

Appendix A
Summary of Changes in VOC Emissions due to Rule Effectiveness

Table A-1. Summary of changes in VOC emissions due to rule effectiveness by SCC for Nueces and San Patricio Counties.

SCC	SCC1 Description	SCC3 Description	SCC6 Description	SCC8 Description	VOC (tpy)	VOC after RE (tpy)	Inc. (%)	No. of Rec.	Number of AFS Records Binned by Percentage Change In Emissions due to RE						
									0	0-10	10-90	90-101	101-180	180-200	200+
49090023	Petroleum and Solvent Evaporation	Organic Solvent Evaporation	Fuel Fired Equipment	Natural Gas: Flares	0.00	0.01	100	1				1			
40899999	Petroleum and Solvent Evaporation	Organic Chemical Transportation	Specific Liquid	Loading Rack	17.84	17.90	0	7	6		1				
40899997	Petroleum and Solvent Evaporation	Organic Chemical Transportation	Specific Liquid	Marine Vessels: Loading Rack	37.42	37.88	1	5	4			1			
40899995	Petroleum and Solvent Evaporation	Organic Chemical Transportation	Specific Liquid	Cars/Trucks: Loading Rack	3.22	3.23	0	5	4				1		
40799998	Petroleum and Solvent Evaporation	Organic Chemical Storage	Miscellaneous	Specify in Comments	4.03	4.37	8	17	16			1			
40729697	Petroleum and Solvent Evaporation	Organic Chemical Storage	Floating Roof Tanks - Miscellaneous	Specify In Comments: Breathing Loss	0.05	0.11	93	1				1			
40717697	Petroleum and Solvent Evaporation	Organic Chemical Storage	Floating Roof Tanks - Alkanes (Paraffins)	Specify Alkane: Standing Loss	3.80	11.02	190	6						6	
40717613	Petroleum and Solvent Evaporation	Organic Chemical Storage	Floating Roof Tanks - Alkanes (Paraffins)	Petroleum Distillates: Standing Loss	2.41	4.70	95	1				1			
40717612	Petroleum and Solvent Evaporation	Organic Chemical Storage	Floating Roof Tanks - Alkanes (Paraffins)	Naphtha: Withdrawal Loss	2.41	4.69	95	1				1			
40714697	Petroleum and Solvent Evaporation	Organic Chemical Storage	Fixed Roof Tanks - Miscellaneous	Specify In Comments: Breathing Loss	5.65	6.61	17	3	2			1			

40704898	Petroleum and Solvent Evaporation	Organic Chemical Storage	Fixed Roof Tanks - Ethers	Specify Ether: Working Loss	0.28	0.31	9	2	1			1			
40704002	Petroleum and Solvent Evaporation	Organic Chemical Storage	Fixed Roof Tanks - Carboxylic Acids	Acetic Acid: Working Loss	0.05	0.10	93	1				1			
40703602	Petroleum and Solvent Evaporation	Organic Chemical Storage	Fixed Roof Tanks - Aromatics	Benzene: Working Loss	0.15	0.25	70	3	2			1			
40700815	Petroleum and Solvent Evaporation	Organic Chemical Storage	Fixed Roof Tanks - Alcohols	Methyl Alcohol: Breathing Loss	1.00	1.55	55	5	3		1	1			
40688801	Petroleum and Solvent Evaporation	Transportation and Marketing of Petroleum Products	Fugitive Emissions	Specify in Comments Field	28.57	32.91	15	5	1	1	3				
40600259	Petroleum and Solvent Evaporation	Transportation and Marketing of Petroleum Products	Marine Vessels	Tanker/Barge Cleaning	76.54	111.01	45	2	1					1	
40600249	Petroleum and Solvent Evaporation	Transportation and Marketing of Petroleum Products	Marine Vessels	Jet Fuel: Loading Barges	12.98	24.44	88	2	1					1	
40600239	Petroleum and Solvent Evaporation	Transportation and Marketing of Petroleum Products	Marine Vessels	Gasoline: Tanker Ship - Ballasted Tank Condition	63.17	79.66	26	3	2			1			
40600238	Petroleum and Solvent Evaporation	Transportation and Marketing of Petroleum Products	Marine Vessels	Gasoline: Barges Loading - Uncleaned Tanks	2.95	3.23	9	3	2		1				
40600131	Petroleum and Solvent Evaporation	Transportation and Marketing of Petroleum Products	Tank Cars and Trucks	Gasoline: Submerged Loading (Normal Service)	11.57	17.34	50	6	5			1			
40400305	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Oil and Gas Field Storage and Working Tanks	Internal Floating Roof Tank: Standing Loss	6.89	20.00	190	5						5	
40400304	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Oil and Gas Field Storage and Working Tanks	External Floating Roof Tank with Secondary Seals: Standing Loss	13.44	38.96	190	9						9	

40400260	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Bulk Plants	Specify Liquid: Standing Loss - Internal Floating Roof w/ Primary Seal	6.86	17.65	157	10				7		3
40400240	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Bulk Plants	Specify Liquid: Standing Loss - Ext. Floating Roof w/ Secondary Seal	32.77	95.04	190	9						9
40400179	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Bulk Terminals	Specify Liquid: Internal Floating Roof (Primary/Secondary Seal)	18.14	52.61	190	3						3
40400160	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Bulk Terminals	Specify Liquid: Standing Loss - Internal Floating Roof w/ Primary Seal	45.30	128.06	183	15				2	1	12
40400152	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Bulk Terminals	Vapor Collection Losses	0.02	0.04	120	1					1	
40400151	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Bulk Terminals	Valves, Flanges, and Pumps	13.92	31.91	129	4				2		2
40400150	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Bulk Terminals	Miscellaneous Losses/Leaks: Loading Racks	0.17	0.49	187	1						1
40400140	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Bulk Terminals	Specify Liquid: Standing Loss - Ext. Float Roof Tank w/ Second'y Seal	1.00	2.90	190	1						1
40400130	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Bulk Terminals	Specify Liquid: Standing Loss - External Floating Roof w/ Primary Seal	0.14	0.41	190	1						1
40400122	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Bulk Terminals	Diesel Fuel: Working Loss (Diameter Independent) - Fixed Roof Tank	0.00	0.00	--	1						
40400121	Petroleum and Solvent Evaporation	Petroleum Liquids Storage (non-Refinery)	Bulk Terminals	Diesel Fuel: Standing Loss (Diameter	1.65	3.54	114	6				5		1

				Independent) - Fixed Roof Tank													
40388801	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Fugitive Emissions	Specify in Comments Field	78.49	88.37	13	10	9			1					
40301199	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Specify Liquid: Standing Loss (250000 Bbl. Tank Size)	24.07	47.18	96	26	6			18	1	1			
40301198	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Specify Liquid: Standing Loss (67000 Bbl. Tank Size)	15.23	33.33	119	9				6		3			
40301197	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Specify Liquid: Withdrawal Loss	244.43	518.59	112	133			3	105	1	24			
40301155	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Distillate Fuel #2: Standing Loss - Internal	0.72	2.09	190	3						3			
40301152	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Crude Oil: Standing Loss - Internal	20.76	40.48	95	7				7					
40301151	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Gasoline: Standing Loss - Internal	87.59	176.66	102	19				17		2			
40301150	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Specify Liquid: Standing Loss - Internal	103.56	215.61	108	51	1			47		3			
40301142	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Crude Oil: Standing Loss - External - Secondary Seal	74.87	201.99	170	9				2		7			
40301141	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Gasoline: Standing Loss - External - Secondary Seal	63.48	123.78	95	4				4					
40301140	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Specify Liquid: Standing Loss - External - Secondary Seal	30.78	70.49	129	8	1			4		3			
40301132	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Crude Oil: Standing Loss - External - Primary Seal	4.34	12.57	190	2						2			
40301130	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Specify Liquid: Standing Loss - External - Primary	4.27	8.33	95	1				1					

				Seal											
40301120	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Distillate Fuel #2: Withdrawal Loss	0.87	1.70	95	3				2	1		
40301117	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Crude Oil RVP 5: Withdrawal Loss	3.94	7.69	95	1				1			
40301111	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Jet Naphtha (JP-4): Standing Loss (67000 Bbl. Tank Size)	19.70	38.42	95	5				5			
40301110	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Crude Oil RVP 5: Standing Loss (250000 Bbl. Tank Size)	95.15	196.94	107	17				15		2	
40301109	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Crude Oil RVP 5: Standing Loss (67000 Bbl. Tank Size)	4.06	7.92	95	2				2			
40301108	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Gasoline RVP 13/10/7: Withdrawal Loss (250000 Bbl. Tank Size)	91.92	186.30	103	14				13		1	
40301105	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Gasoline RVP 10: Standing Loss (250000 Bbl. Tank Size)	1.99	3.89	95	1				1			
40301104	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Gasoline RVP 13: Standing Loss (250000 Bbl. Tank Size)	38.81	75.68	95	1				1			
40301103	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Gasoline RVP 7: Standing Loss (67000 Bbl. Tank Size)	58.63	114.34	95	7				7			
40301101	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Floating Roof Tanks (Varying Sizes)	Gasoline RVP 13: Standing Loss (67000 Bbl. Tank Size)	2.18	4.25	95	2				2			
40301099	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Fixed Roof Tanks (Varying Sizes)	Specify Liquid: Working Loss (Tank Diameter Independent)	280.23	284.17	1	140	13	7		1		1	1
40301097	Petroleum and Solvent	Petroleum Product Storage	Fixed Roof Tanks (Varying	Specify Liquid: Breathing Loss	11.63	11.92	2	18	7	2	9				

	Evaporation	at Refineries	Sizes)	(67000 Bbl. Tank Size)										
40301015	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Fixed Roof Tanks (Varying Sizes)	Jet Naphtha (JP-4): Working Loss (Tank Diameter Independent)	4.50	8.77	95	2	1			1		
40300202	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Deleted - Do Not Use (See 4-03-011 and 4-07)	Product **	43.08	96.98	125	23				16		7
40300104	Petroleum and Solvent Evaporation	Petroleum Product Storage at Refineries	Deleted - Do Not Use (See 4-03-010 and 4-07)	Crude **	0.24	0.69	188	1						1
40100302	Petroleum and Solvent Evaporation	Organic Solvent Evaporation	Cold Solvent Cleaning/Stripping	Methylene Chloride	0.75	0.78	5	1		1				
38500101	Industrial Processes	Cooling Tower	Process Cooling	Mechanical Draft	119.98	121.72	1	36	35		1			
31088801	Industrial Processes	Oil and Gas Production	Fugitive Emissions	Specify in Comments Field	22.38	25.29	13	8	7		1			
31000299	Industrial Processes	Oil and Gas Production	Natural Gas Production	Other Not Classified	0.00	0.00	--	1						
30699998	Industrial Processes	Petroleum Industry	Petroleum Products - Not Classified	Not Classified **	54.64	69.15	27	7	5			1		1
30688802	Industrial Processes	Petroleum Industry	Fugitive Emissions	Specify in Comments Field	58.04	66.79	15	10	9		1			
30688801	Industrial Processes	Petroleum Industry	Fugitive Emissions	Specify in Comments Field	900.83	904.09	0	108	106			1		1
30603301	Industrial Processes	Petroleum Industry	Desulfurization	Sulfur Recovery Unit	3.10	3.29	6	4	3			1		
30601201	Industrial Processes	Petroleum Industry	Fluid Coking Units	General	16.99	31.83	87	2	1					1
30600904	Industrial Processes	Petroleum Industry	Flares	Process Gas	71.11	178.68	151	7	6					1
30600813	Industrial Processes	Petroleum Industry	Fugitive Emissions	Pipeline Valves: Heavy Liquid Streams	217.17	260.60	20	3				3		
30600811	Industrial Processes	Petroleum Industry	Fugitive Emissions	Pipeline Valves: Gas Streams	0.55	0.66	20	1				1		
30600805	Industrial Processes	Petroleum Industry	Fugitive Emissions	Miscellaneous: Sampling/Non-Asphalt Blowing/Purging/e	226.07	246.56	9	29		24		5		

				tc.											
30600801	Industrial Processes	Petroleum Industry	Fugitive Emissions	Pipeline Valves and Flanges	426.97	472.54	11	14		10	4				
30600515	Industrial Processes	Petroleum Industry	Wastewater Treatment	Petroleum Refinery Wastewater System: Lift Station	3.64	4.05	11	6	5					1	
30600508	Industrial Processes	Petroleum Industry	Wastewater Treatment	Oil/Water Separator	2.47	7.15	189	2				1		1	
30600505	Industrial Processes	Petroleum Industry	Wastewater Treatment	Wastewater Treatment w/o Separator	6.71	10.26	53	5	4			1			
30600503	Industrial Processes	Petroleum Industry	Wastewater Treatment	Process Drains and Wastewater Separators	47.07	48.32	3	10	8			2			
30600401	Industrial Processes	Petroleum Industry	Blowdown Systems	Blowdown System with Vapor Recovery System with Flaring	76.34	110.59	45	22	19					3	
30199999	Industrial Processes	Chemical Manufacturing	Other Not Classified	Specify in Comments Field	58.93	91.38	55	33	23		1	7		2	
30199998	Industrial Processes	Chemical Manufacturing	Other Not Classified	Specify in Comments Field	40.04	41.02	2	42	38	1		2		1	
30190099	Industrial Processes	Chemical Manufacturing	Fuel Fired Equipment	Specify in Comments Field	309.63	312.72	1	10	6			4			
30190023	Industrial Processes	Chemical Manufacturing	Fuel Fired Equipment	Natural Gas: Flares	1.47	2.87	95	2				2			
30190013	Industrial Processes	Chemical Manufacturing	Fuel Fired Equipment	Natural Gas: Incinerators	15.80	15.80	0	10	9			1			
30188801	Industrial Processes	Chemical Manufacturing	Fugitive Emissions	Specify in Comments Field	3.82	4.35	14	9		5	3	1			
30187098	Industrial Processes	Chemical Manufacturing	Inorganic Chemical Storage (Fixed Roof Tanks)	Specify Liquid: Working Loss	0.19	0.23	24	7	5		1	1			
30183001	Industrial Processes	Chemical Manufacturing	General Processes	Storage/Transfer	1.07	1.12	5	12	7			4	1		
30182002	Industrial Processes	Chemical Manufacturing	Wastewater Treatment	Wastewater Treatment	0.27	0.41	51	3	2					1	
30125101	Industrial Processes	Chemical Manufacturing	Ethylene Glycol	General	14.42	20.35	41	13	11			2			
30125099	Industrial Processes	Chemical Manufacturing	Methanol/Alcohol Production	Other Not Classified	0.11	0.12	10	8	7		1				
30112701	Industrial	Chemical	Fluorocarbons/	General	8.10	8.10	0	5	4			1			

	Processes	Manufacturing	Chlorofluorocarbons												
30112599	Industrial Processes	Chemical Manufacturing	Chlorine Derivatives	Other Not Classified	2.85	7.79	173	2	1					1	
30106099	Industrial Processes	Chemical Manufacturing	Pharmaceutical Preparations	Other Not Classified	43.08	65.34	52	14	12			2			
30102499	Industrial Processes	Chemical Manufacturing	Synthetic Organic Fiber Manufacturing	Other Not Classified	0.08	0.15	82	1			1				
30101899	Industrial Processes	Chemical Manufacturing	Plastics Production	Others Not Specified	43.84	47.27	8	96	92		3	1			