Pollutant Emitted ***Ethylbenzene***	Chemical Abstract Services (CAS) Number ***100-41-4***
Proposed Emission Rate (lb/hr) ***1.50x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.15x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.37 in Hg @ 77°F***
Solubility ***In water 0.014 g/100mL @ 59 °F***	Molecular Weight (lb/lb-mole) ***106.17***
Absorptive Properties -	

Pollutant Emitted ***Formaldehyde***	Chemical Abstract Services (CAS) Number ***50-00-0***
Proposed Emission Rate (lb/hr) ***6.94x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.87x10^{-2}***	Vapor Pressure (in. Hg @ °F) ***0.15 in Hg @ 77 °F***
Solubility ***In water 4.00 x10^{5} mg/L @ 68°F***	Molecular Weight (lb/lb-mole) ***30.03***
Absorptive Properties -	

Pollutant Emitted ***Hexane***	Chemical Abstract Services (CAS) Number ***110-54-5***
Proposed Emission Rate (lb/hr) ***1.69x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.59x10^{-1}***	Vapor Pressure (in. Hg @ °F) ***5.90 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***86.1***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***5.63x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***3.56x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***3.09 x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***2.72x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***1.12 in Hg @ 77°F***
Solubility ***In water 526 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***2.34x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.79x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Pollutant Emitted ***PAH***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***3.99x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***3.32x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***N/A***
Solubility ***N/A***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Pollutant Emitted ***Antimony***	Chemical Abstract Services (CAS) Number ***7740-36-0***
Proposed Emission Rate (lb/hr) ***1.95x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/particulate***
Concentration in Emission Stream (ppmv) ***1.30x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***121.76***
Absorptive Properties -	

Pollutant Emitted ***Arsenic***	Chemical Abstract Services (CAS) Number ***7440-38-2***
Proposed Emission Rate (lb/hr) ***$7.50x10^{-7}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***$8.12x10^{-5}$***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Beryllium***	Chemical Abstract Services (CAS) Number ***7440-41-7***
Proposed Emission Rate (lb/hr) ***$4.88x10^{-7}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***$4.39x10^{-4}$***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***9.01***
Absorptive Properties -	

Pollutant Emitted ***Cadmium***	Chemical Abstract Services (CAS) Number ***7440-43-9***
Proposed Emission Rate (lb/hr) ***$4.13x10^{-6}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***$2.98x10^{-4}$***	Vapor Pressure (in. Hg @ °F) ***0 in Hg@ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Chromium (hexavalent)***	Chemical Abstract Services (CAS) Number ***1333-82-0***
Proposed Emission Rate (lb/hr) ***$1.05x10^{-6}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***$1.64x10^{-4}$***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @77°F***
Solubility ***1,660 g/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

Pollutant Emitted ***Chromium***	Chemical Abstract Services (CAS) Number ***7440-47-3***
Proposed Emission Rate (lb/hr) ***5.25x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***8.19x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

Pollutant Emitted ***Cobalt***	Chemical Abstract Services (CAS) Number ***7440-48-4***
Proposed Emission Rate (lb/hr) ***3.08x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***4.23x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.93***
Absorptive Properties -	

Pollutant Emitted ***Manganese***	Chemical Abstract Services (CAS) Number
Proposed Emission Rate (lb/hr) ***1.39x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.05x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***54.94***
Absorptive Properties -	

Pollutant Emitted ***Mercury***	Chemical Abstract Services (CAS) Number ***7439-97-6***
Proposed Emission Rate (lb/hr) ***9.38x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.79x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***7.85x10^{-5} in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***200.59***
Absorptive Properties -	

Pollutant Emitted ***Nickel***	Chemical Abstract Services (CAS) Number ***7044-02-0***
Proposed Emission Rate (lb/hr) ***7.88x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***1.09x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg Q 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.69***
Absorptive Properties -	

Pollutant Emitted ***Selenium***	Chemical Abstract Services (CAS) Number ***7782-49-2***
Proposed Emission Rate (lb/hr) ***3.30x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.39x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0.29 in Hg @ 807***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***78.96***
Absorptive Properties -	

Signature of Applicant 	Date 09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR
HAZARDOUS AIR POLLUTANT (HAP) SOURCES

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8329 (09-12)

SECTION A1 - APPLICANT INFORMATION

Name of Firm or Organization ***Meridian Energy Group - Davis Refinery***		
Applicant's Name ***Tom Williams***		
Title ***VP of Planning &Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***

SECTION A2 - FACILITY INFORMATION

Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number ***(409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***
Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Alkylation Unit / Iso-Stripper Reboiler

SECTION B – STACK DATA

Inside Diameter (ft) ***4.0***	Height Above Grade (ft) ***95.0***	
Gas Temperature at Exit (°F) ***785.5***	Gas Velocity at Exit (ft/sec) ***22.4***	Gas Volume (scfm) ***16,894.20***
Basis of any Estimates (attach separate sheet if necessary) ***Engineering data and Emission factors from Table 1.4-2. AP 42, Chapter 1: External Combustion Sources. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☒ No ☐
Nearest Residences or Building ***Utility building***	Distance (ft) ***1,091 ft***	Direction ***Southwest***
Nearest Property Line ***Fenceline***	Distance (ft) ***536 ft***	Direction ***East***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***118-H-1801***	Mean Particle Diameter (μm) ***TBD***
Flow Rate (scfm) ***16,894.20***	Drift Velocity (ft/sec) ***22.4***
Stream Temperature (°F) ***785.5***	Particulate Concentration (gr/dscf) ***TBD***
Moisture Content (%) ***TBD***	Halogens or Metals Present? ***Metals***
Pressure (in. Hg) ***TBD***	Organic Content (ppmv) $***9.22x10^{-1}***$
Heat Content (Btu/scfm) ***TBD***	O_2 Content (%) ***N/A***

SECTION D – POLLUTANT SPECIFIC DATA (Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***Acetaldehyde***	Chemical Abstract Services (CAS) Number ***75-07-0***
Proposed Emission Rate (lb/hr) $***2.53x10^{-4}***$	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic Vapor***
Concentration in Emission Stream (ppmv) $***5.15x10^{-3}***$	Vapor Pressure (in. Hg @ °F) ***35.51 in Hg @ 68°C***
Solubility $***1x10^{+6}$ mg/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***44.05***
Absorptive Properties -	

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) $***4.42x10^{-5}***$	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) $***5.08x10^{-4}***$	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility $***In water 1.79x10^{3} mg/L @ 77 °F***$	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Dichlorobenzene***	Chemical Abstract Services (CAS) Number ***Varies***
Proposed Emission Rate (lb/hr) $***2.53x10^{-5}***$	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) $***1.54x10^{-4}***$	Vapor Pressure (in. Hg @ °F) ***Varies***
Solubility ***Varies***	Molecular Weight (lb/lb-mole) ***147.00***
Absorptive Properties -	

Pollutant Emitted ***Ethylbenzene***	Chemical Abstract Services (CAS) Number ***100-41-4***
Proposed Emission Rate (lb/hr) ***3.37x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***2.85x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.37 in Hg @ 77°F***
Solubility ***In water 0.014 g/100mL @ 59 °F***	Molecular Weight (lb/lb-mole) ***106.17***
Absorptive Properties -	

Pollutant Emitted ***Formaldehyde***	Chemical Abstract Services (CAS) Number ***50-00-0***
Proposed Emission Rate (lb/hr) ***1.56x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***4.66x10^{-2}***	Vapor Pressure (in. Hg @ °F) ***0.15 in Hg @ 77 °F***
Solubility ***In water 4.00 x10^{5} mg/L @ 68°F***	Molecular Weight (lb/lb-mole) ***30.03***
Absorptive Properties -	

Pollutant Emitted ***Hexane***	Chemical Abstract Services (CAS) Number ***110-54-5***
Proposed Emission Rate (lb/hr) ***3.79x10^{-2}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***3.95x10^{-1}***	Vapor Pressure (in. Hg @ °F) ***5.90 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***86.1***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***1.26x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***8.85x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***6.95x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***6.77x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***1.12 in Hg @ 77°F***
Solubility ***In water 526 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***5.26x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***4.45x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Pollutant Emitted ***PAH***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***8.96x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***8.25x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***N/A***
Solubility ***N/A***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Pollutant Emitted ***Antimony***	Chemical Abstract Services (CAS) Number ***7740-36-0***
Proposed Emission Rate (lb/hr) ***4.38x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/particulate***
Concentration in Emission Stream (ppmv) ***3.23x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***121.76***
Absorptive Properties -	

Pollutant Emitted ***Arsenic***	Chemical Abstract Services (CAS) Number ***7440-38-2***
Proposed Emission Rate (lb/hr) ***1.68x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.02x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Beryllium***	Chemical Abstract Services (CAS) Number ***7440-41-7***
Proposed Emission Rate (lb/hr) ***1.09x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***1.09x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***9.01***
Absorptive Properties -	

Pollutant Emitted ***Cadmium***	Chemical Abstract Services (CAS) Number ***7440-43-9***
Proposed Emission Rate (lb/hr) ***9.26x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***7.40x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg@ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Chromium (hexavalent)***	Chemical Abstract Services (CAS) Number ***1333-82-0***
Proposed Emission Rate (lb/hr) ***2.36x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***4.07x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @77°F***
Solubility ***1,660 g/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

Pollutant Emitted ***Chromium***	Chemical Abstract Services (CAS) Number ***7440-47-3***
Proposed Emission Rate (lb/hr) ***1.18x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.04x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

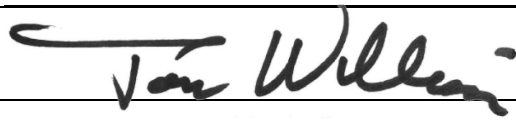
Pollutant Emitted ***Cobalt***	Chemical Abstract Services (CAS) Number ***7440-48-4***
Proposed Emission Rate (lb/hr) ***6.90x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***1.05x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.93***
Absorptive Properties -	

Pollutant Emitted ***Manganese***	Chemical Abstract Services (CAS) Number
Proposed Emission Rate (lb/hr) ***3.12x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***5.09x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***54.94***
Absorptive Properties -	

Pollutant Emitted ***Mercury***	Chemical Abstract Services (CAS) Number ***7439-97-6***
Proposed Emission Rate (lb/hr) ***2.10x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***9.42x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***7.85x10^{-5} in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***200.59***
Absorptive Properties -	

Pollutant Emitted ***Nickel***	Chemical Abstract Services (CAS) Number ***7044-02-0***
Proposed Emission Rate (lb/hr) ***1.77x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.70x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg Q 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.69***
Absorptive Properties -	

Pollutant Emitted ***Selenium***	Chemical Abstract Services (CAS) Number ***7782-49-2***
Proposed Emission Rate (lb/hr) ***7.41x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***8.42x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0.29 in Hg @ 807***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***78.96***
Absorptive Properties -	

Signature of Applicant 	Date 09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR
HAZARDOUS AIR POLLUTANT (HAP) SOURCES

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8329 (09-12)

SECTION A1 - APPLICANT INFORMATION

Name of Firm or Organization ***Meridian Energy Group - Davis Refinery***		
Applicant's Name ***Tom Williams***		
Title ***VP of Planning &Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***

SECTION A2 - FACILITY INFORMATION

Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number ***(409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***
Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Kero Hydrotreater / Heater

SECTION B – STACK DATA

Inside Diameter (ft) ***2.5***	Height Above Grade (ft) ***96.0***	
Gas Temperature at Exit (°F) ***764.3***	Gas Velocity at Exit (ft/sec) ***21.9***	Gas Volume (scfm) ***6,224.68***
Basis of any Estimates (attach separate sheet if necessary) ***Engineering data and Emission factors from Table 1.4-2. AP 42, Chapter 1: External Combustion Sources. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☐ No ☒
Nearest Residences or Building ***Utility building***	Distance (ft) ***778 ft***	Direction ***South***
Nearest Property Line ***Fenceline***	Distance (ft) ***970 ft***	Direction ***Southwest***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***125-H-2501***	Mean Particle Diameter (μm) ***TBD***
Flow Rate (scfm) ***6,224.68***	Drift Velocity (ft/sec) ***21.9***
Stream Temperature (°F) ***764.3***	Particulate Concentration (gr/dscf) ***TBD***
Moisture Content (%) ***TBD***	Halogens or Metals Present? ***Metals***
Pressure (in. Hg) ***TBD***	Organic Content (ppmv) $***3.65x10^{-1}***$
Heat Content (Btu/scfm) ***TBD***	O_2 Content (%) ***N/A***

SECTION D – POLLUTANT SPECIFIC DATA
(Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***Acetaldehyde***	Chemical Abstract Services (CAS) Number ***75-07-0***
Proposed Emission Rate (lb/hr) $***3.75x10^{-5}***$	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic Vapor***
Concentration in Emission Stream (ppmv) $***2.04x10^{-3}***$	Vapor Pressure (in. Hg @ °F) ***35.51 in Hg @ 68°C***
Solubility $***1x10^{+6}$ mg/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***44.05***
Absorptive Properties -	

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) $***6.56x10^{-6}***$	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) $***2.01x10^{-4}***$	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility $***In water 1.79x10^{3} mg/L @ 77 °F***$	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Dichlorobenzene***	Chemical Abstract Services (CAS) Number ***Varies***
Proposed Emission Rate (lb/hr) $***3.75x10^{-6}***$	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) $***6.11x10^{-5}***$	Vapor Pressure (in. Hg @ °F) ***Varies***
Solubility ***Varies***	Molecular Weight (lb/lb-mole) ***147.00***
Absorptive Properties -	

Pollutant Emitted ***Ethylbenzene***	Chemical Abstract Services (CAS) Number ***100-41-4***
Proposed Emission Rate (lb/hr) ***5.00x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.13x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.37 in Hg @ 77°F***
Solubility ***In water 0.014 g/100mL @ 59 °F***	Molecular Weight (lb/lb-mole) ***106.17***
Absorptive Properties -	

Pollutant Emitted ***Formaldehyde***	Chemical Abstract Services (CAS) Number ***50-00-0***
Proposed Emission Rate (lb/hr) ***2.31x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.84x10^{-2}***	Vapor Pressure (in. Hg @ °F) ***0.15 in Hg @ 77 °F***
Solubility ***In water 4.00 x10^{5} mg/L @ 68°F***	Molecular Weight (lb/lb-mole) ***30.03***
Absorptive Properties -	

Pollutant Emitted ***Hexane***	Chemical Abstract Services (CAS) Number ***110-54-5***
Proposed Emission Rate (lb/hr) ***5.63x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.56x10^{-1}***	Vapor Pressure (in. Hg @ °F) ***5.90 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***86.1***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***1.88x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***3.50x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***1.03x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***2.86x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***1.12 in Hg @ 77°F***
Solubility ***In water 526 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***7.81x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.76x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Pollutant Emitted ***PAH***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***1.33x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***3.27x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***N/A***
Solubility ***N/A***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Pollutant Emitted ***Antimony***	Chemical Abstract Services (CAS) Number ***7740-36-0***
Proposed Emission Rate (lb/hr) ***6.50x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/particulate***
Concentration in Emission Stream (ppmv) ***1.28x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***121.76***
Absorptive Properties -	

Pollutant Emitted ***Arsenic***	Chemical Abstract Services (CAS) Number ***7440-38-2***
Proposed Emission Rate (lb/hr) ***2.50x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***7.99x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Beryllium***	Chemical Abstract Services (CAS) Number ***7440-41-7***
Proposed Emission Rate (lb/hr) ***1.63x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***4.32x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***9.01***
Absorptive Properties -	

Pollutant Emitted ***Cadmium***	Chemical Abstract Services (CAS) Number ***7440-43-9***
Proposed Emission Rate (lb/hr) ***1.38x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.93x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg@ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Chromium (hexavalent)***	Chemical Abstract Services (CAS) Number ***1333-82-0***
Proposed Emission Rate (lb/hr) ***3.50x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***1.61x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @77°F***
Solubility ***1,660 g/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

Pollutant Emitted ***Chromium***	Chemical Abstract Services (CAS) Number ***7440-47-3***
Proposed Emission Rate (lb/hr) ***1.75x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***8.06x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

Pollutant Emitted ***Cobalt***	Chemical Abstract Services (CAS) Number ***7440-48-4***
Proposed Emission Rate (lb/hr) ***1.03x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***4.17x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.93***
Absorptive Properties -	

Pollutant Emitted ***Manganese***	Chemical Abstract Services (CAS) Number
Proposed Emission Rate (lb/hr) ***4.63x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.02x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***54.94***
Absorptive Properties -	

Pollutant Emitted ***Mercury***	Chemical Abstract Services (CAS) Number ***7439-97-6***
Proposed Emission Rate (lb/hr) ***3.13x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.73x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***7.85x10^{-5} in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***200.59***
Absorptive Properties -	

Pollutant Emitted ***Nickel***	Chemical Abstract Services (CAS) Number ***7044-02-0***
Proposed Emission Rate (lb/hr) ***2.63x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***1.07x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg Q 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.69***
Absorptive Properties -	

Pollutant Emitted ***Selenium***	Chemical Abstract Services (CAS) Number ***7782-49-2***
Proposed Emission Rate (lb/hr) ***1.10x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.34x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0.29 in Hg @ 807***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***78.96***
Absorptive Properties -	

Signature of Applicant 	Date 09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR
HAZARDOUS AIR POLLUTANT (HAP) SOURCES

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8329 (09-12)

SECTION A1 - APPLICANT INFORMATION

Name of Firm or Organization ***Meridian Energy Group - Davis Refinery***		
Applicant's Name ***Tom Williams***		
Title ***VP of Planning &Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***

SECTION A2 - FACILITY INFORMATION

Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number ***(409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***
Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Utility Boiler 1

SECTION B – STACK DATA

Inside Diameter (ft) ***3.0***	Height Above Grade (ft) ***100***	
Gas Temperature at Exit (°F) ***294.2***	Gas Velocity at Exit (ft/sec) ***93.9***	Gas Volume (scfm) ***19,914.79***
Basis of any Estimates (attach separate sheet if necessary) ***Engineering data and Emission factors from Table 1.4-2. AP 42, Chapter 1: External Combustion Sources. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☐ No ☒
Nearest Residences or Building ***Utility building***	Distance (ft) ***0 ft***	Direction ***N/A***
Nearest Property Line ***Fenceline***	Distance (ft) ***451 ft***	Direction ***East***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***202-PK-0201A***	Mean Particle Diameter (μm) ***TBD***
Flow Rate (scfm) ***19,914.79***	Drift Velocity (ft/sec) ***93.9***
Stream Temperature (°F) ***294.2***	Particulate Concentration (gr/dscf) ***TBD***
Moisture Content (%) ***TBD***	Halogens or Metals Present? ***Metals***
Pressure (in. Hg) ***TBD***	Organic Content (ppmv) ***3.38×10^{-1}***
Heat Content (Btu/scfm) ***TBD***	O_2 Content (%) ***N/A***

SECTION D – POLLUTANT SPECIFIC DATA
(Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***Acetaldehyde***	Chemical Abstract Services (CAS) Number ***75-07-0***
Proposed Emission Rate (lb/hr) ***1.80×10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic Vapor***
Concentration in Emission Stream (ppmv) ***1.88×10^{-3}***	Vapor Pressure (in. Hg @ °F) ***35.51 in Hg @ 68°C***
Solubility ***$1 \times 10^{+6}$ mg/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***44.05***
Absorptive Properties -	

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) ***3.15×10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.86×10^{-4}***	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility ***In water 1.79×10^{3} mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Dichlorobenzene***	Chemical Abstract Services (CAS) Number ***Varies***
Proposed Emission Rate (lb/hr) ***1.80×10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***5.65×10^{-5}***	Vapor Pressure (in. Hg @ °F) ***Varies***
Solubility ***Varies***	Molecular Weight (lb/lb-mole) ***147.00***
Absorptive Properties -	

Pollutant Emitted ***Ethylbenzene***	Chemical Abstract Services (CAS) Number ***100-41-4***
Proposed Emission Rate (lb/hr) ***2.40x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.04x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.37 in Hg @ 77°F***
Solubility ***In water 0.014 g/100mL @ 59 °F***	Molecular Weight (lb/lb-mole) ***106.17***
Absorptive Properties -	

Pollutant Emitted ***Formaldehyde***	Chemical Abstract Services (CAS) Number ***50-00-0***
Proposed Emission Rate (lb/hr) ***1.11x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.70x10^{-2}***	Vapor Pressure (in. Hg @ °F) ***0.15 in Hg @ 77 °F***
Solubility ***In water 4.00 x10^{5} mg/L @ 68°F***	Molecular Weight (lb/lb-mole) ***30.03***
Absorptive Properties -	

Pollutant Emitted ***Hexane***	Chemical Abstract Services (CAS) Number ***110-54-5***
Proposed Emission Rate (lb/hr) ***2.70x10^{-2}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.44x10^{-1}***	Vapor Pressure (in. Hg @ °F) ***5.90 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***86.1***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***9.00x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***3.24x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***4.95 x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***2.48x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***1.12 in Hg @ 77°F***
Solubility ***In water 526 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***3.75x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.63x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Pollutant Emitted ***PAH***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***6.39x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***3.02x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***N/A***
Solubility ***N/A***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Pollutant Emitted ***Antimony***	Chemical Abstract Services (CAS) Number ***7740-36-0***
Proposed Emission Rate (lb/hr) ***3.12x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/particulate***
Concentration in Emission Stream (ppmv) ***1.18x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***121.76***
Absorptive Properties -	

Pollutant Emitted ***Arsenic***	Chemical Abstract Services (CAS) Number ***7440-38-2***
Proposed Emission Rate (lb/hr) ***1.20x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***7.39x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Beryllium***	Chemical Abstract Services (CAS) Number ***7440-41-7***
Proposed Emission Rate (lb/hr) ***7.80x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.99x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***9.01***
Absorptive Properties -	

Pollutant Emitted ***Cadmium***	Chemical Abstract Services (CAS) Number ***7440-43-9***
Proposed Emission Rate (lb/hr) ***6.60x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.71x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg@ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Chromium (hexavalent)***	Chemical Abstract Services (CAS) Number ***1333-82-0***
Proposed Emission Rate (lb/hr) ***1.68x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***1.49x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @77°F***
Solubility ***1,660 g/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

Pollutant Emitted ***Chromium***	Chemical Abstract Services (CAS) Number ***7440-47-3***
Proposed Emission Rate (lb/hr) ***8.40x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***7.45x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

Pollutant Emitted ***Cobalt***	Chemical Abstract Services (CAS) Number ***7440-48-4***
Proposed Emission Rate (lb/hr) ***4.92x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.85x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.93***
Absorptive Properties -	

Pollutant Emitted ***Manganese***	Chemical Abstract Services (CAS) Number
Proposed Emission Rate (lb/hr) ***2.22x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***1.86x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***54.94***
Absorptive Properties -	

Pollutant Emitted ***Mercury***	Chemical Abstract Services (CAS) Number ***7439-97-6***
Proposed Emission Rate (lb/hr) ***1.50x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.45x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***7.85x10^{-5} in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***200.59***
Absorptive Properties -	

Pollutant Emitted ***Nickel***	Chemical Abstract Services (CAS) Number ***7044-02-0***
Proposed Emission Rate (lb/hr) ***1.26x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***9.90x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg Q 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.69***
Absorptive Properties -	

Pollutant Emitted ***Selenium***	Chemical Abstract Services (CAS) Number ***7782-49-2***
Proposed Emission Rate (lb/hr) ***5.28x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.08x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0.29 in Hg @ 807***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***78.96***
Absorptive Properties -	

Signature of Applicant 	Date 09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR
HAZARDOUS AIR POLLUTANT (HAP) SOURCES

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8329 (09-12)

SECTION A1 - APPLICANT INFORMATION

Name of Firm or Organization ***Meridian Energy Group - Davis Refinery***		
Applicant's Name ***Tom Williams***		
Title ***VP of Planning &Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***

SECTION A2 - FACILITY INFORMATION

Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number ***(409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***
Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Utility Boiler 2

SECTION B – STACK DATA

Inside Diameter (ft) ***3.0***	Height Above Grade (ft) ***100***	
Gas Temperature at Exit (°F) ***294.2***	Gas Velocity at Exit (ft/sec) ***93.9***	Gas Volume (scfm) ***19,914.79***
Basis of any Estimates (attach separate sheet if necessary) ***Engineering data and Emission factors from Table 1.4-2. AP 42, Chapter 1: External Combustion Sources. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☐ No ☒
Nearest Residences or Building ***Utility building***	Distance (ft) ***0 ft***	Direction ***N/A***
Nearest Property Line ***Fenceline***	Distance (ft) ***415 ft***	Direction ***East***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***202-PK-0201B***	Mean Particle Diameter (μm) ***TBD***
Flow Rate (scfm) ***19,914.79***	Drift Velocity (ft/sec) ***93.9***
Stream Temperature (°F) ***294.2***	Particulate Concentration (gr/dscf) ***TBD***
Moisture Content (%) ***TBD***	Halogens or Metals Present? ***Metals***
Pressure (in. Hg) ***TBD***	Organic Content (ppmv) $3.381x10^{-1}$
Heat Content (Btu/scfm) ***TBD***	O_2 Content (%) ***N/A***

SECTION D – POLLUTANT SPECIFIC DATA
(Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***Acetaldehyde***	Chemical Abstract Services (CAS) Number ***75-07-0***
Proposed Emission Rate (lb/hr) $1.80x10^{-4}$	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic Vapor***
Concentration in Emission Stream (ppmv) $1.88x10^{-3}$	Vapor Pressure (in. Hg @ °F) ***35.51 in Hg @ 68°C***
Solubility $1x10^{+6}$ ***mg/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***44.05***
Absorptive Properties -	

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) $3.15x10^{-5}$	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) $1.86\ x10^{-4}$	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility ***In water*** $1.79x10^{3}$ ***mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Dichlorobenzene***	Chemical Abstract Services (CAS) Number ***Varies***
Proposed Emission Rate (lb/hr) $1.80x10^{-5}$	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) $5.65x10^{-5}$	Vapor Pressure (in. Hg @ °F) ***Varies***
Solubility ***Varies***	Molecular Weight (lb/lb-mole) ***147.00***
Absorptive Properties -	

Pollutant Emitted ***Ethylbenzene***	Chemical Abstract Services (CAS) Number ***100-41-4***
Proposed Emission Rate (lb/hr) ***2.40x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.04x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.37 in Hg @ 77°F***
Solubility ***In water 0.014 g/100mL @ 59 °F***	Molecular Weight (lb/lb-mole) ***106.17***
Absorptive Properties -	

Pollutant Emitted ***Formaldehyde***	Chemical Abstract Services (CAS) Number ***50-00-0***
Proposed Emission Rate (lb/hr) ***1.11x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.70x10^{-2}***	Vapor Pressure (in. Hg @ °F) ***0.15 in Hg @ 77 °F***
Solubility ***In water 4.00 x10^{5} mg/L @ 68°F***	Molecular Weight (lb/lb-mole) ***30.03***
Absorptive Properties -	

Pollutant Emitted ***Hexane***	Chemical Abstract Services (CAS) Number ***110-54-5***
Proposed Emission Rate (lb/hr) ***2.70x10^{-2}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.44x10^{-1}***	Vapor Pressure (in. Hg @ °F) ***5.90 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***86.1***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***9.00x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***3.24x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***4.95 x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***2.48x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***1.12 in Hg @ 77°F***
Solubility ***In water 526 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***3.75x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.63x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Pollutant Emitted ***PAH***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***6.39x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***3.02x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***N/A***
Solubility ***N/A***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Pollutant Emitted ***Antimony***	Chemical Abstract Services (CAS) Number ***7740-36-0***
Proposed Emission Rate (lb/hr) ***3.12x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/particulate***
Concentration in Emission Stream (ppmv) ***1.18x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***121.76***
Absorptive Properties -	

Pollutant Emitted ***Arsenic***	Chemical Abstract Services (CAS) Number ***7440-38-2***
Proposed Emission Rate (lb/hr) ***1.20x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***7.39x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Beryllium***	Chemical Abstract Services (CAS) Number ***7440-41-7***
Proposed Emission Rate (lb/hr) ***7.80x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.99x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***9.01***
Absorptive Properties -	

Pollutant Emitted ***Cadmium***	Chemical Abstract Services (CAS) Number ***7440-43-9***
Proposed Emission Rate (lb/hr) ***6.60x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.71x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg@ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Chromium (hexavalent)***	Chemical Abstract Services (CAS) Number ***1333-82-0***
Proposed Emission Rate (lb/hr) ***1.68x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***1.49x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @77°F***
Solubility ***1,660 g/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

Pollutant Emitted ***Chromium***	Chemical Abstract Services (CAS) Number ***7440-47-3***
Proposed Emission Rate (lb/hr) ***8.40x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***7.45x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

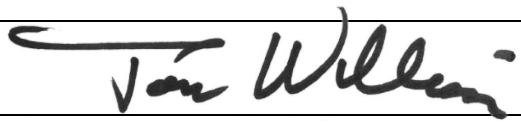
Pollutant Emitted ***Cobalt***	Chemical Abstract Services (CAS) Number ***7440-48-4***
Proposed Emission Rate (lb/hr) ***4.92x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.85x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.93***
Absorptive Properties -	

Pollutant Emitted ***Manganese***	Chemical Abstract Services (CAS) Number
Proposed Emission Rate (lb/hr) ***2.22x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***1.86x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***54.94***
Absorptive Properties -	

Pollutant Emitted ***Mercury***	Chemical Abstract Services (CAS) Number ***7439-97-6***
Proposed Emission Rate (lb/hr) ***1.50x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.45x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***7.85x10^{-5} in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***200.59***
Absorptive Properties -	

Pollutant Emitted ***Nickel***	Chemical Abstract Services (CAS) Number ***7044-02-0***
Proposed Emission Rate (lb/hr) ***1.26x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***9.90x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg Q 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.69***
Absorptive Properties -	

Pollutant Emitted ***Selenium***	Chemical Abstract Services (CAS) Number ***7782-49-2***
Proposed Emission Rate (lb/hr) ***5.28x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.08x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0.29 in Hg @ 807***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***78.96***
Absorptive Properties -	

Signature of Applicant 	Date 09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR
HAZARDOUS AIR POLLUTANT (HAP) SOURCES

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8329 (09-12)

SECTION A1 - APPLICANT INFORMATION

Name of Firm or Organization ***Meridian Energy Group - Davis Refinery***		
Applicant's Name ***Tom Williams***		
Title ***VP of Planning &Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***

SECTION A2 - FACILITY INFORMATION

Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number ***(409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***
Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Utility Boiler 3

SECTION B – STACK DATA

Inside Diameter (ft) ***3.0***	Height Above Grade (ft) ***100***	
Gas Temperature at Exit (°F) ***294.2***	Gas Velocity at Exit (ft/sec) ***93.9***	Gas Volume (scfm) ***19,914.80***
Basis of any Estimates (attach separate sheet if necessary) ***Engineering data and Emission factors from Table 1.4-2. AP 42, Chapter 1: External Combustion Sources. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☐ No ☒
Nearest Residences or Building ***Utility building***	Distance (ft) ***0 ft***	Direction ***N/A***
Nearest Property Line ***Fenceline***	Distance (ft) ***379 ft***	Direction ***East***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***202-PK-0201C***	Mean Particle Diameter (μm) ***TBD***
Flow Rate (scfm) ***19,914.80***	Drift Velocity (ft/sec) ***93.9***
Stream Temperature (°F) ***294.2***	Particulate Concentration (gr/dscf) ***TBD***
Moisture Content (%) ***TBD***	Halogens or Metals Present? ***Metals***
Pressure (in. Hg) ***TBD***	Organic Content (ppmv) ***$2.81x10^{-2}$***
Heat Content (Btu/scfm) ***TBD***	O_2 Content (%) ***N/A***

SECTION D – POLLUTANT SPECIFIC DATA
(Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***Acetaldehyde***	Chemical Abstract Services (CAS) Number ***75-07-0***
Proposed Emission Rate (lb/hr) ***$1.50x10^{-5}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic Vapor***
Concentration in Emission Stream (ppmv) ***$1.57x10^{-4}$***	Vapor Pressure (in. Hg @ °F) ***35.51 in Hg @ 68°C***
Solubility ***$1x10^{+6}$ mg/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***44.05***
Absorptive Properties -	

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) ***$2.63x10^{-6}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***$1.55x10^{-5}$***	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility ***In water $1.79x10^{3}$ mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Dichlorobenzene***	Chemical Abstract Services (CAS) Number ***Varies***
Proposed Emission Rate (lb/hr) ***$1.50x10^{-6}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***$4.71x10^{-6}$***	Vapor Pressure (in. Hg @ °F) ***Varies***
Solubility ***Varies***	Molecular Weight (lb/lb-mole) ***147.00***
Absorptive Properties -	

Pollutant Emitted ***Ethylbenzene***	Chemical Abstract Services (CAS) Number ***100-41-4***
Proposed Emission Rate (lb/hr) ***2.00x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***8.89x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0.37 in Hg @ 77°F***
Solubility ***In water 0.014 g/100mL @ 59 °F***	Molecular Weight (lb/lb-mole) ***106.17***
Absorptive Properties -	

Pollutant Emitted ***Formaldehyde***	Chemical Abstract Services (CAS) Number ***50-00-0***
Proposed Emission Rate (lb/hr) ***9.25x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.42x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.15 in Hg @ 77 °F***
Solubility ***In water 4.00 x10^{5} mg/L @ 68°F***	Molecular Weight (lb/lb-mole) ***30.03***
Absorptive Properties -	

Pollutant Emitted ***Hexane***	Chemical Abstract Services (CAS) Number ***110-54-5***
Proposed Emission Rate (lb/hr) ***2.25x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.20x10^{-2}***	Vapor Pressure (in. Hg @ °F) ***5.90 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***86.1***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***7.50x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***2.70x10^{-6}***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***4.13 x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***2.06x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***1.12 in Hg @ 77°F***
Solubility ***In water 526 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***3.13x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.36x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Pollutant Emitted ***PAH***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***5.32x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***2.52x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***N/A***
Solubility ***N/A***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Pollutant Emitted ***Antimony***	Chemical Abstract Services (CAS) Number ***7740-36-0***
Proposed Emission Rate (lb/hr) ***2.60x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/particulate***
Concentration in Emission Stream (ppmv) ***9.85x10^{-6}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***121.76***
Absorptive Properties -	

Pollutant Emitted ***Arsenic***	Chemical Abstract Services (CAS) Number ***7440-38-2***
Proposed Emission Rate (lb/hr) ***1.00x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***6.15x10^{-6}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Beryllium***	Chemical Abstract Services (CAS) Number ***7440-41-7***
Proposed Emission Rate (lb/hr) ***6.50x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.33x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***9.01***
Absorptive Properties -	

Pollutant Emitted ***Cadmium***	Chemical Abstract Services (CAS) Number ***7440-43-9***
Proposed Emission Rate (lb/hr) ***5.50x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.26x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg@ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Chromium (hexavalent)***	Chemical Abstract Services (CAS) Number ***1333-82-0***
Proposed Emission Rate (lb/hr) ***1.40x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***1.24x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @77°F***
Solubility ***1,660 g/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

Pollutant Emitted ***Chromium***	Chemical Abstract Services (CAS) Number ***7440-47-3***
Proposed Emission Rate (lb/hr) ***7.00x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***6.21x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

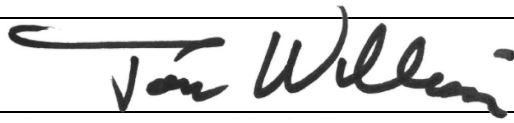
Pollutant Emitted ***Cobalt***	Chemical Abstract Services (CAS) Number ***7440-48-4***
Proposed Emission Rate (lb/hr) ***4.10x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.21x10^{-6}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.93***
Absorptive Properties -	

Pollutant Emitted ***Manganese***	Chemical Abstract Services (CAS) Number
Proposed Emission Rate (lb/hr) ***1.85x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***1.55x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***54.94***
Absorptive Properties -	

Pollutant Emitted ***Mercury***	Chemical Abstract Services (CAS) Number ***7439-97-6***
Proposed Emission Rate (lb/hr) ***1.25x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.87x10^{-6}***	Vapor Pressure (in. Hg @ °F) ***7.85x10^{-5} in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***200.59***
Absorptive Properties -	

Pollutant Emitted ***Nickel***	Chemical Abstract Services (CAS) Number ***7044-02-0***
Proposed Emission Rate (lb/hr) ***1.05x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***8.25x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg Q 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.69***
Absorptive Properties -	

Pollutant Emitted ***Selenium***	Chemical Abstract Services (CAS) Number ***7782-49-2***
Proposed Emission Rate (lb/hr) ***4.40x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.57x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0.29 in Hg @ 807***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***78.96***
Absorptive Properties -	

Signature of Applicant 	Date 09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR
HAZARDOUS AIR POLLUTANT (HAP) SOURCES

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8329 (09-12)

SECTION A1 - APPLICANT INFORMATION

Name of Firm or Organization ***Meridian Energy Group - Davis Refinery***		
Applicant's Name ***Tom Williams***		
Title ***VP of Planning &Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***

SECTION A2 - FACILITY INFORMATION

Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number ***(409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***
Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Catalytic Reforming Unit / 107-H-0701

SECTION B – STACK DATA

Inside Diameter (ft) ***6.0***	Height Above Grade (ft) ***42.0***	
Gas Temperature at Exit (°F) ***787.7***	Gas Velocity at Exit (ft/sec) ***27.2***	Gas Volume (scfm) ***19,541.61***
Basis of any Estimates (attach separate sheet if necessary) ***Engineering Calculation Notes and emission factors from Table 5-6 of the Emissions Estimation Protocol for Petroleum Refineries. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532 Yes ☐ No ☒		
Nearest Residences or Building ***Utility building***	Distance (ft) ***268.4 ft***	Direction ***South***
Nearest Property Line ***Fenceline***	Distance (ft) ***810 ft***	Direction ***Southeast***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***107-H-0701***	Mean Particle Diameter (μm) ***TBD***
Flow Rate (scfm) ***19,541.61***	Drift Velocity (ft/sec) ***27.2***
Stream Temperature (°F) ***787.7***	Particulate Concentration (gr/dscf) ***TBD***
Moisture Content (%) ***N/A***	Halogens or Metals Present? ***N/A***
Pressure (in. Hg) ***TBD***	Organic Content (ppmv) ***2.67×10^{-8}***
Heat Content (Btu/scfm) ***TBD***	O_2 Content (%) ***N/A***

SECTION D – POLLUTANT SPECIFIC DATA
(Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) ***1.46×10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***6.17×10^{-3}***	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility ***In water 1.79×10^{3} mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***1.28×10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***3.29×10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***3.50×10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***1.26×10^{-2}***	Vapor Pressure (in. Hg @ °F) ***1.11 in Hg @ 77 °F***
Solubility ***In water 526 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***2.56x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***7.94 x 10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Pollutant Emitted ***Poly Aromatic Hydrocarbons (PAH)***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***8.78 x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***1.85 x 10^{-6}***	Vapor Pressure (in. Hg @ °F) ***TBD***
Solubility ***TBD***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Pollutant Emitted ***Hydrogen Chloride***	Chemical Abstract Services (CAS) Number ***7647-01-0***
Proposed Emission Rate (lb/hr) ***1.53***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/ Vapor***
Concentration in Emission Stream (ppmv) ***1.39 x 10^{+1}***	Vapor Pressure (in. Hg @ °F) ***1.39 in Hg @ 77 °F***
Solubility ***67.3 g/100 mL of water @ 86 °F***	Molecular Weight (lb/lb-mole) ***36.46***
Absorptive Properties -	

Pollutant Emitted ***Chlorine***	Chemical Abstract Services (CAS) Number ***7782-50-5***
Proposed Emission Rate (lb/hr) ***0.08***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/ Vapor***
Concentration in Emission Stream (ppmv) ***3.91x10^{-1}***	Vapor Pressure (in. Hg @ °F) ***229.52 in Hg @ 77°F***
Solubility ***6.30 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***70.91***
Absorptive Properties -	

Pollutant Emitted ***Dioxin Toxic Equivalents (TEQ)b***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***2.08 x10^{-9}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/ Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***TBD***
Solubility ***TBD***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Pollutant Emitted ***Total Polychlorinated biphenyls (PCB)***	Chemical Abstract Services (CAS) Number ***1336-36-3***
Proposed Emission Rate (lb/hr) ***9.49 x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/ Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***TBD***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***291.98***
Absorptive Properties -	

Signature of Applicant		Date 09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR
HAZARDOUS AIR POLLUTANT (HAP) SOURCES
NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8329 (09-12)

SECTION A1 - APPLICANT INFORMATION

Name of Firm or Organization ***Meridian Energy Group - Davis Refinery***		
Applicant's Name ***Tom Williams***		
Title ***VP of Planning &Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***

SECTION A2 - FACILITY INFORMATION

Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number ***(409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***
Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Catalytic Reforming Unit / 106-H-0601

SECTION B – STACK DATA

Inside Diameter (ft) ***4.0***	Height Above Grade (ft) ***42.0***	
Gas Temperature at Exit (°F) ***786.2***	Gas Velocity at Exit (ft/sec) ***27.5***	Gas Volume (scfm) ***8,796.80***
Basis of any Estimates (attach separate sheet if necessary) ***Engineering Calculation Notes and emission factors from Table 5-6 of the Emissions Estimation Protocol for Petroleum Refineries. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☐ No ☒
Nearest Residences or Building ***Utility building***	Distance (ft) ***228 ft***	Direction ***South***
Nearest Property Line ***Fenceline***	Distance (ft) ***657 ft***	Direction ***Southeast***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***106-H-0601***	Mean Particle Diameter (μm) ***TBD***
Flow Rate (scfm) ***8,796.80***	Drift Velocity (ft/sec) ***27.5***
Stream Temperature (°F) ***786.2***	Particulate Concentration (gr/dscf) ***TBD***
Moisture Content (%) ***N/A***	Halogens or Metals Present? ***N/A***
Pressure (in. Hg) ***TBD***	Organic Content (ppmv) ***2.67×10^{-8}***
Heat Content (Btu/scfm) ***TBD***	O_2 Content (%) ***N/A***

SECTION D – POLLUTANT SPECIFIC DATA
(Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) ***6.60×10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***6.17×10^{-3}***	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility ***In water 1.79×10^{3} mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***5.78×10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***3.29×10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***1.58×10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***1.26×10^{-2}***	Vapor Pressure (in. Hg @ °F) ***1.11 in Hg @ 77 °F***
Solubility ***In water 526 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***1.16x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***7.95 x 10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Pollutant Emitted ***Poly Aromatic Hydrocarbons (PAH)***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***3.97 x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***1.85 x 10^{-6}***	Vapor Pressure (in. Hg @ °F) ***TBD***
Solubility ***TBD***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Pollutant Emitted ***Hydrogen Chloride***	Chemical Abstract Services (CAS) Number ***7647-01-0***
Proposed Emission Rate (lb/hr) ***0.69***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/ Vapor***
Concentration in Emission Stream (ppmv) ***1.39 x 10^{+1}***	Vapor Pressure (in. Hg @ °F) ***1.39 in Hg @ 77 °F***
Solubility ***67.3 g/100 mL of water @ 86 °F***	Molecular Weight (lb/lb-mole) ***36.46***
Absorptive Properties -	

Pollutant Emitted ***Chlorine***	Chemical Abstract Services (CAS) Number ***7782-50-5***
Proposed Emission Rate (lb/hr) ***0.04***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/ Vapor***
Concentration in Emission Stream (ppmv) ***3.91x10^{-1}***	Vapor Pressure (in. Hg @ °F) ***229.52 in Hg @ 77°F***
Solubility ***6.30 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***70.91***
Absorptive Properties -	

Pollutant Emitted ***Dioxin Toxic Equivalents (TEQ)b***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***9.41 x10^{-10}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/ Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***TBD***
Solubility ***TBD***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Pollutant Emitted ***Total Polychlorinated biphenyls (PCB)***	Chemical Abstract Services (CAS) Number ***1336-36-3***
Proposed Emission Rate (lb/hr) ***4.29 x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/ Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***TBD***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***291.98***
Absorptive Properties -	

Signature of Applicant		Date 09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR
HAZARDOUS AIR POLLUTANT (HAP) SOURCES

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8329 (09-12)

SECTION A1 - APPLICANT INFORMATION

Name of Firm or Organization ***Meridian Energy Group - Davis Refinery***		
Applicant's Name ***Tom Williams***		
Title ***VP of Planning &Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***

SECTION A2 - FACILITY INFORMATION

Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number ***(409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***
Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Firewater Diesel Pump

SECTION B – STACK DATA

Inside Diameter (ft) ***TBD***	Height Above Grade (ft) ***TBD***	
Gas Temperature at Exit (°F) ***TBD***	Gas Velocity at Exit (ft/sec) ***TBD***	Gas Volume (scfm) ***TBD***
Basis of any Estimates (attach separate sheet if necessary) ***Emission factors From AP-42 Chapter 3 Section 3.4. Large Stationary Diesel And All Stationary Dual-fuel Engines. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☐ No ☒
Nearest Residences or Building ***Administrative building***	Distance (ft) ***336 ft***	Direction ***South***
Nearest Property Line ***Fenceline***	Distance (ft) ***494 ft***	Direction ***East***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***212-P-1201 A/B/C***	Mean Particle Diameter (μm) ***TBD***
Flow Rate (scfm) ***TBD***	Drift Velocity (ft/sec) ***TBD***
Stream Temperature (°F) ***TBD***	Particulate Concentration (gr/dscf) ***TBD***
Moisture Content (%) ***TBD***	Halogens or Metals Present? ***N/A***
Pressure (in. Hg) ***TBD***	Organic Content (ppmv) ***TBD***
Heat Content (Btu/scfm) ***TBD***	O_2 Content (%) ***N/A***

SECTION D – POLLUTANT SPECIFIC DATA
(Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***Acetaldehyde***	Chemical Abstract Services (CAS) Number ***75-07-0***
Proposed Emission Rate (lb/hr) ***$3.45x10^{-4}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***35.51 in Hg @ 68°C***
Solubility ***$1x10^{+6}$ mg/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***44.05***
Absorptive Properties -	

Pollutant Emitted ***Acrolein***	Chemical Abstract Services (CAS) Number ***107-02-8***
Proposed Emission Rate (lb/hr) ***$1.08x10^{-4}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***10.79 in Hg @ 77 °F***
Solubility ***In water 2.12 x 10^5 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***56.06***
Absorptive Properties -	

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) ***$1.06x10^{-2}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility ***In water $1.79x10^3$ mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Formaldehyde***	Chemical Abstract Services (CAS) Number ***50-00-0***
Proposed Emission Rate (lb/hr) ***1.08x10^{-3}***	Emission Source (describe) ***Processo Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***0.15 in Hg @ 77 °F***
Solubility ***In water 4.00 x10^{5} mg/L @ 68°F***	Molecular Weight (lb/lb-mole) ***30.03***
Absorptive Properties -	

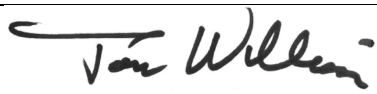
Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***1.78x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Propylene***	Chemical Abstract Services (CAS) Number ***115-07-1***
Proposed Emission Rate (lb/hr) ***3.82x10^{-2}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***342.12 in Hg @ 77 °F***
Solubility ***In water 200 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***42.08***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***3.85x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***1.12 in Hg @ 77°F***
Solubility ***In water 526 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***2.64x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Pollutant Emitted ***PAH***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***1.12x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***N/A***
Solubility ***N/A***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Signature of Applicant 	Date 09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR
HAZARDOUS AIR POLLUTANT (HAP) SOURCES

NORTH DAKOTA DEPARTMENT OF HEALTH
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SFN 8329 (09-12)

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Name of Firm or Organization ***Meridian Energy Group - Davis Refinery***		
Applicant's Name ***Tom Williams***		
Title ***VP of Planning &Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***

SECTION A2 - FACILITY INFORMATION

Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number ***(409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***
Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Diesel/Natural gas-fired emergency generator set

SECTION B – STACK DATA

Inside Diameter (ft) ***TBD***	Height Above Grade (ft) ***TBD***	
Gas Temperature at Exit (°F) ***TBD***	Gas Velocity at Exit (ft/sec) ***TBD***	Gas Volume (scfm) ***TBD***
Basis of any Estimates (attach separate sheet if necessary) ***Emission factors From AP-42 Chapter 3 Section 3.4. Large Stationary Diesel And All Stationary Dual-fuel Engines. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☐ No ☒
Nearest Residences or Building ***Administrative building***	Distance (ft) ***300 ft***	Direction ***East***
Nearest Property Line ***Fenceline***	Distance (ft) ***690 ft***	Direction ***East***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***216-EG-1601 A/B/C***	Mean Particle Diameter (μm) ***TBD***
Flow Rate (scfm) ***TBD***	Drift Velocity (ft/sec) ***TBD***
Stream Temperature (°F) ***TBD***	Particulate Concentration (gr/dscf) ***TBD***
Moisture Content (%) ***TBD***	Halogens or Metals Present? ***N/A***
Pressure (in. Hg) ***TBD***	Organic Content (ppmv) ***TBD***
Heat Content (Btu/scfm) ***TBD***	O_2 Content (%) ***N/A***

SECTION D – POLLUTANT SPECIFIC DATA
(Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***Acetaldehyde***	Chemical Abstract Services (CAS) Number ***75-07-0***
Proposed Emission Rate (lb/hr) ***$4.38x10^{-3}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***35.51 in Hg @ 68°C***
Solubility ***$1x10^{+6}$ mg/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***44.05***
Absorptive Properties -	

Pollutant Emitted ***Acrolein***	Chemical Abstract Services (CAS) Number ***107-02-8***
Proposed Emission Rate (lb/hr) ***$1.37x10^{-3}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***10.79 in Hg @ 77 °F***
Solubility ***In water 2.12 x 10^5 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***56.06***
Absorptive Properties -	

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) ***$1.35x10^{-1}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility ***In water $1.79x10^3$ mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Formaldehyde***	Chemical Abstract Services (CAS) Number ***50-00-0***
Proposed Emission Rate (lb/hr) ***1.37x10^{-2}***	Emission Source (describe) ***Processo Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***0.15 in Hg @ 77 °F***
Solubility ***In water 4.00 x10^{5} mg/L @ 68°F***	Molecular Weight (lb/lb-mole) ***30.03***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***2.26x10^{-2}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Propylene***	Chemical Abstract Services (CAS) Number ***115-07-1***
Proposed Emission Rate (lb/hr) ***4.85x10^{-1}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***342.12 in Hg @ 77 °F***
Solubility ***In water 200 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***42.08***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***4.89 x10^{-2}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***1.12 in Hg @ 77°F***
Solubility ***In water 526 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***3.36x10^{-2}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Pollutant Emitted ***PAH***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***1.42x10^{-2}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***N/A***
Solubility ***N/A***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Signature of Applicant 	Date 09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

North Dakota Department of
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Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Fluid Catalytic Cracking Unit

SECTION B – STACK DATA

Inside Diameter (ft) ***4.0***	Height Above Grade (ft) ***120***	
Gas Temperature at Exit (°F) ***480***	Gas Velocity at Exit (ft/sec) ***64.8***	Gas Volume (scfm) ***28,110***
Basis of any Estimates (attach separate sheet if necessary) ***Emission factors from Table 5-4 of the Emissions Estimation Protocol for Petroleum Refineries. Metal HAPs were calculated using the Equation 5-1 and Table 5-3. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☒ No ☐
Nearest Residences or Building ***Utility building***	Distance (ft) ***783 ft***	Direction ***Southwest***
Nearest Property Line ***Fenceline***	Distance (ft) ***590 ft***	Direction ***South***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***112-VS-1201***	Mean Particle Diameter (μm) ***<10***
Flow Rate (scfm) ***28,110***	Drift Velocity (ft/sec) ***64.8***
Stream Temperature (°F) ***480***	Particulate Concentration (gr/dscf) ***TBD***
Moisture Content (%) ***TBD***	Halogens or Metals Present? ***Metals***
Pressure (in. Hg) ***TBD***	Organic Content (ppmv) ***TBD***
Heat Content (Btu/scfm) ***TBD***	O_2 Content (%) ***N/A***

SECTION D – POLLUTANT SPECIFIC DATA
(Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***Acetaldehyde***	Chemical Abstract Services (CAS) Number ***75-07-0***
Proposed Emission Rate (lb/hr) ***$1.21x10^{-2}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic Vapor***
Concentration in Emission Stream (ppmv) ***$1.12\ x10^{-1}$***	Vapor Pressure (in. Hg @ °F) ***35.51 in Hg @ 68°C***
Solubility ***$1x10^{+6}$ mg/L in water @ 77°F***	Molecular Weight (lb/lb-mole) ***44.05***
Absorptive Properties -	

Pollutant Emitted ***Acetone***	Chemical Abstract Services (CAS) Number ***67-64-1***
Proposed Emission Rate (lb/hr) ***$1.49x10^{-3}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***$1.05\ x\ 10^{-2}$***	Vapor Pressure (in. Hg @ °F) ***9.09 in Hg @ 77°F***
Solubility ***Miscible in water***	Molecular Weight (lb/lb-mole) ***58.07***
Absorptive Properties -	

Pollutant Emitted ***Acrolein***	Chemical Abstract Services (CAS) Number ***107-02-8***
Proposed Emission Rate (lb/hr) ***$6.17x10^{-4}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***$4.48\ x10^{-3}$***	Vapor Pressure (in. Hg @ °F) ***10.78 in Hg @ 77 °F***
Solubility ***In water $2.12\ x10^{5}$ mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***56.06***
Absorptive Properties -	

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) ***$1.03x10^{-2}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***5.53×10^{-2}***	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility ***In water $1.79x10^{3}$ mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Bromomethane***	Chemical Abstract Services (CAS) Number ***74-83-9***
Proposed Emission Rate (lb/hr) ***$1.31x10^{-3}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***5.61×10^{-3}***	Vapor Pressure (in. Hg @ °F) ***63.78 in Hg @ 68°F***
Solubility ***In water 15,200 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***94.94***
Absorptive Properties -	

Pollutant Emitted ***1,3-Butadiene***	Chemical Abstract Services (CAS) Number ***106-99-0***
Proposed Emission Rate (lb/hr) ***$1.87x10^{-5}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.41×10^{-4}***	Vapor Pressure (in. Hg @ °F) ***72.34 in Hg @ 68°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***54.09***
Absorptive Properties -	

Pollutant Emitted ***Carbon disulfide***	Chemical Abstract Services (CAS) Number ***75-15-0***
Proposed Emission Rate (lb/hr) ***$3.46x10^{-4}$***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic /Vapor***
Concentration in Emission Stream (ppmv) ***1.85×10^{-3}***	Vapor Pressure (in. Hg @ °F) ***14.4 in Hg @ 77 °F***
Solubility ***In water 2,160 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***76.14***
Absorptive Properties -	

Pollutant Emitted ***Formaldehyde***	Chemical Abstract Services (CAS) Number ***50-00-0***
Proposed Emission Rate (lb/hr) ***1.49x10^{-1}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***2.03***	Vapor Pressure (in. Hg @ °F) ***153.15 in Hg @ 68°F***
Solubility ***Miscible in water***	Molecular Weight (lb/lb-mole) ***30.03***
Absorptive Properties -	

Pollutant Emitted ***Hexachlorodibenzofuran***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***5.89x10^{-10}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***6.44 x 10^{-10}***	Vapor Pressure (in. Hg @ °F) ***TBD***
Solubility ***TBD***	Molecular Weight (lb/lb-mole) ***374.86***
Absorptive Properties -	

Pollutant Emitted ***Heptacholorodibenzo-p-dioxin***	Chemical Abstract Services (CAS) Number ***19408-74-3***
Proposed Emission Rate (lb/hr) ***5.23x10^{-10}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***5.01 x 10^{-10}***	Vapor Pressure (in. Hg @ °F) ***1.91 x 10^{-12} in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***390.86***
Absorptive Properties -	

Pollutant Emitted ***Hydrogen Chloride***	Chemical Abstract Services (CAS) Number ***7647-01-0***
Proposed Emission Rate (lb/hr) ***2.06x10^{-2}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic /Vapor***
Concentration in Emission Stream (ppmv) ***2.29 x 10^{-1}***	Vapor Pressure (in. Hg @ °F) ***1.39 in Hg @ 77°F***
Solubility ***Miscible in water***	Molecular Weight (lb/lb-mole) ***36.46***
Absorptive Properties -	

Pollutant Emitted ***Hydrogen Cyanide***	Chemical Abstract Services (CAS) Number ***74-90-8***
Proposed Emission Rate (lb/hr) ***8.03x10^{-2}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic /Vapor***
Concentration in Emission Stream (ppmv) ***1.21***	Vapor Pressure (in. Hg @ °F) ***29.21 in Hg @ 77°F***
Solubility ***In water 0.014 g/100mL @ 59 °F***	Molecular Weight (lb/lb-mole) ***27.03***
Absorptive Properties -	

Pollutant Emitted ***Ethylbenzene***	Chemical Abstract Services (CAS) Number ***100-41-4***
Proposed Emission Rate (lb/hr) ***1.49x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***5.73x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0.37 in Hg @ 77°F***
Solubility ***In water 0.014 g/100mL @ 59 °F***	Molecular Weight (lb/lb-mole) ***106.17***
Absorptive Properties -	

Pollutant Emitted ***Methylene Chloride***	Chemical Abstract Services (CAS) Number ***75-09-2***
Proposed Emission Rate (lb/hr) ***4.11x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***1.97 x10^{-2}***	Vapor Pressure (in. Hg @ °F) ***17.13 in Hg @ 77 °F***
Solubility ***In water 1.30 x10^{4} mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***30.03***
Absorptive Properties -	

Pollutant Emitted ***Penthachlorodibenzofurans***	Chemical Abstract Services (CAS) Number ***57117-41-6***
Proposed Emission Rate (lb/hr) ***2.99x10^{-10}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***3.57x10^{-10}***	Vapor Pressure (in. Hg @ °F) ***TBD***
Solubility ***TBD***	Molecular Weight (lb/lb-mole) ***54.09***
Absorptive Properties -	

Pollutant Emitted ***Phenol***	Chemical Abstract Services (CAS) Number ***108-95-2***
Proposed Emission Rate (lb/hr) ***5.32x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***2.30 x 10^{-2}***	Vapor Pressure (in. Hg @ °F) ***0.013 in Hg @ 68 °F***
Solubility ***50 to 100 mg/mL @ 66°F***	Molecular Weight (lb/lb-mole) ***94.11***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***6.54x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***2.08 x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***1.96x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***8.66x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***1.12 in Hg @ 77°F***
Solubility ***In water 526 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Trichlorofluoromethane***	Chemical Abstract Services (CAS) Number ***75-69-4***
Proposed Emission Rate (lb/hr) ***1.49x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***4.43x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***31.61 in Hg @ 77°F***
Solubility ***In water 1,100 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***54.09***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***1.96x10^{-3}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***7.52x10^{-3}***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Pollutant Emitted ***PAH***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***3.32x10^{-4}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***7.40x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***N/A***
Solubility ***N/A***	Molecular Weight (lb/lb-mole) ***TBD***
Absorptive Properties -	

Pollutant Emitted ***Antimony***	Chemical Abstract Services (CAS) Number ***7740-36-0***
Proposed Emission Rate (lb/hr) ***4.08x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/particulate***
Concentration in Emission Stream (ppmv) ***1.36x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***121.76***
Absorptive Properties -	

Pollutant Emitted ***Arsenic***	Chemical Abstract Services (CAS) Number ***7440-38-2***
Proposed Emission Rate (lb/hr) ***6.28x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***3.41x10^{-6}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Beryllium***	Chemical Abstract Services (CAS) Number ***7440-41-7***
Proposed Emission Rate (lb/hr) ***1.88x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***8.51x10^{-6}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***9.01***
Absorptive Properties -	

Pollutant Emitted ***Cadmium***	Chemical Abstract Services (CAS) Number ***7440-43-9***
Proposed Emission Rate (lb/hr) ***8.16x10^{-7}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.95x10^{-6}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg@ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole)
Absorptive Properties -	

Pollutant Emitted ***Chromium***	Chemical Abstract Services (CAS) Number ***7440-47-3***
Proposed Emission Rate (lb/hr) ***1.57x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***1.23x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***51.99***
Absorptive Properties -	

Pollutant Emitted ***Cobalt***	Chemical Abstract Services (CAS) Number ***7440-48-4***
Proposed Emission Rate (lb/hr) ***3.26x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.25x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.93***
Absorptive Properties -	

Pollutant Emitted ***Manganese***	Chemical Abstract Services (CAS) Number
Proposed Emission Rate (lb/hr) ***8.16x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***6.04x10^{-5}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***54.94***
Absorptive Properties -	

Pollutant Emitted ***Mercury***	Chemical Abstract Services (CAS) Number ***7439-97-6***
Proposed Emission Rate (lb/hr) ***1.12x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.27x10^{-6}***	Vapor Pressure (in. Hg @ °F) ***7.85x10^{-5} in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***200.59***
Absorptive Properties -	

Pollutant Emitted ***Nickel***	Chemical Abstract Services (CAS) Number ***7044-02-0***
Proposed Emission Rate (lb/hr) ***6.28x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***4.35x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0 in Hg @ 77°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***58.69***
Absorptive Properties -	

Pollutant Emitted ***Selenium***	Chemical Abstract Services (CAS) Number ***7782-49-2***
Proposed Emission Rate (lb/hr) ***1.57x10^{-6}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***8.09x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***0.29 in Hg @ 807 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***78.96***
Absorptive Properties -	

Pollutant Emitted ***Vanadium***	Chemical Abstract Services (CAS) Number ***7440-62-2***
Proposed Emission Rate (lb/hr) ***8.29x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***6.62x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***Approx. 0 in Hg***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***50.94***
Absorptive Properties -	

Pollutant Emitted ***Zinc***	Chemical Abstract Services (CAS) Number ***7440-66-6***
Proposed Emission Rate (lb/hr) ***4.65x10^{-5}***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Particulate***
Concentration in Emission Stream (ppmv) ***2.89x10^{-4}***	Vapor Pressure (in. Hg @ °F) ***2.95 x 10 $^{-8}$ in Hg @ 908.6***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***65.38***
Absorptive Properties -	

Signature of Applicant	Date

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR
HAZARDOUS AIR POLLUTANT (HAP) SOURCES

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8329 (09-12)

SECTION A1 - APPLICANT INFORMATION

Name of Firm or Organization ***Meridian Energy Group - Davis Refinery***		
Applicant's Name ***Tom Williams***		
Title ***VP of Planning &Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***

SECTION A2 - FACILITY INFORMATION

Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number ***(409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***
Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Process Leaks (Fugitive) - FUG-1

SECTION B – STACK DATA

Inside Diameter (ft) ***N/A***	Height Above Grade (ft) ***N/A***	
Gas Temperature at Exit (°F) ***N/A***	Gas Velocity at Exit (ft/sec) ***N/A***	Gas Volume (scfm) ***N/A***
Basis of any Estimates (attach separate sheet if necessary) ***Emission factors from Tables 2-5, 2-6 and 2-7 of the Emissions Estimation Protocol for Petroleum Refineries. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☐ No ☒
Nearest Residences or Building ***Administrative building***	Distance (ft) ***N/A***	Direction ***N/A***
Nearest Property Line ***Fenceline***	Distance (ft) ***N/A***	Direction ***N/A***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***FUG-1***	Mean Particle Diameter (μm) ***N/A***
Flow Rate (scfm) ***N/A***	Drift Velocity (ft/sec) ***N/A***
Stream Temperature (°F) ***N/A***	Particulate Concentration (gr/dscf) ***N/A***
Moisture Content (%) ***N/A***	Halogens or Metals Present? ***No***
Pressure (in. Hg) ***N/A***	Organic Content (ppmv) ***N/A***
Heat Content (Btu/scfm) ***N/A***	O_2 Content (%) ***N/A***

SECTION D – POLLUTANT SPECIFIC DATA
(Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***1,3-Butadiene***	Chemical Abstract Services (CAS) Number ***106-99-0***
Proposed Emission Rate (lb/hr) ***$1.23x10^{-3}$***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***72.34 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***54.09***
Absorptive Properties -	

Pollutant Emitted ***2,2,4-trimethylpentane***	Chemical Abstract Services (CAS) Number ***540-84-1***
Proposed Emission Rate (lb/hr) ***$1.18\ x10^{-1}$***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***1.50 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***114.22***
Absorptive Properties -	

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) ***$3.60\ x10^{-2}$***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility ***In water $1.79x10^{3}$ mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Biphenyl***	Chemical Abstract Services (CAS) Number ***95-52-4***
Proposed Emission Rate (lb/hr) ***6.01x10^{-3}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***3.51x 10^{-4} in Hg @ 77 °F***
Solubility ***In water 0.0004 g/100mL @ 68 °F***	Molecular Weight (lb/lb-mole) ***154.21***
Absorptive Properties -	

Pollutant Emitted ***1,2,4- Trimethyl benzene***	Chemical Abstract Services (CAS) Number ***95-63-6***
Proposed Emission Rate (lb/hr) ***3.87 x 10^{-2}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.28 in Hg @ 111.92°F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***72.15***
Absorptive Properties -	

Pollutant Emitted ***Cumene***	Chemical Abstract Services (CAS) Number ***98-82-8***
Proposed Emission Rate (lb/hr) ***3.36 x10^{-3}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.17 in Hg @ 77°F***
Solubility ***61.3 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***120.19***
Absorptive Properties -	

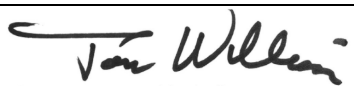
Pollutant Emitted ***Ethylbenzene***	Chemical Abstract Services (CAS) Number ***100-41-4***
Proposed Emission Rate (lb/hr) ***2.69x10^{-2}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.37 in Hg @ 77°F***
Solubility ***In water 0.014 g/100mL @ 59 °F***	Molecular Weight (lb/lb-mole) ***106.17***
Absorptive Properties -	

Pollutant Emitted ***Hexane***	Chemical Abstract Services (CAS) Number ***110-54-5***
Proposed Emission Rate (lb/hr) ***$8.19x10^{-2}$***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***5.90 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***86.1***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***$1.28x10^{-2}$***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***$1.06x10^{-1}$***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***1.12 in Hg @ 77°F***
Solubility ***In water 526 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***$1.14x10^{-1}$***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR
HAZARDOUS AIR POLLUTANT (HAP) SOURCES

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8329 (09-12)

SECTION A1 - APPLICANT INFORMATION

Name of Firm or Organization ***Meridian Energy Group - Davis Refinery***		
Applicant's Name ***Tom Williams***		
Title ***VP of Planning &Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***

SECTION A2 - FACILITY INFORMATION

Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number ***(409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***
Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Sulfur Recovering Unit / Oxidizer Vent (OV) and Flash Drum Vent (FDV), both directed to a thermal oxidizer (122-H-2201)

SECTION B – STACK DATA

Inside Diameter (ft) ***TBD***	Height Above Grade (ft) ***TBD***	
Gas Temperature at Exit (°F) ***125 (OV)/ 125 (FDV)***	Gas Velocity at Exit (ft/sec) ***TBD***	Gas Volume (scfm) ***3,725.69 (OV)/53.47 (FDV)***
Basis of any Estimates (attach separate sheet if necessary) ***Engineering data from vendor.***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☒ No ☐
Nearest Residences or Building ***Utility building***	Distance (ft) ***618 ft***	Direction ***Southeast***
Nearest Property Line ***Fenceline***	Distance (ft) ***820 ft***	Direction ***Northwest***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***Not listed (directed to 122-H-2201)***	Mean Particle Diameter (μm) ***N/A***
Flow Rate (scfm) ***3,725.69 (OV)/ 53.47 (FDV)***	Drift Velocity (ft/sec) ***TBD***
Stream Temperature (°F) ***125 (OV)/ 125 (FDV)***	Particulate Concentration (gr/dscf) ***N/A***
Moisture Content (%) ***9.55%(OV)/ 5.88% (FDV)***	Halogens or Metals Present? ***None***
Pressure (in. Hg) ***29.92 (OV) / 50.28 (FDV)***	Organic Content (ppmv) ***0.39% molar (OV) / 81.46% molar (FDV)***
Heat Content (Btu/scfm) ***TBD***	O_2 Content (%) ***16.16% (OV)/ 0% (FDV)***

SECTION D – POLLUTANT SPECIFIC DATA
(Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***Volatile Organic Compounds (VOC)***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***64.88 (OV) / 202.29 (FDV)***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***N/A***
Solubility ***-***	Molecular Weight (lb/lb-mole) ***N/A***
Absorptive Properties -	

Pollutant Emitted ***Hydrogen Sulfide***	Chemical Abstract Services (CAS) Number ***7783-06-4***
Proposed Emission Rate (lb/hr) ***- (OV) / - (FDV)***	Emission Source (describe) ***Process Point***
Source Classification (process point, process fugitive, area fugitive) ***Process Point***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Inorganic/Vapor***
Concentration in Emission Stream (ppmv) ***<1 ppmv (OV) / <10 ppmv (FDV)***	Vapor Pressure (in. Hg @ °F) ***$1.55x10^{-7}$ in Hg @ 77 °F***
Solubility ***Insoluble in water; soluble in carbon disulfide***	Molecular Weight (lb/lb-mole) ***34.08***
Absorptive Properties -	

Signature of Applicant	Date

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

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Title ***Vice President of Operations***	Telephone Number ***(409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***
Facility Address (Street & No. or Lat/Long to Nearest Second) ***37th Street / 46°52'45"N/103°14'55" W***		
City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / Storage Tanks (Tank farm)

SECTION B – STACK DATA

Inside Diameter (ft) ***N/A***	Height Above Grade (ft) ***N/A***	
Gas Temperature at Exit (°F) ***N/A***	Gas Velocity at Exit (ft/sec) ***N/A***	Gas Volume (scfm) ***N/A***
Basis of any Estimates (attach separate sheet if necessary) ***Emission factors from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☒ No ☐
Nearest Residences or Building ***Administrative building***	Distance (ft) ***1,230 ft***	Direction ***East***
Nearest Property Line ***Fenceline***	Distance (ft) ***310 ft***	Direction ***South***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***Storage Tanks***	Mean Particle Diameter (μm) ***TBD***
Flow Rate (scfm) ***N/A***	Drift Velocity (ft/sec) ***TBD***
Stream Temperature (°F) ***N/A***	Particulate Concentration (gr/dscf) ***TBD***
Moisture Content (%) ***TBD***	Halogens or Metals Present? ***Halogens***
Pressure (in. Hg) ***TBD***	Organic Content (ppmv) ***TBD***
Heat Content (Btu/scfm) ***TBD***	O_2 Content (%) ***TBD***

SECTION D – POLLUTANT SPECIFIC DATA
(Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***2-Methyl naphthalene***	Chemical Abstract Services (CAS) Number ***91-57-6***
Proposed Emission Rate (lb/hr) ***$2.09x10^{-3}$***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***$2.17x10^{-3}$ in Hg @ 77 °F***
Solubility ***In water mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***142.08***
Absorptive Properties -	

Pollutant Emitted ***Anthracene***	Chemical Abstract Services (CAS) Number ***120-12-7***
Proposed Emission Rate (lb/hr) ***$1.43x10^{-4}$***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***$2.17x10^{-5}$ in Hg @ 77 °F***
Solubility ***In water 1.29 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***178.23***
Absorptive Properties -	

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) ***$5.01x10^{-2}$***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility ***In water $1.79x10^{3}$ mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Biphenyl***	Chemical Abstract Services (CAS) Number ***95-52-4***
Proposed Emission Rate (lb/hr) ***2.77x10^{-4}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***3.51x 10^{-4} in Hg @ 77 °F***
Solubility ***In water 0.0004 g/100mL @ 68 °F***	Molecular Weight (lb/lb-mole) ***154.21***
Absorptive Properties -	

Pollutant Emitted ***Chrysene***	Chemical Abstract Services (CAS) Number ***218-01-9***
Proposed Emission Rate (lb/hr) ***1.25x10^{-4}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***2.45 x10^{-10}in Hg @ 77 °F***
Solubility ***In water 0.002 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***228.29***
Absorptive Properties -	

Pollutant Emitted ***Cresols***	Chemical Abstract Services (CAS) Number ***106-44-5***
Proposed Emission Rate (lb/hr) ***7.71x10^{-3}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.004 in Hg @ 77°F***
Solubility ***In water 2.15x10^{+4}@77°F***	Molecular Weight (lb/lb-mole) ***108.14***
Absorptive Properties -	

Pollutant Emitted ***Cumene***	Chemical Abstract Services (CAS) Number ***98-82-8***
Proposed Emission Rate (lb/hr) ***9.17x10^{-3}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.17 in Hg @ 77°F***
Solubility ***61.3 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***120.19***
Absorptive Properties -	

Pollutant Emitted ***Ethylbenzene***	Chemical Abstract Services (CAS) Number ***100-41-4***
Proposed Emission Rate (lb/hr) ***1.93x10^{-2}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.37 in Hg @ 77°F***
Solubility ***In water 0.014 g/100mL @ 59 °F***	Molecular Weight (lb/lb-mole) ***106.17***
Absorptive Properties -	

Pollutant Emitted ***Fluorene***	Chemical Abstract Services (CAS) Number ***86-73-7***
Proposed Emission Rate (lb/hr) ***2.15x10^{-4}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***1.26x10 $^{-5}$ in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***166.22***
Absorptive Properties -	

Pollutant Emitted ***Hexane***	Chemical Abstract Services (CAS) Number ***110-54-5***
Proposed Emission Rate (lb/hr) ***3.30x10^{-1}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***5.90 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***86.1***
Absorptive Properties -	

Pollutant Emitted ***Methanol***	Chemical Abstract Services (CAS) Number ***67-56-1***
Proposed Emission Rate (lb/hr) ***2.26x10^{-3}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***5.0 in Hg @ 77 °F***
Solubility ***Miscible in water***	Molecular Weight (lb/lb-mole) ***32.04***
Absorptive Properties -	

Pollutant Emitted ***Methyl isobutyl Ketone***	Chemical Abstract Services (CAS) Number ***108-10-1***
Proposed Emission Rate (lb/hr) ***1.91x10^{-1}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***0.78 in Hg @ 77 °F***
Solubility ***In water 19,000 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***100.16***
Absorptive Properties -	

Pollutant Emitted ***Methyl tertiary-butyl ether***	Chemical Abstract Services (CAS) Number
Proposed Emission Rate (lb/hr) ***1.71x10^{-1}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***2.95 in Hg @ 154 °F***
Solubility ***In water 4.2 g/100mL @ 68°F***	Molecular Weight (lb/lb-mole) ***88.15***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***4.91x10^{-3}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Phenanthrene***	Chemical Abstract Services (CAS) Number ***85-01-8***
Proposed Emission Rate (lb/hr) ***8.94x10^{-4}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***4.76x10^{-6} in Hg @ 77 °F***
Solubility ***In water 1.15 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***178.23***
Absorptive Properties -	

Pollutant Emitted ***Phenol***	Chemical Abstract Services (CAS) Number ***108-95-2***
Proposed Emission Rate (lb/hr) ***1.35x10^{-3}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.013 in Hg @ 77°F***
Solubility ***In water 1 g/15mL***	Molecular Weight (lb/lb-mole) ***94.11***
Absorptive Properties -	

Pollutant Emitted ***Pyrene***	Chemical Abstract Services (CAS) Number ***129-00-0***
Proposed Emission Rate (lb/hr) ***2.32 x10^{-4}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***TBD***	Vapor Pressure (in. Hg @ °F) ***1.77x10^{-7} in Hg @ 77 °F***
Solubility ***In water 0.135 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***202.25***
Absorptive Properties -	

Pollutant Emitted ***Styrene***	Chemical Abstract Services (CAS) Number ***100-42-5***
Proposed Emission Rate (lb/hr) ***3.63x10^{-2}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.25 in Hg @ 77 °F***
Solubility ***In water 300 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***104.15***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***1.10x10^{-1}***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***1.11 in Hg @ 77 °F***
Solubility ***In water 526 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***$8.59x10^{-2}$***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***106.17***
Absorptive Properties -	

Pollutant Emitted ***Volatile Organic Compounds (VOC)***	Chemical Abstract Services (CAS) Number ***N/A***
Proposed Emission Rate (lb/hr) ***2.09***	Emission Source (describe) ***Tank Farm***
Source Classification (process point, process fugitive, area fugitive) ***Area Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***N/A***
Solubility ***-***	Molecular Weight (lb/lb-mole) ***0.11***
Absorptive Properties -	

Signature of Applicant 	Date 09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

North Dakota Department of
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918 E Divide Ave., 2nd Floor
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City ***Belfield***	State ***ND***	ZIP Code ***58622***
County ***Billings***	Number of Employees at Location ***TBD***	
Land Area at Plant Site ***261*** Acres (or) Sq. Ft.	MSL Elevation at Plant ***2,685 feet***	

Describe Nature of Business/Process

Petroleum Refining / WasteWater Treatment Plant - 206WWT (Fugitive)

SECTION B – STACK DATA

Inside Diameter (ft) ***N/A***	Height Above Grade (ft) ***N/A***	
Gas Temperature at Exit (°F) ***N/A***	Gas Velocity at Exit (ft/sec) ***N/A***	Gas Volume (scfm) ***N/A***
Basis of any Estimates (attach separate sheet if necessary) ***Engineering data and * Table 7-8. Table 7-9. and Table 7-10 from the Emissions Estimation Protocol for Petroleum Refineries. See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***		
Are Emission Control Devices in Place? If YES – Complete SFN 8532		Yes ☐ No ☒
Nearest Residences or Building ***Administrative building***	Distance (ft) ***1,434 ft***	Direction ***South***
Nearest Property Line ***Fenceline***	Distance (ft) ***963 ft***	Direction ***Northwest***

SECTION C – EMISSION STREAM DATA

Source ID No. From SFN 8516 ***206WWT (Fugitive)***	Mean Particle Diameter (μm)
Flow Rate (scfm) ***N/A***	Drift Velocity (ft/sec) ***N/A***
Stream Temperature (°F) ***N/A***	Particulate Concentration (gr/dscf) ***N/A***
Moisture Content (%) ***N/A***	Halogens or Metals Present? ***No***
Pressure (in. Hg) ***N/A***	Organic Content (ppmv) ***N/A***
Heat Content (Btu/scfm) ***N/A***	O_2 Content (%) ***N/A***

SECTION D – POLLUTANT SPECIFIC DATA (Complete One Box for Each Pollutant in Emission Stream)

Pollutant Emitted ***2,2,4-trimethylpentane***	Chemical Abstract Services (CAS) Number ***540-84-1***
Proposed Emission Rate (lb/hr) ***2.41 x10^{-2}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic/Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***1.50 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***114.22***
Absorptive Properties -	

Pollutant Emitted ***Benzene***	Chemical Abstract Services (CAS) Number ***71-43-2***
Proposed Emission Rate (lb/hr) ***5.56x10^{-3}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***3.73 in Hg @ 77 °F***
Solubility ***In water 1.79x10^{3} mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***78.11***
Absorptive Properties -	

Pollutant Emitted ***Biphenyl***	Chemical Abstract Services (CAS) Number ***95-52-4***
Proposed Emission Rate (lb/hr) ***2.34x10^{-5}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***3.51x 10^{-4} in Hg @ 77 °F***
Solubility ***In water 0.0004 g/100mL @ 68 °F***	Molecular Weight (lb/lb-mole) ***154.21***
Absorptive Properties -	

Pollutant Emitted ***Cresols***	Chemical Abstract Services (CAS) Number ***106-44-5***
Proposed Emission Rate (lb/hr) ***0***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.004 in Hg @ 77°F***
Solubility ***In water 2.15x10^{+4}@77°F***	Molecular Weight (lb/lb-mole) ***108.14***
Absorptive Properties -	

Pollutant Emitted ***Cumene***	Chemical Abstract Services (CAS) Number ***98-82-8***
Proposed Emission Rate (lb/hr) ***1.97x10^{-3}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.17 in Hg @ 77°F***
Solubility ***61.3 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***120.19***
Absorptive Properties -	

Pollutant Emitted ***Ethylbenzene***	Chemical Abstract Services (CAS) Number ***100-41-4***
Proposed Emission Rate (lb/hr) ***4.31x10^{-3}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.37 in Hg @ 77°F***
Solubility ***In water 0.014 g/100mL @ 59 °F***	Molecular Weight (lb/lb-mole) ***106.17***
Absorptive Properties -	

Pollutant Emitted ***Hexane***	Chemical Abstract Services (CAS) Number ***110-54-5***
Proposed Emission Rate (lb/hr) ***4.28x10^{-2}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***5.90 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***86.1***
Absorptive Properties -	

Pollutant Emitted ***Methyl tertiary-butyl ether***	Chemical Abstract Services (CAS) Number
Proposed Emission Rate (lb/hr) ***1.17x10^{-3}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***2.95 in Hg @ 154 °F***
Solubility ***In water 4.2 g/100mL @ 68°F***	Molecular Weight (lb/lb-mole) ***88.15***
Absorptive Properties -	

Pollutant Emitted ***Naphthalene***	Chemical Abstract Services (CAS) Number ***91-20-3***
Proposed Emission Rate (lb/hr) ***6.32x10^{-4}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.003 in Hg @ 77 °F***
Solubility ***In water 31 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***128.17***
Absorptive Properties -	

Pollutant Emitted ***Phenol***	Chemical Abstract Services (CAS) Number ***108-95-2***
Proposed Emission Rate (lb/hr) ***0***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.013 in Hg @ 77°F***
Solubility ***In water 1 g/15mL***	Molecular Weight (lb/lb-mole) ***94.11***
Absorptive Properties -	

Pollutant Emitted ***Styrene***	Chemical Abstract Services (CAS) Number ***100-42-5***
Proposed Emission Rate (lb/hr) ***8.26 x10^{-3}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.25 in Hg @ 77°F***
Solubility ***In water 300 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***104.15***
Absorptive Properties -	

Pollutant Emitted ***Toluene***	Chemical Abstract Services (CAS) Number ***108-88-3***
Proposed Emission Rate (lb/hr) ***1.39x10^{-2}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***1.11 in Hg @ 77 °F***
Solubility ***In water 526 mg/L @ 77 °F***	Molecular Weight (lb/lb-mole) ***92.14***
Absorptive Properties -	

Pollutant Emitted ***Xylene***	Chemical Abstract Services (CAS) Number ***95-47-6***
Proposed Emission Rate (lb/hr) ***1.68x10^{-2}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***0.26 in Hg @ 77°F***
Solubility ***In water 178 mg/L @ 77°F***	Molecular Weight (lb/lb-mole) ***106.16***
Absorptive Properties -	

Pollutant Emitted ***1,3-Butadiene***	Chemical Abstract Services (CAS) Number ***106-99-0***
Proposed Emission Rate (lb/hr) ***1.00x10^{-5}***	Emission Source (describe) ***Fugitive***
Source Classification (process point, process fugitive, area fugitive) ***Process Fugitive***	Pollutant Class and Form (organic/inorganic - particulate/vapor) ***Organic /Vapor***
Concentration in Emission Stream (ppmv) ***N/A***	Vapor Pressure (in. Hg @ °F) ***72.34 in Hg @ 68 °F***
Solubility ***Insoluble in water***	Molecular Weight (lb/lb-mole) ***54.09***
Absorptive Properties -	

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0001***		
Capacity	Barrels ***110,999***		Gallons ***4,661,958***	
Dimensions	Diameter ***115'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Crude Oil, (RVP 6.8 – 7 psi)

SECTION D – VAPOR DISPOSAL

☒Atmosphere ☐Vapor Recovery Unit ☐Flare ☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***6.8 - 7***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***770,000***	Tank Turnovers per Year ***60.25***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

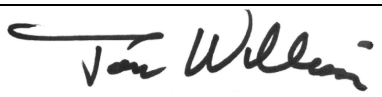
SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
Benzene	***3.06E-03***	***1.34E-02***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Biphenyl	***6.11E-05***	***2.68E-04***	
Cresol	***1.83E-04***	***8.03E-04***	
Cumene	***1.53E-04***	***6.69E-04***	
Ethylbenzene	***4.89E-04***	***2.14E-03***	
Hexane	***2.57E-02***	***1.12E-01***	
Naphthalene	***1.83E-04***	***8.03E-04***	
Phenol	***2.75E-04***	***1.20E-03***	
Toluene	***2.29E-03***	***1.00E-02***	
Xylene	***1.89E-03***	***8.30E-03***	
VOC	***2.80E-01***	***1.22E+00***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

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NORTH DAKOTA DEPARTMENT OF HEALTH
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County ***Billings***		Source ID Number ***203-T-0002***		
Capacity	Barrels ***110,999***		Gallons ***4,661,958***	
Dimensions	Diameter ***115'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☒With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Crude Oil, (RVP 6.8 – 7 psi)

SECTION D – VAPOR DISPOSAL

☒Atmosphere ☐Vapor Recovery Unit ☐Flare ☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***6.8 - 7***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***770,000***	Tank Turnovers per Year ***60.25***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
Benzene	***3.06E-03***	***1.34E-02***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Biphenyl	***6.11E-05***	***2.68E-04***	
Cresol	***1.83E-04***	***8.03E-04***	
Cumene	***1.53E-04***	***6.69E-04***	
Ethylbenzene	***4.89E-04***	***2.14E-03***	
Hexane	***2.57E-02***	***1.12E-01***	
Naphthalene	***1.83E-04***	***8.03E-04***	
Phenol	***2.75E-04***	***1.20E-03***	
Toluene	***2.29E-03***	***1.00E-02***	
Xylene	***1.89E-03***	***8.30E-03***	
VOC	***2.80E-01***	***1.22E+00***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

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Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0003***		
Capacity	Barrels ***110,999***		Gallons ***4,661,958***	
Dimensions	Diameter ***115'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☒With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Crude Oil, (RVP 6.8 – 7 psi)

SECTION D – VAPOR DISPOSAL

☒Atmosphere ☐Vapor Recovery Unit ☐Flare ☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***6.8 - 7***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***770,000***	Tank Turnovers per Year ***60.25***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
Benzene	***3.06E-03***	***1.34E-02***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Biphenyl	***6.11E-05***	***2.68E-04***	
Cresol	***1.83E-04***	***8.03E-04***	
Cumene	***1.53E-04***	***6.69E-04***	
Ethylbenzene	***4.89E-04***	***2.14E-03***	
Hexane	***2.57E-02***	***1.12E-01***	
Naphthalene	***1.83E-04***	***8.03E-04***	
Phenol	***2.75E-04***	***1.20E-03***	
Toluene	***2.29E-03***	***1.00E-02***	
Xylene	***1.89E-03***	***8.30E-03***	
VOC	***2.80E-01***	***1.22E+00***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb

Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

North Dakota Department of Health
Division of Air Quality
918 E Divide Ave., 2nd Floor
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PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
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Applicant´s Name ***Tom Williams***		
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County ***Billings***		Source ID Number ***203-T-0005***		
Capacity	Barrels ***64,996***		Gallons ***2,729,832***	
Dimensions	Diameter ***88'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Desulfurized Heavy Naphtha, (RVP 1.2 psi)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***1.2***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***89,896.8***	Tank Turnovers per Year ***26.78***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***2.4E-04***	***1.0E-03***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***1.6E-05***	***7.1E-05***	
Benzene	***4.7E-03***	***2.1E-02***	
Biphenyl	***1.1E-05***	***5.0E-05***	
Chrysene	***1.4E-05***	***6.2E-05***	
Cresol	***8.8E-04***	***3.8E-03***	
Cumene	***1.0E-03***	***4.4E-03***	
Ethylbenzene	***2.1E-03***	***9.2E-03***	
Fluorene	***2.4E-05***	***1.1E-04***	
Hexane	***2.8E-02***	***1.2E-01***	
Methanol	***2.6E-04***	***1.1E-03***	
Methyl isobutyl ketone	***2.2E-02***	***9.5E-02***	
Methyl tertiary-butyl ether	***2.1E-02***	***9.2E-02***	
Naphthalene	***5.1E-04***	***2.2E-03***	
Phenanthrene	***1.0E-04***	***4.4E-04***	
Phenol	***6.1E-05***	***2.7E-04***	
Pyrene	***2.6E-05***	***1.2E-04***	
Styrene	***4.5E-03***	***2.0E-02***	
Toluene	***1.2E-02***	***5.3E-02***	
Xylene	***9.5E-03***	***4.1E-02***	
VOC	***3.95E-02***	***1.73E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb

Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0006***		
Capacity	Barrels ***33,312***		Gallons ***1,399,104***	
Dimensions	Diameter ***63'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Reformate, (RVP 3 psi)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***3***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***179,793.60***	Tank Turnovers per Year ***46.90***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

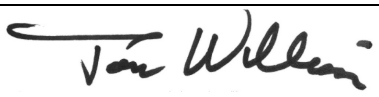
Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***1.2E-04***	***5.3E-04***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***8.3E-06***	***3.6E-05***	
Benzene	***2.4E-03***	***1.1E-02***	
Biphenyl	***5.9E-06***	***2.6E-05***	
Chrysene	***7.3E-06***	***3.2E-05***	
Cresol	***4.5E-04***	***2.0E-03***	
Cumene	***5.2E-04***	***2.3E-03***	
Ethylbenzene	***1.1E-03***	***4.7E-03***	
Fluorene	***1.2E-05***	***5.5E-05***	
Hexane	***1.5E-02***	***6.4E-02***	
Methanol	***1.3E-04***	***5.8E-04***	
Methyl isobutyl ketone	***1.1E-02***	***4.9E-02***	
Methyl tertiary-butyl ether	***1.1E-02***	***4.7E-02***	
Naphthalene	***2.6E-04***	***1.2E-03***	
Phenanthrene	***5.2E-05***	***2.3E-04***	
Phenol	***3.1E-05***	***1.4E-04***	
Pyrene	***1.4E-05***	***5.9E-05***	
Styrene	***2.3E-03***	***1.0E-02***	
Toluene	***6.2E-03***	***2.7E-02***	
Xylene	***4.8E-03***	***2.1E-02***	
VOC	***5.92E-02***	***2.59E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb

Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0007***		
Capacity	Barrels ***33,312***		Gallons ***1,399,104***	
Dimensions	Diameter ***63'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Reformate, (RVP 3 psi)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***3***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***179,793.60***	Tank Turnovers per Year ***46.90***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

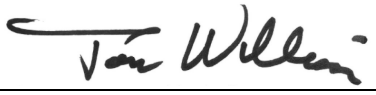
SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***1.2E-04***	***5.3E-04***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***8.3E-06***	***3.6E-05***	
Benzene	***2.4E-03***	***1.1E-02***	
Biphenyl	***5.9E-06***	***2.6E-05***	
Chrysene	***7.3E-06***	***3.2E-05***	
Cresol	***4.5E-04***	***2.0E-03***	
Cumene	***5.2E-04***	***2.3E-03***	
Ethylbenzene	***1.1E-03***	***4.7E-03***	
Fluorene	***1.2E-05***	***5.5E-05***	
Hexane	***1.5E-02***	***6.4E-02***	
Methanol	***1.3E-04***	***5.8E-04***	
Methyl isobutyl ketone	***1.1E-02***	***4.9E-02***	
Methyl tertiary-butyl ether	***1.1E-02***	***4.7E-02***	
Naphthalene	***2.6E-04***	***1.2E-03***	
Phenanthrene	***5.2E-05***	***2.3E-04***	
Phenol	***3.1E-05***	***1.4E-04***	
Pyrene	***1.4E-05***	***5.9E-05***	
Styrene	***2.3E-03***	***1.0E-02***	
Toluene	***6.2E-03***	***2.7E-02***	
Xylene	***4.8E-03***	***2.1E-02***	
VOC	***5.92E-02***	***2.59E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0008***		
Capacity	Barrels ***64,996***		Gallons ***2,729,832***	
Dimensions	Diameter ***88'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Gasoline, (RVP 13-15 psi)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***13-15***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***416,780***	Tank Turnovers per Year ***55.73***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

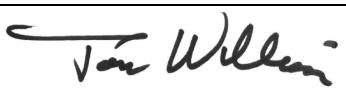
SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***2.4E-04***	***1.0E-03***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***1.6E-05***	***7.1E-05***	
Benzene	***4.7E-03***	***2.1E-02***	
Biphenyl	***1.1E-05***	***5.0E-05***	
Chrysene	***1.4E-05***	***6.2E-05***	
Cresol	***8.8E-04***	***3.8E-03***	
Cumene	***1.0E-03***	***4.4E-03***	
Ethylbenzene	***2.1E-03***	***9.2E-03***	
Fluorene	***2.4E-05***	***1.1E-04***	
Hexane	***2.8E-02***	***1.2E-01***	
Methanol	***2.6E-04***	***1.1E-03***	
Methyl isobutyl ketone	***2.2E-02***	***9.5E-02***	
Methyl tertiary-butyl ether	***2.1E-02***	***9.2E-02***	
Naphthalene	***5.1E-04***	***2.2E-03***	
Phenanthrene	***1.0E-04***	***4.4E-04***	
Phenol	***6.1E-05***	***2.7E-04***	
Pyrene	***2.6E-05***	***1.2E-04***	
Styrene	***4.5E-03***	***2.0E-02***	
Toluene	***1.2E-02***	***5.3E-02***	
Xylene	***9.5E-03***	***4.1E-02***	
VOC	***1.20E-01***	***5.24E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0009***		
Capacity	Barrels ***64,996***		Gallons ***2,729,832***	
Dimensions	Diameter ***88'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Gasoline, (RVP 13-15 psi)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***13-15***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***416,780***	Tank Turnovers per Year ***55.73***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***2.4E-04***	***1.0E-03***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***1.6E-05***	***7.1E-05***	
Benzene	***4.7E-03***	***2.1E-02***	
Biphenyl	***1.1E-05***	***5.0E-05***	
Chrysene	***1.4E-05***	***6.2E-05***	
Cresol	***8.8E-04***	***3.8E-03***	
Cumene	***1.0E-03***	***4.4E-03***	
Ethylbenzene	***2.1E-03***	***9.2E-03***	
Fluorene	***2.4E-05***	***1.1E-04***	
Hexane	***2.8E-02***	***1.2E-01***	
Methanol	***2.6E-04***	***1.1E-03***	
Methyl isobutyl ketone	***2.2E-02***	***9.5E-02***	
Methyl tertiary-butyl ether	***2.1E-02***	***9.2E-02***	
Naphthalene	***5.1E-04***	***2.2E-03***	
Phenanthrene	***1.0E-04***	***4.4E-04***	
Phenol	***6.1E-05***	***2.7E-04***	
Pyrene	***2.6E-05***	***1.2E-04***	
Styrene	***4.5E-03***	***2.0E-02***	
Toluene	***1.2E-02***	***5.3E-02***	
Xylene	***9.5E-03***	***4.1E-02***	
VOC	***1.20E-01***	***5.24E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb

Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0010***		
Capacity	Barrels ***64,996***		Gallons ***2,729,832***	
Dimensions	Diameter ***88'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Gasoline, (RVP 13-15 psi)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***13-15***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***416,780***	Tank Turnovers per Year ***55.73***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***2.4E-04***	***1.0E-03***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***1.6E-05***	***7.1E-05***	
Benzene	***4.7E-03***	***2.1E-02***	
Biphenyl	***1.1E-05***	***5.0E-05***	
Chrysene	***1.4E-05***	***6.2E-05***	
Cresol	***8.8E-04***	***3.8E-03***	
Cumene	***1.0E-03***	***4.4E-03***	
Ethylbenzene	***2.1E-03***	***9.2E-03***	
Fluorene	***2.4E-05***	***1.1E-04***	
Hexane	***2.8E-02***	***1.2E-01***	
Methanol	***2.6E-04***	***1.1E-03***	
Methyl isobutyl ketone	***2.2E-02***	***9.5E-02***	
Methyl tertiary-butyl ether	***2.1E-02***	***9.2E-02***	
Naphthalene	***5.1E-04***	***2.2E-03***	
Phenanthrene	***1.0E-04***	***4.4E-04***	
Phenol	***6.1E-05***	***2.7E-04***	
Pyrene	***2.6E-05***	***1.2E-04***	
Styrene	***4.5E-03***	***2.0E-02***	
Toluene	***1.2E-02***	***5.3E-02***	
Xylene	***9.5E-03***	***4.1E-02***	
VOC	***1.20E-01***	***5.24E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb

Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0011***		
Capacity	Barrels ***33,312***		Gallons ***1,399,104***	
Dimensions	Diameter ***63'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Jet Fuel, (TVP 0.04 psia)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***0.04***	Maximum Reid Vapor Pressure ***-***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***89,250***	Tank Turnovers per Year ***23.28***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***1.2E-05***	***5.1E-05***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***7.9E-07***	***3.5E-06***	
Benzene	***1.8E-04***	***7.8E-04***	
Biphenyl	***0.0E+00***	***0.0E+00***	
Chrysene	***6.9E-07***	***3.0E-06***	
Cresol	***6.3E-07***	***2.7E-06***	
Cumene	***3.3E-05***	***1.4E-04***	
Ethylbenzene	***5.9E-05***	***2.6E-04***	
Fluorene	***1.2E-06***	***5.2E-06***	
Hexane	***1.6E-03***	***6.9E-03***	
Methanol	***1.3E-05***	***5.5E-05***	
Methyl isobutyl ketone	***1.1E-03***	***4.6E-03***	
Methyl tertiary-butyl ether	***0.0E+00***	***0.0E+00***	
Naphthalene	***1.3E-05***	***5.8E-05***	
Phenanthrene	***5.0E-06***	***2.2E-05***	
Phenol	***2.2E-06***	***9.7E-06***	
Pyrene	***1.3E-06***	***5.6E-06***	
Styrene	***0.0E+00***	***0.0E+00***	
Toluene	***3.3E-04***	***1.4E-03***	
Xylene	***2.3E-04***	***1.0E-03***	
VOC	***2.57E-02***	***1.13E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb

Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:

Signature of Applicant	Date
	09/26/2016

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NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

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Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0012***		
Capacity	Barrels ***33,312***		Gallons ***1,399,104***	
Dimensions	Diameter ***63'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Jet Fuel, (TVP 0.04 psia)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***0.04***	Maximum Reid Vapor Pressure ***-***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***89,250***	Tank Turnovers per Year ***23.28***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

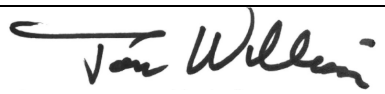
SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***1.2E-05***	***5.1E-05***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***7.9E-07***	***3.5E-06***	
Benzene	***1.8E-04***	***7.8E-04***	
Biphenyl	***0.0E+00***	***0.0E+00***	
Chrysene	***6.9E-07***	***3.0E-06***	
Cresol	***6.3E-07***	***2.7E-06***	
Cumene	***3.3E-05***	***1.4E-04***	
Ethylbenzene	***5.9E-05***	***2.6E-04***	
Fluorene	***1.2E-06***	***5.2E-06***	
Hexane	***1.6E-03***	***6.9E-03***	
Methanol	***1.3E-05***	***5.5E-05***	
Methyl isobutyl ketone	***1.1E-03***	***4.6E-03***	
Methyl tertiary-butyl ether	***0.0E+00***	***0.0E+00***	
Naphthalene	***1.3E-05***	***5.8E-05***	
Phenanthrene	***5.0E-06***	***2.2E-05***	
Phenol	***2.2E-06***	***9.7E-06***	
Pyrene	***1.3E-06***	***5.6E-06***	
Styrene	***0.0E+00***	***0.0E+00***	
Toluene	***3.3E-04***	***1.4E-03***	
Xylene	***2.3E-04***	***1.0E-03***	
VOC	***2.57E-02***	***1.13E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

North Dakota Department of Health
Division of Air Quality
918 E Divide Ave., 2nd Floor
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PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0013***		
Capacity	Barrels ***33,312***		Gallons ***1,399,104***	
Dimensions	Diameter ***63'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☒Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☐ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☐Double Deck	☐Pontoon	☒Other – Specify: ***Cone Roof***
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Undesulphurized Diesel, (TVP 0.004 psia)

SECTION D – VAPOR DISPOSAL

☐Atmosphere	☒Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***0.004***	Maximum Reid Vapor Pressure ***-***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***41.67***
Average Throughput (gallons per day) ***88,208.4***	Tank Turnovers per Year ***27.61***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

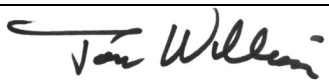
SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***1.2E-05***	***5.1E-05***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***7.9E-07***	***3.5E-06***	
Benzene	***1.8E-04***	***7.8E-04***	
Biphenyl	***0.0E+00***	***0.0E+00***	
Chrysene	***6.9E-07***	***3.0E-06***	
Cresol	***6.3E-07***	***2.7E-06***	
Cumene	***3.3E-05***	***1.4E-04***	
Ethylbenzene	***5.9E-05***	***2.6E-04***	
Fluorene	***1.2E-06***	***5.2E-06***	
Hexane	***1.6E-03***	***6.9E-03***	
Methanol	***1.3E-05***	***5.5E-05***	
Methyl isobutyl ketone	***1.1E-03***	***4.6E-03***	
Methyl tertiary-butyl ether	***0.0E+00***	***0.0E+00***	
Naphthalene	***1.3E-05***	***5.8E-05***	
Phenanthrene	***5.0E-06***	***2.2E-05***	
Phenol	***2.2E-06***	***9.7E-06***	
Pyrene	***1.3E-06***	***5.6E-06***	
Styrene	***0.0E+00***	***0.0E+00***	
Toluene	***3.3E-04***	***1.4E-03***	
Xylene	***2.3E-04***	***1.0E-03***	
VOC	***4.29E-03***	***1.88E-02***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0014***		
Capacity	Barrels ***33,312***		Gallons ***1,399,104***	
Dimensions	Diameter ***63'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☒Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☐ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☐Double Deck	☐Pontoon	☒Other – Specify: ***Cone Roof***
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Undesulphurized Diesel, (TVP 0.004 psia)

SECTION D – VAPOR DISPOSAL

☐Atmosphere	☒Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***0.004***	Maximum Reid Vapor Pressure ***-***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***41.67***
Average Throughput (gallons per day) ***88,208.4***	Tank Turnovers per Year ***27.61***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***1.2E-05***	***5.1E-05***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***7.9E-07***	***3.5E-06***	
Benzene	***1.8E-04***	***7.8E-04***	
Biphenyl	***0.0E+00***	***0.0E+00***	
Chrysene	***6.9E-07***	***3.0E-06***	
Cresol	***6.3E-07***	***2.7E-06***	
Cumene	***3.3E-05***	***1.4E-04***	
Ethylbenzene	***5.9E-05***	***2.6E-04***	
Fluorene	***1.2E-06***	***5.2E-06***	
Hexane	***1.6E-03***	***6.9E-03***	
Methanol	***1.3E-05***	***5.5E-05***	
Methyl isobutyl ketone	***1.1E-03***	***4.6E-03***	
Methyl tertiary-butyl ether	***0.0E+00***	***0.0E+00***	
Naphthalene	***1.3E-05***	***5.8E-05***	
Phenanthrene	***5.0E-06***	***2.2E-05***	
Phenol	***2.2E-06***	***9.7E-06***	
Pyrene	***1.3E-06***	***5.6E-06***	
Styrene	***0.0E+00***	***0.0E+00***	
Toluene	***3.3E-04***	***1.4E-03***	
Xylene	***2.3E-04***	***1.0E-03***	
VOC	***4.29E-03***	***1.88E-02***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

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NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

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Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0015***		
Capacity	Barrels ***64,996***		Gallons ***2,729,832***	
Dimensions	Diameter ***88'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☒Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☐ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☐Double Deck	☐Pontoon	☒Other – Specify: ***Cone Roof***
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Desulphurized Diesel, (TVP 0.004 psia)

SECTION D – VAPOR DISPOSAL

☐Atmosphere	☒Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***0.004***	Maximum Reid Vapor Pressure ***-***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***13.67***
Average Throughput (gallons per day) ***351,792***	Tank Turnovers per Year ***56.44***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***2.3E-05***	***9.9E-05***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***1.5E-06***	***6.8E-06***	
Benzene	***3.5E-04***	***1.5E-03***	
Biphenyl	***0.0E+00***	***0.0E+00***	
Chrysene	***1.4E-06***	***5.9E-06***	
Cresol	***1.2E-06***	***5.4E-06***	
Cumene	***6.4E-05***	***2.8E-04***	
Ethylbenzene	***1.2E-04***	***5.1E-04***	
Fluorene	***2.3E-06***	***1.0E-05***	
Hexane	***3.1E-03***	***1.4E-02***	
Methanol	***2.4E-05***	***1.1E-04***	
Methyl isobutyl ketone	***2.1E-03***	***9.0E-03***	
Methyl tertiary-butyl ether	***0.0E+00***	***0.0E+00***	
Naphthalene	***2.6E-05***	***1.1E-04***	
Phenanthrene	***9.7E-06***	***4.2E-05***	
Phenol	***4.3E-06***	***1.9E-05***	
Pyrene	***2.5E-06***	***1.1E-05***	
Styrene	***0.0E+00***	***0.0E+00***	
Toluene	***6.4E-04***	***2.8E-03***	
Xylene	***4.5E-04***	***2.0E-03***	
VOC	***7.95E-03***	***3.48E-02***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

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PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0016***		
Capacity	Barrels ***64,996***		Gallons ***2,729,832***	
Dimensions	Diameter ***88'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☒Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☐ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☐Double Deck	☐Pontoon	☒Other – Specify: ***Cone Roof***
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Desulphurized Diesel, (TVP 0.004 psia)

SECTION D – VAPOR DISPOSAL

☐Atmosphere	☒Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***0.004***	Maximum Reid Vapor Pressure ***-***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***13.67***
Average Throughput (gallons per day) ***351,792***	Tank Turnovers per Year ***56.44***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***2.3E-05***	***9.9E-05***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***1.5E-06***	***6.8E-06***	
Benzene	***3.5E-04***	***1.5E-03***	
Biphenyl	***0.0E+00***	***0.0E+00***	
Chrysene	***1.4E-06***	***5.9E-06***	
Cresol	***1.2E-06***	***5.4E-06***	
Cumene	***6.4E-05***	***2.8E-04***	
Ethylbenzene	***1.2E-04***	***5.1E-04***	
Fluorene	***2.3E-06***	***1.0E-05***	
Hexane	***3.1E-03***	***1.4E-02***	
Methanol	***2.4E-05***	***1.1E-04***	
Methyl isobutyl ketone	***2.1E-03***	***9.0E-03***	
Methyl tertiary-butyl ether	***0.0E+00***	***0.0E+00***	
Naphthalene	***2.6E-05***	***1.1E-04***	
Phenanthrene	***9.7E-06***	***4.2E-05***	
Phenol	***4.3E-06***	***1.9E-05***	
Pyrene	***2.5E-06***	***1.1E-05***	
Styrene	***0.0E+00***	***0.0E+00***	
Toluene	***6.4E-04***	***2.8E-03***	
Xylene	***4.5E-04***	***2.0E-03***	
VOC	***7.95E-03***	***3.48E-02***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

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PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0017***		
Capacity	Barrels ***33,312***		Gallons ***1,399,104***	
Dimensions	Diameter ***63'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☒Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☐ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☐Double Deck	☐Pontoon	☒Other – Specify: ***Cone Roof***
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Vacuum Gasoil, (TVP 0,00002 – 0,00003)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***0,00002 – 0,00003***	Maximum Reid Vapor Pressure ***-***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***41.67***
Average Throughput (gallons per day) ***124,740***	Tank Turnovers per Year ***39.05***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***1.2E-05***	***5.1E-05***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***7.9E-07***	***3.5E-06***	
Benzene	***1.8E-04***	***7.8E-04***	
Biphenyl	***0.0E+00***	***0.0E+00***	
Chrysene	***6.9E-07***	***3.0E-06***	
Cresol	***6.3E-07***	***2.7E-06***	
Cumene	***3.3E-05***	***1.4E-04***	
Ethylbenzene	***5.9E-05***	***2.6E-04***	
Fluorene	***1.2E-06***	***5.2E-06***	
Hexane	***1.6E-03***	***6.9E-03***	
Methanol	***1.3E-05***	***5.5E-05***	
Methyl isobutyl ketone	***1.1E-03***	***4.6E-03***	
Methyl tertiary-butyl ether	***0.0E+00***	***0.0E+00***	
Naphthalene	***1.3E-05***	***5.8E-05***	
Phenanthrene	***5.0E-06***	***2.2E-05***	
Phenol	***2.2E-06***	***9.7E-06***	
Pyrene	***1.3E-06***	***5.6E-06***	
Styrene	***0.0E+00***	***0.0E+00***	
Toluene	***3.3E-04***	***1.4E-03***	
Xylene	***2.3E-04***	***1.0E-03***	
VOC	***1.97E-03***	***8.64E-03***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
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County ***Billings***		Source ID Number ***203-T-0018***		
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Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

FCC Naphtha, (RVP 15 psia)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***15***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***181,146***	Tank Turnovers per Year ***26.78***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***1.2E-04***	***5.3E-04***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***8.3E-06***	***3.6E-05***	
Benzene	***2.4E-03***	***1.1E-02***	
Biphenyl	***5.9E-06***	***2.6E-05***	
Chrysene	***7.3E-06***	***3.2E-05***	
Cresol	***4.5E-04***	***2.0E-03***	
Cumene	***5.2E-04***	***2.3E-03***	
Ethylbenzene	***1.1E-03***	***4.7E-03***	
Fluorene	***1.2E-05***	***5.5E-05***	
Hexane	***1.5E-02***	***6.4E-02***	
Methanol	***1.3E-04***	***5.8E-04***	
Methyl isobutyl ketone	***1.1E-02***	***4.9E-02***	
Methyl tertiary-butyl ether	***1.1E-02***	***4.7E-02***	
Naphthalene	***2.6E-04***	***1.2E-03***	
Phenanthrene	***5.2E-05***	***2.3E-04***	
Phenol	***3.1E-05***	***1.4E-04***	
Pyrene	***1.4E-05***	***5.9E-05***	
Styrene	***2.3E-03***	***1.0E-02***	
Toluene	***6.2E-03***	***2.7E-02***	
Xylene	***4.8E-03***	***2.1E-02***	
VOC	***9.60E-02***	***4.20E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0019***		
Capacity	Barrels ***33,312***		Gallons ***1,399,104***	
Dimensions	Diameter ***63'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

FCC Naphtha, (RVP 15 psia)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***15***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***181,146***	Tank Turnovers per Year ***26.78***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***1.2E-04***	***5.3E-04***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***8.3E-06***	***3.6E-05***	
Benzene	***2.4E-03***	***1.1E-02***	
Biphenyl	***5.9E-06***	***2.6E-05***	
Chrysene	***7.3E-06***	***3.2E-05***	
Cresol	***4.5E-04***	***2.0E-03***	
Cumene	***5.2E-04***	***2.3E-03***	
Ethylbenzene	***1.1E-03***	***4.7E-03***	
Fluorene	***1.2E-05***	***5.5E-05***	
Hexane	***1.5E-02***	***6.4E-02***	
Methanol	***1.3E-04***	***5.8E-04***	
Methyl isobutyl ketone	***1.1E-02***	***4.9E-02***	
Methyl tertiary-butyl ether	***1.1E-02***	***4.7E-02***	
Naphthalene	***2.6E-04***	***1.2E-03***	
Phenanthrene	***5.2E-05***	***2.3E-04***	
Phenol	***3.1E-05***	***1.4E-04***	
Pyrene	***1.4E-05***	***5.9E-05***	
Styrene	***2.3E-03***	***1.0E-02***	
Toluene	***6.2E-03***	***2.7E-02***	
Xylene	***4.8E-03***	***2.1E-02***	
VOC	***9.60E-02***	***4.20E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0020***		
Capacity	Barrels ***33,312***		Gallons ***1,399,104***	
Dimensions	Diameter ***63′***	Height ***60′***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Alkylate, (RVP 4 psia)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***4***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***102,648***	Tank Turnovers per Year ***26.78***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***1,2E-04***	***5,3E-04***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***8,3E-06***	***3,6E-05***	
Benzene	***2,4E-03***	***1,1E-02***	
Biphenyl	***5,9E-06***	***2,6E-05***	
Chrysene	***7,3E-06***	***3,2E-05***	
Cresol	***4,5E-04***	***2,0E-03***	
Cumene	***5,2E-04***	***2,3E-03***	
Ethylbenzene	***1,1E-03***	***4,7E-03***	
Fluorene	***1,2E-05***	***5,5E-05***	
Hexane	***1,5E-02***	***6,4E-02***	
Methanol	***1,3E-04***	***5,8E-04***	
Methyl isobutyl ketone	***1,1E-02***	***4,9E-02***	
Methyl tertiary-butyl ether	***1,1E-02***	***4,7E-02***	
Naphthalene	***2,6E-04***	***1,2E-03***	
Phenanthrene	***5,2E-05***	***2,3E-04***	
Phenol	***3,1E-05***	***1,4E-04***	
Pyrene	***1,4E-05***	***5,9E-05***	
Styrene	***2,3E-03***	***1,0E-02***	
Toluene	***6,2E-03***	***2,7E-02***	
Xylene	***4,8E-03***	***2,1E-02***	
VOC	***6.27E-02***	***2.74E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

North Dakota Department of Health
Division of Air Quality
918 E Divide Ave., 2nd Floor
Bismarck, ND 58501-1947
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PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0021***		
Capacity	Barrels ***33,312***		Gallons ***1,399,104***	
Dimensions	Diameter ***63′***	Height ***60′***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☐Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☒ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☒Double Deck	☐Pontoon	☐Other – Specify:
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☒With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Alkylate, (RVP 4 psia)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***-***	Maximum Reid Vapor Pressure ***4***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***N/A***
Average Throughput (gallons per day) ***102,648***	Tank Turnovers per Year ***26.78***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***1,2E-04***	***5,3E-04***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***8,3E-06***	***3,6E-05***	
Benzene	***2,4E-03***	***1,1E-02***	
Biphenyl	***5,9E-06***	***2,6E-05***	
Chrysene	***7,3E-06***	***3,2E-05***	
Cresol	***4,5E-04***	***2,0E-03***	
Cumene	***5,2E-04***	***2,3E-03***	
Ethylbenzene	***1,1E-03***	***4,7E-03***	
Fluorene	***1,2E-05***	***5,5E-05***	
Hexane	***1,5E-02***	***6,4E-02***	
Methanol	***1,3E-04***	***5,8E-04***	
Methyl isobutyl ketone	***1,1E-02***	***4,9E-02***	
Methyl tertiary-butyl ether	***1,1E-02***	***4,7E-02***	
Naphthalene	***2,6E-04***	***1,2E-03***	
Phenanthrene	***5,2E-05***	***2,3E-04***	
Phenol	***3,1E-05***	***1,4E-04***	
Pyrene	***1,4E-05***	***5,9E-05***	
Styrene	***2,3E-03***	***1,0E-02***	
Toluene	***6,2E-03***	***2,7E-02***	
Xylene	***4,8E-03***	***2,1E-02***	
VOC	***6.27E-02***	***2.74E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb

Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0022***		
Capacity	Barrels ***33,312***		Gallons ***1,399,104***	
Dimensions	Diameter ***63'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☒Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☐ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☐Double Deck	☐Pontoon	☒Other – Specify: ***Cone Roof***
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Diluent, (TVP 0.004 psia)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***0.004***	Maximum Reid Vapor Pressure ***-***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***41.67***
Average Throughput (gallons per day) ***39,564***	Tank Turnovers per Year ***0.01***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***1.2E-05***	***5.1E-05***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***7.9E-07***	***3.5E-06***	
Benzene	***1.8E-04***	***7.8E-04***	
Biphenyl	***0.0E+00***	***0.0E+00***	
Chrysene	***6.9E-07***	***3.0E-06***	
Cresol	***6.3E-07***	***2.7E-06***	
Cumene	***3.3E-05***	***1.4E-04***	
Ethylbenzene	***5.9E-05***	***2.6E-04***	
Fluorene	***1.2E-06***	***5.2E-06***	
Hexane	***1.6E-03***	***6.9E-03***	
Methanol	***1.3E-05***	***5.5E-05***	
Methyl isobutyl ketone	***1.1E-03***	***4.6E-03***	
Methyl tertiary-butyl ether	***0.0E+00***	***0.0E+00***	
Naphthalene	***1.3E-05***	***5.8E-05***	
Phenanthrene	***5.0E-06***	***2.2E-05***	
Phenol	***2.2E-06***	***9.7E-06***	
Pyrene	***1.3E-06***	***5.6E-06***	
Styrene	***0.0E+00***	***0.0E+00***	
Toluene	***3.3E-04***	***1.4E-03***	
Xylene	***2.3E-04***	***1.0E-03***	
VOC	***3.73E-02***	***1.63E-01***	

* Include an estimate of greenhouse gas emissions (CO_2e)

SECTION I – STANDARDS OF PERFORMANCE

Tank subject to:	☐40 CFR 60, Subpart K	☐40 CFR 60, Subpart Ka	☒40 CFR 60, Subpart Kb
Are the standards of performance for new stationary sources; petroleum liquid storage vessels, 40 CFR Part 60, Subparts K, Ka, and Kb being adhered to, where applicable? ☒Yes ☐ No – Explain:			

Signature of Applicant	Date
	09/26/2016

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

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

PERMIT APPLICATION FOR VOLATILE ORGANIC COMPOUNDS STORAGE TANK

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF AIR QUALITY
SFN 8535 (10-13)

SECTION A – FACILITY INFORMATION

Name of Firm or Organization ***Meridian Energy Group – Davis Refinery***		
Applicant´s Name ***Tom Williams***		
Title ***VP of Planning & Permitting***	Telephone Number ***(707) 299-0182***	E-mail Address ***twilliams@meridianenergygroup.inc***
Mailing Address (Street & No.) ***2062 Business Center Drive, Suite 115***		
City ***Irvine***	State ***CA***	ZIP Code ***92612***
Contact Person for Air Pollution Matters ***Tom Johnson***		
Title ***Vice President of Operations***	Telephone Number (***409)795-0792***	E-mail Address ***tjohnson@meridianenergygroup.inc***

SECTION B – TANK DATA

Legal Description of Facility Site ***Property ID 07 0000 00165 000 in the SE 1/4 of Section 2, Twp 139N, Range 100W and Property ID: 07 0000 00162 000 in the NW1/4 and SW 1/4 of Section 1, Twp 139N, Range 100W***				
County ***Billings***		Source ID Number ***203-T-0023***		
Capacity	Barrels ***64,996***		Gallons ***2,729,832***	
Dimensions	Diameter ***88'***	Height ***60'***	Length	Width
Shape	☒Cylindrical	☐Spherical	☐Other – Specify:	
Materials of Construction	***Carbon Steel***			
Construction	☐Riveted	☒Welded	☐Other – Specify:	
Color	***Beige***			
Condition	☒Good	☐Fair	☐Poor	
Status	☒New Construction	☐Alteration	☐Existing (Give Date Constructed): _____	
Type of Tank	☒Fixed Roof ☐Variable Vapor Space ☐Pressure (low or high)		☐External Floating ☐ Internal Floating ☐Other – Specify:	
Type of Roof	☐Pan	☐Double Deck	☐Pontoon	☒Other – Specify: ***Cone Roof***
Type of Seal	Metallic Shoe Seal	Liquid Mounted Resilient Seal	Vapor Mounted Resilient Seal	
	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Shoe Mounted Secondary Seal	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	☐Primary Seal Only ☐With Rim Mounted Seal ☐With Weather Shield	

SECTION C – TANK CONTENTS

Fuel Oil, (TVP 0.000028 psia)

SECTION D – VAPOR DISPOSAL

☒Atmosphere	☐Vapor Recovery Unit	☐Flare	☐Other – Specify:

SECTION E – VAPOR PRESSURE DATA

psia	
Maximum True Vapor Pressure ***0.000028***	Maximum Reid Vapor Pressure ***-***

SECTION F – OPERATIONAL DATA

Maximum Filling Rate (barrels per hour or gallons per hour) ***TBD***	Vapor Space Outage (See AP-42, 7.1-92, Equation 1-15) ***14***
Average Throughput (gallons per day) ***131,880***	Tank Turnovers per Year ***21.16***

SECTION G – SOLUTION STORAGE

If material stored is a solution, supply the following information:	
Name of Solvent ***N/A***	Name of Material Dissolved ***N/A***
Concentration of Material Dissolved (% by weight or % by volume or lbs/gal) ***N/A***	

SECTION H – AIR CONTAMINANTS EMITTED

Pollutant*	Maximum Pounds Per Hour	Tons Per Year	Basis and Calculations for Quantities (Attach separate sheet if needed)
2-Methyl naphthalene	***2.3E-05***	***9.9E-05***	***VOC from TANKS 4.0.9d software modeled runs.*** ***HAPs from Table 3-3 of the Emissions Estimation Protocol for Petroleum Refineries*** ***See Document P-5715043-01-001-18042-I001 "EMISSIONS INVENTORY" and P-5715043-01-001-18035-I001 "BACT Analysis"***
Anthracene	***1.5E-06***	***6.8E-06***	
Benzene	***3.5E-04***	***1.5E-03***	
Biphenyl	***0.0E+00***	***0.0E+00***	
Chrysene	***1.4E-06***	***5.9E-06***	
Cresol	***1.2E-06***	***5.4E-06***	
Cumene	***6.4E-05***	***2.8E-04***	
Ethylbenzene	***1.2E-04***	***5.1E-04***	
Fluorene	***2.3E-06***	***1.0E-05***	
Hexane	***3.1E-03***	***1.4E-02***	
Methanol	***2.4E-05***	***1.1E-04***	
Methyl isobutyl ketone	***2.1E-03***	***9.0E-03***	
Methyl tertiary-butyl ether	***0.0E+00***	***0.0E+00***	
Naphthalene	***2.6E-05***	***1.1E-04***	
Phenanthrene	***9.7E-06***	***4.2E-05***	
Phenol	***4.3E-06***	***1.9E-05***	
Pyrene	***2.5E-06***	***1.1E-05***	
Styrene	***0.0E+00***	***0.0E+00***	
Toluene	***6.4E-04***	***2.8E-03***	
Xylene	***4.5E-04***	***2.0E-03***	
VOC	***9.42E-04***	***4.13E-03***	

* Include an estimate of greenhouse gas emissions (CO_2e)