Acronyms (add to list as needed for your project)

bbl	barrel
CO ₂ e	Carbon dioxide equivalents
CO	Carbon monoxide
CTG	Combustion turbine generator
dscf	Dry standard cubic feet
EPN	Emission point number
EFR	External floating roof
gr	Grain
GHG	Greenhouse gases
hr	Hour
H ₂ S	Hydrogen sulfide
IFR	Internal floating roof
Pb	lead
MSS	Maintenance, startup, shutdown

MW	Megawatt			
MWh	Megawatt hour			
MMBtu	Million British thermal units			
NOx	Nitrogen oxides			
O2	Oxygen			
PM/PM ₁₀ /PM _{2.5}	Particulate matter, including PM equal to or			
	less than 10 or 2.5 microns in diameter			
ppm	Parts per million			
lb	Pound			
SCR	Selective catalytic reduction			
SO ₂	Sulfur dioxide			
H_2SO_4	Sulfuric acid			
tpy	Tons per year			
VOC	Volatile organic compounds			

Facility Information

Buckeye Texas Processing, LLC
Buckeye Texas Processing Corpus Christi Facility
Quantification of as-built emissions from two existing crude separation units. The equipment includes cooling towers, a wastewater treatment plant, boilers, heaters, storage tanks, flares, and fugitive components. PSD review is triggered for NOx, VOC, and CO ₂ e.
Nueces
Mr. Anthony (Tony) Cummings, (361) 792-3092
Mr. Lyndon Poole, P.E., (512) 239-6971, Lyndon.Poole@tceq.texas.gov
109923, PSDTX1502, and GHGPSDTX159
O-3869
Both 2 and 3
July 15, 2019
September 15, 2019
2911
324110
110067409067
Big Bend, TX
Greater than 250 km

Pollutants triggering major NSR permitting with this action

NOX	* BACT	* LAER	* MACT
VOC	* BACT	* LAER	* MACT
CO ₂ e	* BACT	* LAER	* MACT

Source of em	issions	Cooling Tower (EPN CT	1)		
Process code source listed	e for emission above	99.009			
Primary fuel	fired (if applicable)	N/A			
Throughput v blank if confi	vith units (leave dential)	3,000 gallons per minut	9		
Source notes	(optional)				
Other applicable requirements * NSPS Click here -Can select multiple * NSPS Click here -List all applicable subchapters and subparts * MACT Click here			enter subpart.	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)
VOC	· ·	*Pollution Prevention *Add On Control			
		*No control	Non-Contact Design		0.08 ppmw VOC

Source of emi	issions	Wastewater Treatment F	Plant (EPNs WW, WWCC)		
Process code source listed		22.200			
Primary fuel f	ired (if applicable)				
Throughput w blank if confid	vith units (leave dential)	0.0432 million gallons p	er day (annual basis)		
Source notes	(optional)				
-Can select -List all app and subpa	licable subchapters	 NSPS A, QQQ NESHAP Click here to MACT Click here to entitive Ch. 115 or 117 Click here Control Method (select more than one) 	ter subpart.	Other factors considered (health effects, etc.)	Numeric Limit with units
VOC	unspecified	as needed) *Pollution Prevention	Fixed Roof Wastewater Tank Vapors Route to Non- Regenerative Carbon Adsorption	Blank = none	(required) 100 ppmv
		*Add On Control *No control	Wastewater Directed to Covered System		

Source of em	issions	Boilers (EPNs BOILER1	, BOILER2, BOILER3)			
-	e for emission	13.390				
source listed						
	fired (if applicable) with units (leave dential)	Refinery Fuel Gas 12 MMBtu/hr Each Boile	r			
Source notes	(optional)					
-Can select -List all app and subpa	blicable subchapters	 NSPS A, Dc, Ja NESHAP Click here to MACT Click here to ent Ch. 115 or 117 Click here 	ter subpart.			
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)	
NOx		*Pollution Prevention *Add On Control *No control	Low-NO _x Burners		0.036 lb/MMBtu	
VOC		*Pollution Prevention *Add On Control *No control	Good Combustion Practices		5.5 lb/MMscf	
CO ₂ e		*Pollution Prevention *Add On Control *No control	Low Carbon Fuel Selection Good Combustion Practices		120,000 lb/MMscf	

Source of emi	ssions	Heaters (EPNs HEATER1, HEATER2)				
Process code source listed		13.390				
	ired (if applicable)	Refinery Fuel Gas				
	ith units (leave	85 MMBtu/hr Each Heat	er			
Source notes	(optional)					
-Can select -List all app and subpar	licable subchapters	 NSPS A, Ja NESHAP Click here to MACT Click here to entities Ch. 115 or 117 Click here 	ter subpart.			
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)	
NOx		*Pollution Prevention *Add On Control *No control	Selective Catalytic Reduction		0.014 lb/MMBtu (1-hr average) 0.010 lb/MMBtu (annual average)	
VOC		*Pollution Prevention *Add On Control *No control	Good Combustion Practices		5.5 lb/MMscf	
CO ₂ e		*Pollution Prevention *Add On Control *No control	Low Carbon Fuel Selection Good Combustion Practices		120,000 lb/MMscf	

Source of emi	ssions	Fixed Roof Tanks (EPNs	5 TK-2005, TK-2006)		
Process code source listed		42.005			
Primary fuel fi	ired (if applicable)				
Throughput w blank if confic	rith units (leave lential)	24,000 bbl/hr Each Tank			
Source notes	(optional)	Material: Atmospheric T	ower Bottoms		
Other applicable requirements -Can select multiple -List all applicable subchapters and subparts -Specify pollutants, if needed* NSPS Click here to enter subparts. * NESHAP Click here to enter subpart. * MACT Click here to enter subpart. * Ch. 115 or 117 Click here to enter subchapter.					
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)
VOC		*Pollution Prevention *Add On Control			
		*No control	Painted White with Submerged Fill		0.23 tpy VOC Each Tank

	Fixed Roof Tanks (EPNs DESLTK1, DESLTK2a, DESLTK2b, DESLTK3a, DESLTK3b, DESLTK3c, DESLTK3d, DESLTK4, DESLTK6, FWDSLTK2, FWDSLTK3,	ł
Source of emissions	FWDSLTK4, FWDSLTK5)	l
Process code for emission	42.005	I

source listed a	above				
Primary fuel fi	red (if applicable)				
Throughput w blank if confid	ith units (leave ential)	Throughput Limited by	Permit Condition (Special Condition No. 20)		
Source notes	(optional)	Material: Diesel			
Other applicable requirements * NSPS Click here to enter subparts. -Can select multiple * NSPS Click here to enter subparts. -List all applicable subchapters and subparts * MACT Click here to enter subpart. -Specify pollutants, if needed * Ch. 115 or 117 Click here to enter subchapter. Pollutant Test Method Control Method Description				Numeric Limit with units	
	Blank = unspecified	(select more than one as needed)		(health effects, etc.) Blank = none	(required)
VOC		*Pollution Prevention *Add On Control			
		*No control	Painted White with Submerged Fill		< 0.01 tpy VOC Each Tank

Source of emi	ssions	Internal Floating Roof Ta	nternal Floating Roof Tanks (EPNs TK-1001, TK-1002, TK-1003, TK-1004, TK-1006)					
Process code source listed		42.006		-				
Primary fuel fi	red (if applicable)							
Throughput w blank if confic	ith units (leave lential)	24,000 bbl/hr Each Tank						
Source notes	(optional)	Material: Crude Oil or Co	ondensate					
-Can select -List all app and subpar	licable subchapters	 NSPS A, Kb NESHAP Click here to MACT Click here to ent Ch. 115 or 117 Click here 	ter subpart.					
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)			
VOC	•							
		*Pollution Prevention *Add On Control *No control	Painted White, Submerged Fill, Drain-Dry Design, Mechanical Primary Seal		4.10 tpy VOC Each Tank			

Source of emis	sions	Internal Floating Roof Tank (EPN TK-1005)					
Process code f		42.006					
Primary fuel fir	ed (if applicable)						
Throughput wi blank if confide		24,000 bbl/hr					
Source notes (optional)	Material: Crude Oil, Con	densate, Naphtha, Jet Fuel, Kerosene, Distillate, or ATB				
-Can select r -List all appli and subpart	cable subchapters	* MACT Click here to ent	 * NSPS A, Kb * NESHAP Click here to enter subpart. * MACT Click here to enter subpart. * Ch. 115 or 117 Click here to enter subchapter. 				
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)		
VOC	•						
		*Pollution Prevention *Add On Control *No control	Painted White, Submerged Fill, Drain-Dry Design, Mechanical Primary Seal		2.59 tpy VOC		

Source of emissions Internal Floating Roof Tank (EPN TK-2001)					
Process code source listed a		42.006			
Primary fuel fi	red (if applicable)				
Throughput w blank if confid	ith units (leave ential)	24,000 bbl/hr			
Source notes	optional)	Material: Jet Fuel, Keros	ene, or Distillate		
-Can select -List all appl and subpar	cable subchapters	 NSPS Click here to ent NESHAP Click here to MACT Click here to ent Ch. 115 or 117 Click here 	enter subpart. er subpart.		
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)
VOC		*Pollution Prevention *Add On Control *No control	Painted White, Submerged Fill, Drain-Dry Design, Mechanical Primary Seal		0.22 tpy VOC

Source of emi	ssions	Internal Floating Roof T	ank (EPN TK-2002)		
Process code source listed a		42.006			
	red (if applicable)				
Throughput w blank if confid	ith units (leave ential)	24,000 bbl/hr Each Tank			
Source notes	(optional)	Material: Jet Fuel, Keros	sene, or Distillate		
-Can select -List all appl and subpar	icable subchapters	* NSPS Click here to ent * NESHAP Click here to * MACT Click here to ent * Ch. 115 or 117 Click here Control Method (select more than one	enter subpart. ter subpart.	Other factors considered (health effects, etc.)	Numeric Limit with units
	unspecified	as needed)		Blank = none	(required)
VOC		*Pollution Prevention *Add On Control *No control	Painted White, Submerged Fill, Drain-Dry Design, Mechanical Primary Seal		0.30 tpy VOC

Source of emissions	Internal Floating Roof Tank (EPN TK-2003)
Process code for emission source listed above	42.006
Primary fuel fired (if applicable)	
Throughput with units (leave blank if confidential)	24,000 bbl/hr
Source notes (optional)	Material: Jet Fuel, Kerosene, or Distillate
Other applicable requirements	* NSPS Click here to enter subparts.
-Can select multiple	* NESHAP Click here to enter subpart.
 -List all applicable subchapters and subparts 	* MACT Click here to enter subpart.
-Specify pollutants, if needed	* Ch. 115 or 117 Click here to enter subchapter.

Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)
VOC		*Pollution Prevention *Add On Control *No control	Painted White, Submerged Fill, Drain-Dry Design, Mechanical Primary Seal		0.24 tpy VOC

Source of emissions Internal Floating F			ank (EPN TK-2004)				
Process code source listed a		42.006					
Primary fuel fir	ed (if applicable)						
Throughput wi blank if confide		24,000 bbl/hr Each Tank	24,000 bbl/hr Each Tank				
Source notes (optional)	Material: Jet Fuel, Keros	sene, or Distillate				
-Can select r -List all appli and subpart	cable subchapters	 * NSPS Click here to ent * NESHAP Click here to * MACT Click here to ent * Ch. 115 or 117 Click here 	enter subpart. er subpart.				
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)		
VOC		*Pollution Prevention *Add On Control *No control	Painted White, Submerged Fill, Drain-Dry Design, Mechanical Primary Seal		0.27 tpy VOC		

Source of emi	ssions	Internal Floating Roof Ta	anks (EPNs TK-3001, TK-3002, TK-3003, TK-3004, TK-	3005)	
Process code source listed a		42.006			
Primary fuel fi	ired (if applicable)				
Throughput w blank if confid	rith units (leave lential)	24,000 bbl/hr Each Tank	(
Source notes	(optional)	Material: Naphtha			
-Can select -List all app and subpar	licable subchapters ts lutants, if needed Test Method	 NSPS A, Kb NESHAP Click here to MACT Click here to ent Ch. 115 or 117 Click here Control Method 	ter subpart.	Other factors considered	Numeric Limit
	Blank = unspecified	(select more than one as needed)		(health effects, etc.) Blank = none	with units (required)
VOC					
		*Pollution Prevention *Add On Control *No control	Painted White, Submerged Fill, Drain-Dry Design, Mechanical Primary Seal		TK-3001: 0.86 tpy TK-3002: 2.34 tpy TK-3003: 2.34 tpy TK-3004: 3.22 tpy TK-3005: 3.22 tpy

Source of emis	ssions	Internal Floating Roof Ta	ank (EPN TK-3001)				
Process code source listed a		42.006					
Primary fuel fi	red (if applicable)						
Throughput wi blank if confid	ith units (leave ential)	24,000 bbl/hr Each Tank					
Source notes	(optional)	Material: Naphtha					
-Can select -List all appl and subpar	icable subchapters	* MACT Click here to ent	 * NSPS A, Kb * NESHAP Click here to enter subpart. * MACT Click here to enter subpart. * Ch. 115 or 117 Click here to enter subchapter. 				
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)		
VOC	•						
		*Pollution Prevention *Add On Control *No control	Painted White, Submerged Fill, Drain-Dry Design, Mechanical Primary Seal		0.86 tpy VOC		

Source of emi	ssions	Internal Floating Roof Ta	anks (EPNs TK-3002, TK-3003)			
Process code source listed		42.006				
Primary fuel f	ired (if applicable)					
Throughput w blank if config	rith units (leave lential)	24,000 bbl/hr Each Tank				
Source notes	(optional)	Material: Heavy Naphtha	a			
-Can select -List all app and subpa	licable subchapters rts llutants, if needed	 * NSPS A, Kb * NESHAP Click here to enter subpart. * MACT Click here to enter subpart. * Ch. 115 or 117 Click here to enter subchapter. 				
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)	
VOC	•					
		*Pollution Prevention *Add On Control *No control	Painted White, Submerged Fill, Drain-Dry Design, Mechanical Primary Seal		2.34 tpy VOC Each Tank	

Source of emi	issions	Internal Floating Roof Ta	anks (EPNs TK-3004, TK-3005)				
Process code source listed	for emission above	42.006					
Primary fuel f	ired (if applicable)						
Throughput w blank if confid	vith units (leave dential)	24,000 bbl/hr					
Source notes	(optional)	Material: Light Naphtha					
-Can select -List all app and subpa	licable subchapters	* MACT Click here to ent	 * NSPS A, Kb * NESHAP Click here to enter subpart. * MACT Click here to enter subpart. * Ch. 115 or 117 Click here to enter subchapter. 				
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)		
VOC	•						
		*Pollution Prevention *Add On Control *No control	Painted White, Submerged Fill, Drain-Dry Design, Mechanical Primary Seal		3.22 tpy VOC Each Tank		

Source of emissions Tank Roof Landings (EPN MSS)						
Process code source listed	<u>e for emission</u> above	42.006				
Primary fuel	fired (if applicable)					
Throughput v blank if confi	with units (leave idential)	1,229.39 lb/hr Waste Gas	s to Flare			
Source notes	s (optional)		s with EPNs TK-1001, TK-1002, TK-1003, TK-1004, TK- 2005 - Controlled by Flare (EPN MSS)	1005, TK-1006, TK-2001, TK-2002,	TK-2003, TK-2004, TK-3001, TK-3002, TK-	
-Can selec -List all ap	plicable subchapters	 * NSPS A (40 CFR 60.18) * NESHAP Click here to enter subpart. * MACT Click here to enter subpart. 				
and subpa -Specify po	ollutants, if needed	* Ch. 115 or 117 Click here to enter subchapter.				
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)	
VOC						
		*Pollution Prevention *Add On Control	Flare (EPN MSS) - Meets 40 CFR § 60.18. Steam			
		*No control	Assisted.		98% Destruction Efficiency for VOC	

Source of em	nissions	Tank Degassing (EPN M	(22)		
	e for emission	42.006			
Primary fuel	fired (if applicable)				
Throughput blank if confi	with units (leave	20,000 lb/hr Waste Gas t	to Flare		
Source notes	s (optional)		ks with EPNs TK-1001, TK-1002, TK-1003, TK-1004, TK 8005 - Controlled by Flare (EPN MSS)	K-1005, TK-1006, TK-2001, TK-2002	2, TK-2003, TK-2004, TK-3001, TK-3002, TK-
-Can selec -List all ap and subpa	plicable subchapters	 NSPS A (40 CFR 60.18 NESHAP Click here to MACT Click here to ent Ch. 115 or 117 Click here 	enter subpart. ter subpart.		
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)
VOC					
		*Pollution Prevention *Add On Control *No control	Flare (EPN MSS) - Meets 40 CFR § 60.18. Steam Assisted.		98% Destruction Efficiency for VOC

Source of emissions		Flare (EPN MSS)				
Process code for emission source listed above		19.330				
Primary fuel fired (if applicable)		Waste Gas				
Throughput with units (leave blank if confidential)		20,000 lb/hr Waste Gas to Flare				
Source notes (optional)		Includes Tank and Equipment MSS				
Other applicable requirements -Can select multiple -List all applicable subchapters and subparts -Specify pollutants, if needed		 * NSPS A (40 CFR §60.18) * NESHAP Click here to enter subpart. * MACT Click here to enter subpart. * Ch. 115 or 117 Click here to enter subchapter. 				
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)	
VOC		*Pollution Prevention *Add On Control *No control	Meets design and operating criteria of 40 CFR § 60.18. Steam assisted.		98% Destruction Efficiency for VOC	
NO _x		*Pollution Prevention *Add On Control *No control	Use of pipeline quality natural gas. Meet design and operating criteria of 40 CFR § 60.18. Steam Assisted.		6.90 tpy NO _x	
CO ₂ e		*Pollution Prevention *Add On Control *No control	Good Combustion Practices		16,745 tpy CO ₂ e	

Source of emissions		Flare (EPN FLARE1)				
Process code for emission		19.330				
source listed above Primary fuel fired (if applicable)		Vaste Gas				
Throughput with units (leave blank if confidential)		20,000 lb/hr Waste Gas to Flare				
Source notes (optional)		Includes MSS for Liquefied Petroleum Gas Tanks				
Other applicable requirements -Can select multiple -List all applicable subchapters and subparts -Specify pollutants, if needed		 * NSPS A (40 CFR §60.18) * NESHAP Click here to enter subpart. * MACT Click here to enter subpart. * Ch. 115 or 117 Click here to enter subchapter. 				
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)	
VOC		*Pollution Prevention *Add On Control *No control	Meets design and operating criteria of 40 CFR § 60.18. Air assisted.		98% Destruction Efficiency for VOC	
NO _x		*Pollution Prevention *Add On Control *No control	Use of pipeline quality natural gas. Meet design and operating criteria of 40 CFR § 60.18. Steam Assisted.		18.42 tpy NO _x	
CO ₂ e		*Pollution Prevention *Add On Control *No control	Good Combustion Practices		19,363 tpy CO ₂ e	

Source of emissions		Storage Tank MSS (EPN	MSS-ATM)			
Process code for emission source listed above		50.999				
Primary fuel fired (if applicable)						
Throughput with units (leave blank if confidential)						
Source notes (optional)		Includes Uncontrolled Tank Emissions Following Degassing				
Other applicable requirements -Can select multiple -List all applicable subchapters and subparts -Specify pollutants, if needed		 * NSPS A, * NESHAP Click here to enter subpart. * MACT A, CC * Ch. 115 or 117 Click here to enter subchapter. 				
Pollutant	Test Method Blank = unspecified	Control Method (select more than one as needed)	Control Method Description	Other factors considered (health effects, etc.) Blank = none	Numeric Limit with units (required)	
VOC	EPA Method 21	*Pollution Prevention *Add On Control *No control	Vessels are depressurized/degassed to control until the residual VOC concentration is less than or equal to 10,000 ppmv or 10% of the LEL.		10,000 ppmv	

Source of emissions		Fugitive Components (EPNs FUG, FUG1, ATM1, ATM2)				
Process code for emission source listed above		50.007				
Primary fuel fired (if applicable)		N/A				
Throughput with units (leave blank if confidential)						
Source notes (optional)						
Other applicable requirements -Can select multiple -List all applicable subchapters and subparts -Specify pollutants, if needed Pollutant Test Method		 * NSPS A, GGGa * NESHAP Click here to enter subpart. * MACT Click here to enter subpart. * Ch. 115 or 117 Click here to enter subchapter. Control Method Description Other factors considered Numeric Limit				
	Blank = unspecified	(select more than one as needed)		(health effects, etc.) Blank = none	with units (required)	
VOC		*Pollution Prevention *Add On Control *No control	Leak detection and repair (LDAR) monitoring and directed maintenance in accordance with the 28VHP program.		500 ppmv (valves, connectors) 2,000 ppmv (pumps, compressors, agitators)	