investigation either by himself or Project Supervisor NRC Project Manager will relay information to Project Site Superintendent Accident reporting forms are included in Attachment_D Determination will be made regarding need for post accident drug testing

EMERGENCY RESPONSE PLAN

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

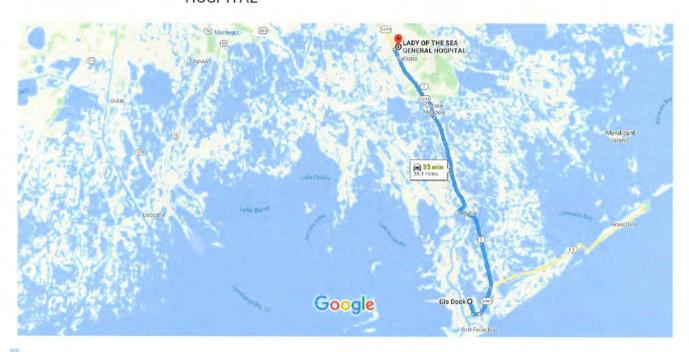


Site Specific Safety Plan Project Name: MC20 Recovered Crude Oil Transfer Revision: 08/2019

Hospital Route

Google Maps

Gis Dock to LADY OF THE SEA GENERAL Drive 28.1 miles, 35 min HOSPITAL





via LA-1 and LA-3235

35 min

Fastest route, the usual traffic ▲This route has restricted usage or private roads.

28.1 miles





Revision: 08/2019

Site Specific Safety Plan
Project Name: MC20 Recovered Crude Oil Transfer

SAFETY PLAN APPROVAL

Site Safety Officer Jesse Bridges	Date
Site Salety Officer Officer	Date

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

Date	Print Name	Signature
1-7-23		
1/7/27		
1/-7-23		
1-7-23		



Pot 46

SAFETY ITS THE WAY TO GO!

Job Hazard Analysis

l C₁₇w 1 Revision: 08/2015

TASK DESC	RIPTION: MC 2	20 Recove	ered Crude Oil / Vessel 1	o Shore	Transfer / -	25-23
		S	SUMMARY OF POTENTIAL HAZA	RDS (Check	capplicable)	
Heavy or a	wkward lifting /		Pinch Points or caught between		Working and walking surfaces; slip, trip, fall	
☐ New / Inexperienced employees		es 🗵	Spill / containment			onment
Struck by o	or crush hazard	×	Noise levels (>85 dBA)			
	liquids, vapors, was	ite 🗵	Elevated surfaces / Fall / Ladd	ers		
			APPLICABLE REGULATION	/SOPS/A	LERTS	
☐ SMS 19.2 V	/acuum Trucks					
		MININ	NUM PERSONAL PROTECTIVE EC	QUIPMENT	(Check applicable)	
Level A Level B Level C Level D	☐ Hard Hat☐ Safety Glasse☐ Face Shield☐ Hearing Prote		Long Sleeves / Coveralls	☐ Dispo ☐ Neop ☐ Glove	er Steel Toe Boots sable boot covers rene Steel Toe Boots ss:	PFD / Work vest
0 10	ob Steps	0	Potential Hazards	NALYSIS	Preventive Mea	sures / Special PPE
1. Pre-jo	ob Meetings vior Based Safety	 Person opera or the Person hazaro Person Person 	nnel do not understand the ational plan, relevant hazards eir roles/responsibilities nnel do not stop work when ds are identified nnel do not report injuries, ses, near misses or incidents	 The operational plan, hazards and controls will be exto all involved personnel in Safety/Ops meeting. Pewill be encouraged to ask questions if they are unsuany project details Immediate supervisor will remind their crews of their Authority and Responsibility to Stop work and contasupervisor if they discover a hazard Personnel will be instructed to report any injuries, ill near misses or incidents 		ards and controls will be explained in Safety/Ops meeting. Personnel of questions if they are unsure of it remind their crews of their oility to Stop work and contact their er a hazard ed to report any injuries, illnesses,
	Survey and oment Set-up	hazareEquiporor dareImpro	en working surfaces and trip ds. ment not certified, not tested maged oper set-up due to untrained qualified personnel	 Inspect site for correctable walking surface hazards. I correct unsafe conditions. Position equipment and I away from travel paths. Identify "no-go" areas. All equipment will be inspected for current certificati testing and serviceable working condition prior to w Personnel will be pre-selected to perform tasks base verified competency 		ns. Position equipment and hoses . Identify "no-go" areas. pected for current certifications, working condition prior to work
3. Vehic	cle movements	struck vehicl Vehicl move Unsec	nnel, equipment or hoses c or crushed by moving les or equipment les not inspected prior to ments. Unsafe for travel. cured items create dropped t or road hazards.	Ground guides will be used for equipment movements. Non-essential personnel will clear the travel path. Travel path will be confirmed as clear prior to movements. Vehicles will be inspected by drivers prior to travel and after travel for potential damage. Vehicles will be inspected to ensure that there are no loose items and that loads are secured properly.		el will clear the travel path. Travel as clear prior to movements. d by drivers prior to travel and al damage. d to ensure that there are no
	ring Vessel and ing near water	caugh Perso during	nnel struck by thrown lines or at in "line of fire". nnel pinched or crushed g vessel movements. nnel fall into the water. Man loard.	 When tossing the mooring lines to the shore allow the line to fall on the ground and pick them up. Do not attempt catch mooring lines from the M/V. When mooring the vessel, keep hands, fingers, arms, an other body parts from between the mooring line and the bits on the dock Never work alone. All personnel within 5' of the docks enare required to wear a USCG approved PFD. Always dis "man overboard" procedures prior to work. Have life rine and recovery plan in place. 		d pick them up. Do not attempt to the M/V. I, keep hands, fingers, arms, and all etween the mooring line and the sonnel within 5' of the docks edge JSCG approved PFD. Always discuss dures prior to work. Have life ring
5. Conn	ecting hoses	while Perso other during	onnel crushed or pinched connecting transfer hoses. Innel suffer back strain or ergonomic related injuries g connections or moving a rip/fall hazards while working		including cam-lock conn- parts or equipment Transfer hoses can be he hoses employees shall u including keeping your b as lifting with your knee	d avoid all crush/pinch points: ections, vehicles and other moving eavy and when handling these use proper ergonomic practices back as straight as possible as well as and not your back ing and maintain situational





Job Hazard Analysis

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





Job Hazard Analysis

Job Steps	Potential Hazards	Preventive Measures / Special PPE
		 detected. PPE will be upgraded according to the concentration of hazards detected. If personnel will work at heights above 6': fall protection will be worn and a rescue plan will be in place. Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.
Prolonged exposure to elements (Heat Stress)	 Inadequate hydration Extended work periods without rest resulting in heat stress 	 Personnel will be encouraged to hydrate frequently. Water to sports drink ratio will be 3:1 (1 sports drink to 3 waters consumed). 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 coworkers).
11. Break time	 Potential for ingestion of petroleum product or other contaminants. Fire hazards from unrestricted smoking Direct sun reduces recovery time for workers during breaks Inadequate water 	 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. Only smoke in designated areas. Ensure that break areas have adequate shade and cooling potential for personnel 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.
12. Decontaminate Personnel	Potential for secondary contamination by absorption, injection, or ingestion	 Follow decontamination plan for clothing removal and disposal when protective outerwear is required and becomes contaminated. Only use safety scissors (never knives) to cut Tyvek from personnel. Ensure that workers wash hands and face thoroughly.
NRC INCIDENT REPORTING POLICY	 First Aid OSHA recordable Illness/Injury Near Miss Equipment/Vehicle Damage 	 NRC employees and subcontractors are required to immediately report all incidents to their supervisor. The immediate supervisor will immediately report the incident to the site safety professional, HSEQ Manager, and Project Manager. 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. The supervisor will complete a root cause analysis of all reported incidents and submit to the HSEQ manager within 8 hours of an incident. Determination will be made regarding need for post-incident drug and alcohol testing based on NRC policy. Contact HSEQ Manager for proper USCG reports, if needed and what report is needed.

REVIEW

Development Team	Position/Title	Reviewed By	Position/Title	Date
				7/27/20
			PM	1-25-

ACKNOWLEDGEMENT

Employee Name	Signature	Date
		1.75.23
		11 111
		1/25/22



Revision: 08/2015

Job Hazard Analysis

1-25-23

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SAFETY MANAGEMENT SYSTEM 3 TRUCKS

Job Hazard Analysis

		Job Hazard Analysis		Revision: 08/2015		
TASK DESC	RIPTION: MC	20 Rec	overed Crude Oil / Vessel t	o Shore	Transfer /_	26-23
Y			SUMMARY OF POTENTIAL HAZA	RDS (Chec		20 25
Heavy or av	wkward lifting /		Pinch Points or caught betwee	A CONTRACTOR OF THE PARTY OF TH		king surfaces; slip, trip, fall
☐ New / Inex	perienced employe	es	Spill / containment		Heat stress envir	ronment
Struck by o	r crush hazard		Noise levels (>85 dBA)			
	liquids, vapors, wa	ste	☐ Elevated surfaces / Fall / Ladd	ers		
			APPLICABLE REGULATION	/SOPS / A	LERTS	
☐ SMS 19.2 V	acuum Trucks					
		MI	NIMUM PERSONAL PROTECTIVE EC	UIPMENT	(Check applicable)	
Level A Level B Level C Level D	☐ Hard Hat ☐ Safety Glasse ☐ Face Shield ☐ Hearing Prot		☐ High Visibility Vest ☐ Long Sleeves / Coveralls ☐ Chemical protective clothing ☐ Respirator:	Dispo	er Steel Toe Boots sable boot covers rene Steel Toe Boots	□ PFD / Work vest □ □ □
		COLIGIT	JOB HAZARD AN			
0 Jo	b Steps		Potential Hazards		Preventive Mea	sures / Special PPE
Behan 2. Site S	ob Meetings vior Based Safety survey and ment Set-up	or or • Pe ha • Pe illi	ersonnel do not understand the perational plan, relevant hazards their roles/responsibilities ersonnel do not stop work when exards are identified ersonnel do not report injuries, messes, near misses or incidents neven working surfaces and trip exards.	• 1	Contract of the contract of th	
Equip	теп эстар	• Ec	pripage of the control of the contro	 correct unsafe conditions. Position equipment and away from travel paths. Identify "no-go" areas. All equipment will be inspected for current certificatesting and serviceable working condition prior to Personnel will be pre-selected to perform tasks bas verified competency 		. Identify "no-go" areas. pected for current certifications, working condition prior to work
3. Vehic	le movements	str ve • Ve m	ersonnel, equipment or hoses ruck or crushed by moving hicles or equipment chicles not inspected prior to ovements. Unsafe for travel. nsecured items create dropped oject or road hazards.	. ,	 Ground guides will be used for equipment movement Non-essential personnel will clear the travel path. To path will be confirmed as clear prior to movements. Vehicles will be inspected by drivers prior to travel an after travel for potential damage. Vehicles will be inspected to ensure that there are no loose items and that loads are secured properly. 	
	ing Vessel and ing near water	• Pe	ersonnel struck by thrown lines or ught in "line of fire". ersonnel pinched or crushed aring vessel movements. ersonnel fall into the water. Man perboard.	 When tossing the mooring lines to the shore allow the to fall on the ground and pick them up. Do not atte catch mooring lines from the M/V. When mooring the vessel, keep hands, fingers, arms, other body parts from between the mooring line and bits on the dock Never work alone. All personnel within 5' of the docks are required to wear a USCG approved PFD. Always "man overboard" procedures prior to work. Have life 		d pick them up. Do not attempt to the M/V. If keep hands, fingers, arms, and all etween the mooring line and the sonnel within 5' of the docks edge JSCG approved PFD. Always discuss lures prior to work. Have life ring
5. Conne	ecting hoses	Pe ot du ho	ersonnel crushed or pinched hile connecting transfer hoses. ersonnel suffer back strain or her ergonomic related injuries uring connections or moving oses	 and recovery plan in place. Identify, communicate and avoid all crush/pinch points: including cam-lock connections, vehicles and other mov parts or equipment Transfer hoses can be heavy and when handling these hoses employees shall use proper ergonomic practices including keeping your back as straight as possible as was lifting with your knees and not your back 		d avoid all crush/pinch points: ections, vehicles and other moving eavy and when handling these se proper ergonomic practices eack as straight as possible as well





Job Hazard Analysis

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



Revision: 08/2015

Job Hazard Analysis

Job Steps	Potential Hazards	Preventive Measures / Special PPE
		 detected. PPE will be upgraded according to the concentration of hazards detected. If personnel will work at heights above 6': fall protection wi be worn and a rescue plan will be in place. Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.
elements (Heat Stress)	nadequate hydration Extended work periods without est resulting in heat stress	 Personnel will be encouraged to hydrate frequently. Water to sports drink ratio will be 3:1 (1 sports drink to 3 waters consumed). 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 coworkers).
• F s • C	rotential for ingestion of etroleum product or other ontaminants. ire hazards from unrestricted moking pirect sun reduces recovery time or workers during breaks madequate water	 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. Only smoke in designated areas. Ensure that break areas have adequate shade and cooling potential for personnel 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.
Personnel c	otential for secondary ontamination by absorption, njection, or ingestion	 Follow decontamination plan for clothing removal and disposal when protective outerwear is required and becomes contaminated. Only use safety scissors (never knives) to cut Tyvek from personnel. Ensure that workers wash hands and face thoroughly.
POLICY • C	irst Aid ISHA recordable Iness/Injury Iear Miss quipment/Vehicle Damage	 NRC employees and subcontractors are required to immediately report all incidents to their supervisor. The immediate supervisor will immediately report the incident to the site safety professional, HSEQ Manager, and Project Manager. 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. The supervisor will complete a root cause analysis of all

REVIEW

Development Team	Position/Title	Reviewed By	Position/Title	Date
				7/27/20
			pm	1-26-2

ACKNOWLEDGEMENT

Employee Name	Signature	Date
		1116/20
		// 6/02
		1126 125

The supervisor will complete a root cause analysis of all reported incidents and submit to the HSEQ manager within 8

Determination will be made regarding need for post-incident drug and alcohol testing based on NRC policy.

Contact HSEQ Manager for proper USCG reports, if needed and what report is needed.

hours of an incident.



Job Hazard Analysis

SAFETY ITS THE WAY TO GO!

Revision: 08/2015

1-26-23 1-26-23 1-26-23 1-26-23

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SAFETY MANAGEMENT SYSTEM

Job Hazard Analysis Revision: 08/2015

			SUMMARY OF POTENTIAL HAZ	ARDS (Ch	eck applicable)			
Heavy or awkward lifting / movement		Pinch Points or caught between		A STATE OF THE PARTY OF THE PAR	Working and walking surfaces; slip, trip, fall			
New / Inexperienced employees		Spill / containment		☐ Heat stress	Heat stress environment			
Struck by or crush hazard			⊠ Noise levels (>85 dBA)		□ ∏ Heat stress	[] Heat stress environment		
Hazardous liquids, vapors, waste			⊠ Elevated surfaces / Fall / Ladders					
			APPLICABLE REGULATION		/ ALEDTS			
☐ SMS 19.2 \	/acuum Trucks		TITLE CADEL REGISTATION	1/3013	/ ALEKIS			
		MI	NIMIM DEDSONAL PROTECTIVE DE	NUDA45	L			
☐ Level A	☐ Hard Hat	IVII	NIMUM PERSONAL PROTECTIVE EC	T_	The second second second second second			
☐ Level B ☐ Safety Glasses ☐ Level C ☐ Face Shield ☐ Level D ☐ Hearing Protection		□ Long Sleeves / Coveralls □ Chemical protective clothing □ Respirator:	⊠ Gloves:		PFD / Work vest			
0 1-	h Carre		JOB HAZARD AI	VALYSIS				
	b Steps b Meetings	• Pe	Potential Hazards ersonnel do not understand the			Measures / Special PPE		
Behavior Based Safety		operational plan, relevant hazards or their roles/responsibilities • Personnel do not stop work when hazards are identified • Personnel do not report injuries, illnesses, near misses or incidents		 The operational plan, hazards and controls will be explained to all involved personnel in Safety/Ops meeting. Personnel will be encouraged to ask questions if they are unsure of any project details Immediate supervisor will remind their crews of their Authority and Responsibility to Stop work and contact their supervisor if they discover a hazard Personnel will be instructed to report any injuries, illnesses, near misses or incidents 				
2. Site Survey and Equipment Set-up		 Uneven working surfaces and trip hazards. Equipment not certified, not tested or damaged Improper set-up due to untrained or unqualified personnel 		 Inspect site for correctable walking surface hazards. Flag or correct unsafe conditions. Position equipment and hoses away from travel paths. Identify "no-go" areas. All equipment will be inspected for current certifications, testing and serviceable working condition prior to work Personnel will be pre-selected to perform tasks based on verified competency 				
3. Vehicle movements		Personnel, equipment or hoses struck or crushed by moving vehicles or equipment Vehicles not inspected prior to movements. Unsafe for travel. Unsecured items create dropped object or road hazards.		 Ground guides will be used for equipment movements. Non-essential personnel will clear the travel path. Travel path will be confirmed as clear prior to movements. Vehicles will be inspected by drivers prior to travel and after travel for potential damage. Vehicles will be inspected to ensure that there are no loose items and that loads are secured properly. 				
Mooring Vessel and working near water		Personnel struck by thrown lines or caught in "line of fire". Personnel pinched or crushed during vessel movements. Personnel fall into the water. Man overboard.			 When tossing the mooring lines to the shore allow the lines to fall on the ground and pick them up. Do not attempt to catch mooring lines from the M/V. When mooring the vessel, keep hands, fingers, arms, and all other body parts from between the mooring line and the bits on the dock Never work alone. All personnel within 5' of the docks edge are required to wear a USCG approved PFD. Always discuss "man overboard" procedures prior to work. Have life ring and recovery plan in place. 			
5. Conne	cting hoses	• Per oth dur hos	rsonnel crushed or pinched ille connecting transfer hoses. rsonnel suffer back strain or her ergonomic related injuries ring connections or moving ses o/trip/fall hazards while working		Identify, communicat including cam-lock of parts or equipment. Transfer hoses can be hoses employees shincluding keeping you as lifting with your keeping with your keeping with your keeping your keeping with your keeping your keeping with your keeping	the and avoid all crush/pinch points; connections, vehicles and other moving the heavy and when handling these hall use proper ergonomic practices our back as straight as possible as well knees and not your back seeping and maintain situational		





Job Hazard Analysis

Job Steps	0.00	
w Job Steps	Potential Hazards	Preventive Measures / Special PPE awareness when walking in the dock area. Try to run hoses in an area that is out of the normal walking path
6. Working in potentially hazardous atmospheres	Personnel exposed to hazards related to hazardous atmospheres. Ignition sources create potential for explosive conditions Personnel not equipped to suppress incipient fire	 Galibrated multi-gas meters/detectors will be used to conthat LEL's, CO and other gases are within safe range for pumping and transfer operations. Operations will transfer operations will stop immediately if LEL's or Carbon Monoxide levels become elevated A protective distance of 100' outside shoreside transfer will identified, and marked with caution tape and warning signot to prohibit smoking, sparks and any potential source of ignition within the transfer area perimeter. The M/V will suspend all similar activities for the duration of transfer operations. Fire extinguishers will be placed at the transfer manifolds, compressors, vessel and any other areas of potential ignition.
Energizing pneumatic equipment	 Personnel injured when struck by hoses or pressure during hose connection or fitting failure. Air leaks or blowout causing pressure related injuries. Hearing loss/injury due to noise levels above 85 decibels 	 All pressurized hoses will have whip checks and safety clinstalled prior to energizing. All pneumatic hoses will be inspected prior to use. Pumping operations will be stopped immediately if leak are detected during operations. Defective hoses will be replaced with new hoses/whips. Hearing protection will be worn in all areas where highnoise machinery and equipment is being operated.
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Job Hazard Analysis

O Job Steps	Potential Hazards	Preventive Measures / Special PPE
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Prolonged exposure to elements (Heat Stress)	 Inadequate hydration Extended work periods without rest resulting in heat stress 	 Personnel will be encouraged to hydrate frequently. Water to sports drink ratio will be 3:1 (1 sports drink to 3 waters consumed). 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 coworkers).
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REVIEW

Development Team	Position/Title	Reviewed By	Position/Title	Date 8/14/2019
			PM	1-24-

ACKNOWLEDGEMENT

Final over Name

Cignature

Date

1/35/23

1-27-23



Job Hazard Analysis

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