PERMIT APPLICATION FOR NATURAL GAS PROCESSING PLANTS

NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY
SFN 11408 (3-2019)

NOTE: READ INSTRUCTIONS BEFORE COMPLETING THIS FORM.
- Must include SFN 8516 or SFN 52858

SECTION A – GENERAL INFORMATION

Name of Firm or Organization	Facility Name

SECTION B - SWEETENING OPERATIONS

Chemical Process (Amine, Selexol, Stretford, Etc.)	Inlet Gas Capacity (10^6 SCF/day)
Inlet Gas Composition (Mol %)	
Hydrogen Sulfide, H_2S	Methane, C_1
Carbon Dioxide, CO_2	Ethane, C_2
Water, H_2O	Propane Plus, C_3+
Nitrogen, N_2	Greenhouse Gasses (as CO_2e)
Other – Specify:	

SECTION C – ACID GAS FLARE (STACK DATA)

Height Above Grade (ft)	Inside Diameter at Exit (ft)	
Average Acid Gas Flow Rate to Flare	(SCFM)	(ACFM)
Maximum Acid Gas Flow Rate to Flare	(SCFM)	(ACFM)
H_2S Content (%)	Heat Content of Gas (Btu/ACF)	

SECTION D – ACID GAS FLARE (AIR CONTAMINANTS EMITTED)

Pollutant	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities:
Particulate (PM, PM_{10}, $PM_{2.5}$)			
Sulfur Dioxide (SO_2)			
Nitrogen Oxides (NO_x)			
Carbon Monoxide (CO)			
Greenhouse Gases (as CO_2e)			
HAPS			
Other – Specify:			

SECTION E – SULFUR RECOVERY OPERATIONS

Chemical Process (Klaus, Amoco, MRCR, etc.)		Acid Gas Flow Rate (10^6 SCF/day)	
Stack Diameter (feet at top)	Gas Discharged (SCFM)	Exit Temp (°F)	Gas Velocity (FPS)
Acid Gas Composition (Mol %)			
Hydrogen Sulfide, H_2S		Methane, C_1	
Carbon Dioxide, CO_2		Ethane, C_2	
Water, H_2O		Propane Plus, C_3+	
Greenhouse Gasses (as CO_2e)			
Other – Specify:			
Is a tail gas cleanup process used for reducing SO_2 emissions? ◯ Yes ◯ No		Tail Gas Cleanup Process (CBA, Dulfreen, SCOT, etc.)	
Overall Recovery Efficiency (%)		Elemental Sulfur Recovered (LT/Day)	

SECTION F – TAIL GAS INCINERATOR (OPERATIONS)

Name of Incinerator Manufacturer	
Model Number	Heat Release (Btu/hr)
Inlet Gas Composition (Mol %)	
Hydrogen Sulfide, H_2S	Nitrogen, N
Carbon Dioxide, CO_2	Water, H_2O
Other – Specify:	

SECTION G – TAIL GAS INCINERATOR (STACK DATA)

Height Above Grade (ft)	Inside Diameter at Exit (ft)	
Gas Temperature at Exit (Average °F)	Gas Velocity at Exit (Average FPS)	
Average Acid Gas Flow Rate to Flare	(SCFM)	(ACFM)
Maximum Acid Gas Flow Rate to Flare	(SCFM)	(ACFM)

SECTION H – TAIL GAS INCINERATOR (AIR CONTAMINANTS EMITTED)

Pollutant	Maximum Pounds Per Hour	Tons Per Hour	Basis and Calculations for Quantities:
Particulate (PM, PM_{10}, $PM_{2.5}$)			
Sulfur Dioxide (SO_2)			
Nitrogen Dioxide (NO_2)			
Carbon Monoxide (CO)			
Greenhouse Gases (as CO_2e)			
HAPS			
Other – Specify:			

SECTION I – EMERGENCY FLARE (STACK DATA)

Height Above Grade (ft)	Inside Diameter at Exit (ft)	
Average Acid Gas Flow Rate to Flare	(SCFM)	(ACFM)
Maximum Acid Gas Flow Rate to Flare	(SCFM)	(ACFM)
H_2S Content (%)	Heat Content of Gas (Btu/ACF)	

SECTION J – EMERGENCY FLARE (AIR CONTAMINANTS EMITTED)

Pollutant	Maximum Pounds Per Hour	Tons Per Hour	Basis and Calculations for Quantities:
Particulate (PM, PM_{10}, $PM_{2.5}$)			
Sulfur Dioxide (SO_2)			
Nitrogen Oxides (NO_x)			
Carbon Monoxide (CO)			
Greenhouse Gases (as CO_2e)			
HAPS			
Other – Specify:			

Attach and label separate sheet(s) if you need more space to explain any system or answers or to provide complete listings of Emissions, Contaminants, or other items.

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

North Dakota Department of Environmental Quality
Division of Air Quality
918 E Divide Avenue, 2nd Floor
Bismarck, ND 58501-1947
(701) 328-5188