Texas Commission on Environmental Quality
Interoffice Memorandum

TO: Office of Chief Clerk DATE: March 7, 2022

FROM: Lorena Patrick, Betsy Peticolas, Contessa Gay
Staff Attorneys
Environmental Law Division

SUBJECT: Backup Documents Filed for Consideration of Hearing Requests at Agenda

Applicant:	Max Midstream Texas, LLC
Proposed Permit No.:	162941
Program:	Air
Docket No.:	TCEQ Docket No. 2022-0157-AIR

Enclosed please find a copy of the following documents for inclusion in the background material for this permit application:

· The final draft permit (including the Special Conditions and the Maximum Allowable Emission Rate Table);

· The summary of the technical review of the permit application, which includes a compliance summary of the applicant;

· The initial Air Quality Analysis Audit memorandum;

· A Second Air Quality Analysis Audit memorandum, which supplements the initial audit; and

· The health effects review for the permit.

Texas Commission on Environmental Quality
Air Quality Permit

A Permit Is Hereby Issued To
Max Midstream Texas, LLC
Authorizing the Construction and Operation of
Seahawk Crude Condensate Terminal
Located at **Point Comfort, Calhoun County, Texas**
Latitude 28° 40′ 57″ Longitude −96° 33′ 5″

Permit: 162941

Issuance Date: TBD

Expiration Date: TBD

For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)] [1]
2. **Voiding of Permit**. A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1)the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of $5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120]
3. **Construction Progress**. Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
4. **Start-up Notification**. The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
5. **Sampling Requirements**. If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]
6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and

operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]

8. **Maximum Allowable Emission Rates**. The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)] [1]
9. **Maintenance of Emission Control**. The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification in accordance with 30 TAC §101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC§ 116.115(b)(2)(G)]
10. **Compliance with Rules**. Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to "air pollution" as defined in Texas Health and Safety Code (THSC) §382.003(3) or violate THSC § 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit. [1]

[1] Please be advised that the requirements of this provision of the general conditions may not be applicable to greenhouse gas emissions.

Common Acronyms in Air Permits

°C = Temperature in degrees Celsius
°F = Temperature in degrees Fahrenheit
°K = Temperature in degrees Kelvin
µg = microgram
$\mu g/m^3$ = microgram per cubic meter
acfm = actual cubic feet per minute
AMOC = alternate means of control
AOS = alternative operating scenario
AP-42 = Air Pollutant Emission Factors, 5th edition
APD = Air Permits Division
API = American Petroleum Institute
APWL = air pollutant watch list
BPA = Beaumont/ Port Arthur
BACT = best available control technology
BAE = baseline actual emissions
bbl = barrel
bbl/day = barrel per day
bhp = brake horsepower
BMP = best management practices
Btu = British thermal unit
Btu/scf = British thermal unit per standard cubic foot or feet
CAA = Clean Air Act
CAM = compliance-assurance monitoring
CEMS = continuous emissions monitoring systems
cfm = cubic feet (per) minute
CFR = Code of Federal Regulations
CN = customer ID number
CNG = compressed natural gas
CO = carbon monoxide
COMS = continuous opacity monitoring system
CPMS = continuous parametric monitoring system
DFW = Dallas/ Fort Worth (Metroplex)
DE = destruction efficiency
DRE = destruction and removal efficiency
dscf = dry standard cubic foot or feet
dscfm = dry standard cubic foot or feet per minute
ED = (TCEQ) Executive Director
EF = emissions factor
EFR = external floating roof tank
EGU = electric generating unit
EI = Emissions Inventory
ELP = El Paso
EPA = (United States) Environmental Protection Agency
EPN = emission point number
ESL = effects screening level
ESP = electrostatic precipitator
FCAA = Federal Clean Air Act
FCCU = fluid catalytic cracking unit
FID = flame ionization detector
FIN = facility identification number
ft = foot or feet
ft/sec = foot or feet per second
g = gram
gal/wk = gallon per week
gal/yr = gallon per year
GLC = ground level concentration
GLC_{max} = maximum (predicted) ground-level concentration
gpm = gallon per minute
gr/1000scf = grain per 1000 standard cubic feet
gr/dscf = grain per dry standard cubic feet
H_2CO = formaldehyde
H_2S = hydrogen sulfide
H_2SO_4 = sulfuric acid
HAP = hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
HC = hydrocarbons
HCl = hydrochloric acid, hydrogen chloride
Hg = mercury
HGB = Houston/Galveston/Brazoria
hp = horsepower
hr = hour
IFR = internal floating roof tank
in H_2O = inches of water
in Hg = inches of mercury
IR = infrared
ISC3 = Industrial Source Complex, a dispersion model
ISCST3 = Industrial Source Complex Short-Term, a dispersion model
K = Kelvin; extension of the degree Celsius scaled-down to absolute zero
LACT = lease automatic custody transfer
LAER = lowest achievable emission rate
lb = pound
hp = horsepower
hr = hour lb/day = pound per day
lb/hr = pound per hour
lb/MMBtu = pound per million British thermal units
LDAR = Leak Detection and Repair (Requirements)
LNG = liquefied natural gas
LPG = liquefied petroleum gas
LT/D = long ton per day
m = meter
m^3 = cubic meter
m/sec = meters per second
MACT = maximum achievable control technology
MAERT = Maximum Allowable Emission Rate Table
MERA = Modeling and Effects Review Applicability
mg = milligram
mg/g = milligram per gram
mL = milliliter
MMBtu = million British thermal units
MMBtu/hr = million British thermal units per hour
MSDS = material safety data sheet
MSS = maintenance, startup, and shutdown
MW = megawatt
NAAQS = National Ambient Air Quality Standards
NESHAP = National Emission Standards for Hazardous Air Pollutants
NGL = natural gas liquids
NNSR = nonattainment new source review
NO_x = total oxides of nitrogen

NSPS = New Source Performance Standards
PAL = plant-wide applicability limit
PBR = Permit(s) by Rule
PCP = pollution control project
PEMS = predictive emission monitoring system
PID = photo ionization detector
PM = periodic monitoring
PM = total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
$PM_{2.5}$ = particulate matter equal to or less than 2.5 microns in diameter
PM_{10} = total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
POC = products of combustion
ppb = parts per billion
ppm = parts per million
ppmv = parts per million (by) volume
psia = pounds (per) square inch, absolute
psig = pounds (per) square inch, gage
PTE = potential to emit
RA = relative accuracy
RATA = relative accuracy test audit
RM = reference method
RVP = Reid vapor pressure
scf = standard cubic foot or feet
scfm = standard cubic foot or feet (per) minute
SCR = selective catalytic reduction
SIL = significant impact levels
SNCR = selective non-catalytic reduction
SO_2 = sulfur dioxide
SOCMI = synthetic organic chemical manufacturing industry
SRU = sulfur recovery unit
TAC = Texas Administrative Code
TCAA = Texas Clean Air Act
TCEQ = Texas Commission on Environmental Quality
TD = Toxicology Division
TLV = threshold limit value
TMDL = total maximum daily load
tpd = tons per day
tpy = tons per year
TVP = true vapor pressure
VOC = volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
VRU = vapor recovery unit or system

Special Conditions

Permit Number 162941

1. This permit covers only those sources of emissions listed in the attached table entitled “Emission Sources - Maximum Allowable Emission Rates” (MAERT), and those sources are limited to the emission limits and other conditions specified in that table.

2. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the MAERT. Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions

Federal Applicability

3. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60):

   A. Subpart A, General Provisions

   B. Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984

   C. Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engine

4. These facilities shall comply with applicable requirements of the EPA regulations on National Emission Standards for Hazardous Air Pollutants (HAPS) for Source Categories, 40 CFR Part 63:

   A. Subpart A: General Provisions.

   B. Subpart Y: National Emission Standards for Marine Tank Vessel Loading Operations. Terminals, Bulk Plants, and Pipeline Facilities.

Emissions Standards and Operating Specifications

5. Fuel gas combusted at this facility shall be sweet natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet.

6. The following requirements apply to the emergency engine and firewater pumps (Emission Point Numbers [EPNs] FWPUMP-1 through FWPUMP-5 and EMG-GEN1):

   A. Fuel shall be limited to ultra-low sulfur diesel (ULSD) containing no more than 15 ppmw total sulfur;

   B. The engine shall be limited to 100 hours per year during non-emergency situations, as defined at 40 CFR §63.6640(f);

   C. The engine shall be equipped with a non-resettable hour meter

Storage Tanks

7. Storage tank service is limited to storing the following liquids: Crude/Crude Condensate (EPNs TK-06-01 through TK-06-15) and diesel (EPNs DIESEL-1 through DIESEL-3).

8. The true vapor pressure of any liquid stored at this facility in an atmospheric tank shall not exceed 11.0 psia.

9. Storage tanks are subject to the following requirements: The control requirements specified in parts A–E of this condition shall not apply (1) where the VOC has an aggregate partial pressure of less than 0.50 psia at the maximum feed temperature or 95°F, whichever is greater, or (2) to storage tanks smaller than 25,000 gallons.

   A. An internal floating deck or "roof" shall be installed. A domed external floating roof tank is equivalent to an internal floating roof tank. The floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the floating roof: (1) a liquid-mounted seal, (2) two continuous seals mounted one above the other, or (3) a mechanical shoe seal.

   B. For any tank equipped with a floating roof, the permit holder shall perform the visual inspections and any seal gap measurements specified in Title 40 Code of Federal Regulations § 60.113b (40 CFR § 60.113b) Testing and Procedures (as amended at 54 FR 32973, Aug. 11, 1989) to verify fitting and seal integrity. Records shall be maintained of the dates inspection was performed, any measurements made, results of inspections and measurements made (including raw data), and actions taken to correct any deficiencies noted.

   C. The floating roof design shall incorporate sufficient flotation to conform to the requirements of API Code 650 dated November 1, 1998 except that an internal floating cover need not be designed to meet rainfall support requirements and the materials of construction may be steel or other materials.

   D. Tanks shall be designed to completely drain its entire contents to a sump in a manner that leaves no more than 9 gallons of free-standing liquid in the tank or the sump.

   E. Tanks shall be constructed or equipped with a connection to a vapor recovery system that routes vapors from the vapor space under the landed roof to a control device. Control of landed roof storage tank emissions shall meet the requirements of Special Condition No. 22.

   F. Except for labels, logos, etc. not to exceed 15 percent of the tank total surface area, uninsulated tank exterior surfaces exposed to the sun shall be white or unpainted aluminum. Storage tanks must be equipped with permanent submerged fill pipes.

   G. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all storage tanks during the previous calendar month and the past consecutive 12-month period. The record shall include tank identification number, control method used, tank capacity in gallons, name of the material stored, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month and year-to-date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures.

Emissions from tanks shall be calculated using the methods that were used to determine the MAERT limits in the permit application, Form PI-1 dated October 6, 2020. Sample calculations from the application shall be attached to a copy of this permit at the plant site.

10. Pressurized spheres are limited to storing isobutane and shall be designed and operated in accordance with the following requirements:

    A. The pressure sphere shall remain pressurized at all times in which the tank is in use, including while filling. The tank pressure shall not exceed that of any relief valve or rupture disk on the tank;

    B. Venting of the isobutane spheres to the emergency flare is limited to unplanned emergency pressure releases.

11. The dissolved hydrogen sulfide in the crude oil/crude condensate/diesel shall not exceed 10 ppmw in any sample.

    A. In order to demonstrate compliance with this Special Condition, the permit holder shall determine the dissolved hydrogen sulfide concentration of each crude oil stock to be stored in the storage tanks identified in Special Condition No. 7. The hydrogen sulfide concentration may be determined using method ASTM UOP163 or ASTM D7621. Additional analytical methods may be approved by the TCEQ.

    B. In order to demonstrate compliance with this Special Condition, the permit holder shall conduct sampling to determine the concentration of H_2S in tank vapor spaces. H_2S concentration may be determined using an instrument meeting the requirements of paragraph A above, except that the “release concentration” shall be 1,000 ppmv. Additional analytical methods may be approved by the TCEQ Regional Office.

    C. The frequency of sampling shall be the more frequent of:

        (1) annual; or

        (2) within 60 days of any change of service for an affected tank.

    D. Records of H_2S concentrations measured to meet the requirements of this condition shall be maintained at the plant site.

Loading

12. All lines and connectors shall be visually inspected for any defects prior to hookup. Lines and connectors that are visibly damaged shall be removed from service. Operations shall cease immediately upon detection of any liquid leaking from the lines or connections.

13. Each tank truck shall be leak checked and certified annual in accordance with 49 CFR 180.407 Department of Transportation (DOT), for pressure tank trucks rated at 15 psig or greater. The permit holder shall not allow a tank truck to be filled unless it has passed a leak-tight test within the past year as evidenced by a certificate which shows the date the tank truck last passed the leak-tight test required by this condition and the identification number of the tank truck.

14. Loading emissions from marine vessels shall be routed to at least one of the VCUs (EPNs CONT-1 through CONT-11 and CONT-15 through CONT-23) for control. The VCUs shall have a 99.9% destruction efficiency or a maximum VOC stack exhaust concentration of 10 ppmv at 3% O_2.

Inland Barges – 100% collection efficiency for vacuum loading

15. Before loading a marine vessel with a VOC which has a vapor pressure equal to or greater than 0.5 pounds per square inch absolute (psia) at 95ºF or the loading temperature, whichever is higher, the owner or operator of the marine terminal shall verify that the marine vessel has passed an annual vapor tightness test as specified in 40 CFR §63.565(c) (September 19, 1995) or 40 CFR §61.304(f) (October 17, 2000) within the previous twelve months.

Ships and Ocean Barges - 99.9% collection efficiency

16. The following additional requirements apply to loading of a VOC which has a vapor pressure equal to or greater than 0.5 pounds per square inch absolute (psia) under actual storage conditions onto inerted marine vessels (ships).

    A. Before loading, the owner or operator of the marine terminal shall verify that the marine vessel has passed an annual vapor tightness test as specified in 40 CFR §63.565(c) (September 19, 1995) or 40 CFR §61.304(f) (October 17, 2000) within the previous twelve months, and received a recent, completed Standard Tanker Chartering Questionnaire form (Q88) or equivalent.

    B. The pressure at the vapor collection connection of an inerted marine vessel must be maintained such that the pressure in a vessels' cargo tanks do not go below 0.2 pounds per square inch gauge (psig) or exceed 80% of the lowest setting of any of the vessel's pressure relief valves. The lowest vessel cargo tank or vent header pressure relief valve setting for the vessel being loaded shall be recorded. Pressure shall be continuously monitored while the vessel is being loaded. Pressure shall be recorded at fifteen-minute intervals.

    C. VOC loading rates shall be recorded during loading. The loading rate must not exceed the maximum permitted loading rate.

    D. During loading, the owner or operator of the marine terminal or of the marine vessel shall conduct audio, olfactory, and visual checks for leaks within the first hour of loading and once every 8 hours thereafter for onshore equipment and on board the ship.

        (1) If a liquid leak is detected during loading and cannot be repaired immediately (for example, by tightening a bolt or packing gland), then the loading operation shall cease until the leak is repaired.

        (2) If a vapor leak is detected by sight, sound, smell, or hydrocarbon gas analyzer during the loading operation, then a "first attempt" shall be made to repair the leak. Loading operations need not be ceased if the first attempt to repair the leak is not successful provided that the first attempt effort is documented by the owner or operator of the marine vessel and a copy of the repair log is made available to a representative of the marine terminal.

(3) If the attempt to repair the leak is not successful and loading continues, emissions from the loading operation for that ship shall be calculated assuming a collection efficiency of 99%.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

Vapor Combustor Units (VCUs)

17. Vapor Combustors (EPNs CONT-1 through CONT-11 and CONT-15 through CONT-23) shall be designed and operated in accordance with the following requirements:

A. Each VCU shall achieve 99.9% control of the waste gas directed to it or a maximum VOC stack exhaust concentration of 10 ppmv at 3% O_2. This shall be ensured by maintaining the temperature in, or immediately downstream of, the combustion chamber above 1400ºF prior to the initial stack test performed in accordance with Special Condition No. 18. Following the completion of the stack test, the six-minute average temperature shall be maintained above the minimum one-hour average temperature maintained during the last satisfactory stack test.

B. The temperature measurement device shall reduce the temperature readings to an averaging period of 6 minutes or less and record it at that frequency. The temperature monitor shall be installed, calibrated or have a calibration check performed at least annually, and maintained according to the manufacturer's specifications. The device shall have an accuracy of the greater of ±2 percent of the temperature being measured expressed in degrees Celsius or ±2.5ºC.

C. Quality assured (or valid) data must be generated when the VCU is operating. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the VCU operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

D. The vapor combustor shall be operated with no visible emissions.

Initial Determination of Compliance

18. The permit holder shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the VCUs (EPNs CONT-1 through CONT-11 and CONT-15 through CONT-23) to demonstrate compliance with the MAERT and Special Conditions. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and the U.S. EPA Reference Methods.

Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure

proposals for 40 CFR Part 60 testing which must have EPA approval shall be submitted to the TCEQ Regional Director.

A. The appropriate TCEQ Regional Office shall be notified not less than 45 days prior to sampling. The notice shall include:

1) Proposed date for pretest meeting.

2) Date sampling will occur.

3) Name of firm conducting sampling.

4) Type of sampling equipment to be used.

5) Method or procedure to be used in sampling.

6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.

7) Procedure/parameters to be used to determine worst case emissions.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for the test reports. The TCEQ Regional Director must approve any deviation from specified sampling procedures.

B. Air contaminants emitted from the VCUs to be tested for include (but are not limited to) VOC, NO_x, and CO.

C. The VCUs (EPNs CONT-1 through CONT-11 and CONT-15 through CONT-23) are limited to the following preliminary emission factors represented in the initial permit application, PI-1 dated October 6, 2020:

EPN(s)	**NOx Emission Factor**	**CO Emission Factor**
CONT-1 and CONT-2	0.10 lb/MMBtu	0.10 lb/MMBtu
CONT-3 through CONT-11 and CONT-15 through CONT-23	0.02 lb/MMBtu	0.02 lb/MMBtu

D. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial start-up of the facilities (or increase in production, as appropriate) and at such other times (identify the need for any periodic sampling here) as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate regional office.

E. The facility being sampled shall operate at the maximum expected hourly loading rate. These conditions/parameters and any other primary operating parameters that affect the emission rate shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in

paragraph A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

During subsequent operations, if the maximum hourly loading rate is greater than that recorded during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Section Manager for the region.

F. Copies of the final sampling report shall be forwarded to the offices below within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions entitled "Chapter 14, Contents of Sampling Reports" of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TCEQ Regional Office.

One copy to each local air pollution control program.

G. Sampling ports and platform(s) shall be incorporated into the design of the VCUs to the specifications set forth in the attachment entitled "Chapter 2, Guidelines for Stack Sampling Facilities" of the TCEQ Sampling Procedures Manual. Alternate sampling facility designs must be submitted for approval to the TCEQ Regional Director.

Fugitives

Piping, Valves, Connectors, Pumps, Agitators, and Compressors – 28VHP

19. The following requirements apply to piping, valves, connectors, pumps, agitators, and compressors containing or in contact with fluids that could reasonably be expected to contain greater than or equal to 10 weight percent VOC at any time.

A. The requirements of paragraphs F and G shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (psia) at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made readily available upon request.

The exempted components may be identified by one or more of the following methods:

- piping and instrumentation diagram (PID);
- a written or electronic database or electronic file;
- color coding;
- a form of weatherproof identification; or
- designation of exempted process unit boundaries.

B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.

C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.

D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in Paragraph A above. If an unsafe to monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe to monitor times. A difficult to monitor component for which quarterly monitoring is specified may instead be monitored annually.

E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open-ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period;

(1) a cap, blind flange, plug, or second valve must be installed on the line or valve; or

(2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once within the 72-hour period following the creation of the open-ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.

F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. If a relief valve is equipped with rupture disc, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity.

A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping

requirements specified in this paragraph. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

The gas analyzer shall conform to requirements listed in Method 21 of 40 CFR part 60, appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

Replacements for leaking components shall be re-monitored within 15 days of being placed back into VOC service.

G. Except as may be provided for in the special conditions of this permit, all pump, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump, compressor, and agitator seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days and a record of the attempt shall be maintained.

I. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging within 15 days of the detection of the leak. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shut down as calculated in accordance

with 30 TAC 115.782 (c)(1)(B)(i)(I) or 500 pounds, whichever is greater, the TCEQ Regional Manager and any local programs shall be notified and the TCEQ Executive Director may require early unit shut down or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

J. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.

K. Alternative monitoring frequency schedules of 30 TAC 115.352 - 115.359 or National Emission Standards for Organic Hazardous Air Pollutants, 40 CFR Part 63, Subpart H, may be used in lieu of Items F and G of this condition.

L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS) and does not constitute approval of alternative standards for these regulations.

Maintenance, Startup, and Shutdown

20. This permit authorizes the emissions from the facilities authorized by this permit for the planned maintenance, startup, and shutdown (MSS) activities summarized in the MSS Activity Summary (Attachment B) attached to this permit.

Additionally, this permit authorizes emissions from the following temporary facilities used to support planned MSS activities at permanent site facilities: vacuum trucks, portable frac tanks/containers, and portable control devices identified in Special Condition 27. Emissions from temporary facilities are authorized provided the temporary facility (a) does not remain on the plant site for more than 12 consecutive months, (b) is used solely to support planned MSS activities at the permanent site facilities listed in this permit, and (c) does not operate as a replacement for an existing authorized facility.

Routine maintenance activities, as identified in Attachment A may be tracked through the work orders or equivalent. Emissions from these activities identified shall be calculated using the number of work orders or equivalent that month and the emissions associated with that activity identified in the permit application.

The performance of and emissions associated with each planned MSS activity performed on storage tanks shall be documented in accordance with the applicable Special Condition(s).

The performance of each planned MSS activity not identified in Attachment A and the emissions associated with it shall be recorded and include at least the following information:

A. the process unit at which emissions from the MSS activity occurred, including the emission point number and common name of the process unit;

B. the type of planned MSS activity and the reason for the planned activity;

C. the common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;

D. the date and time of the MSS activity and its duration;

E. the estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.

All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis.

21. Process units and facilities, with the exception of storage tanks and those identified in Attachment A (minor facilities with an isolated volume <50 ft^3), shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements.

A. The process equipment shall be depressurized to a control device or a controlled recovery system prior to venting to atmosphere, degassing, or draining liquid. Equipment that only contains material that is liquid with VOC partial pressure less than 0.50 psi at the normal process temperature and 95°F may be opened to atmosphere and drained in accordance with paragraph C of this special condition. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded.

B. If mixed phase materials must be removed from process equipment, the cleared material shall be routed to a knockout drum or equivalent to allow for managed initial phase separation. If the VOC partial pressure is greater than 0.50 psi at either the normal process temperature or 95°F, any vents in the system must be routed to a control device or a controlled recovery system. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. Control must remain in place until degassing has been completed or the system is no longer vented to atmosphere.

C. All liquids from process equipment or storage vessels must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be drained into a closed vessel or closed liquid recovery system unless prevented by the physical configuration of the equipment. If it is necessary to drain liquid into an open pan or sump, the liquid must be covered or transferred to a covered vessel within one hour of being drained.

D. If the VOC partial pressure is greater than 0.50 psi at the normal process temperature or 95°F, facilities shall be degassed using good engineering practice to ensure air contaminants are removed from the system through the control device or controlled recovery system to the extent allowed by process equipment or storage vessel design. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. The facilities to be degassed shall not be vented directly to atmosphere, except as necessary to establish isolation of the work area or to monitor VOC concentration following controlled depressurization. The venting shall be minimized to the maximum extent practicable and actions taken recorded. The control device or recovery

system utilized shall be recorded with the estimated emissions from controlled and uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.

(1) For MSS activities identified in Attachment B, the following option may be used in lieu of (2) below. The facilities being prepared for maintenance shall not be vented directly to atmosphere until the VOC concentration has been verified to be less than 10 percent of the lower explosive limit (LEL) per the site safety procedures.

(2) The locations and/or identifiers where the purge gas or steam enters the process equipment or storage vessel and the exit points for the exhaust gases shall be recorded (process flow diagrams [PFDs] or piping and instrumentation diagrams [P&IDs] may be used to demonstrate compliance with the requirement). If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system before the vent stream may be sampled to verify acceptable VOC concentration prior to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of Special Condition 4. The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged. If there is not a connection (such as a sample, vent, or drain valve) available from which a representative sample may be obtained, a sample may be taken upon entry into the system after degassing has been completed. The sample shall be taken from inside the vessel so as to minimize any air or dilution from the entry point. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. Documented site procedures used to de-inventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures) that achieve at least the same level of purging may be used in lieu of the above.

22. This permit authorizes emissions from internal floating roof storage tanks identified in Special Condition No. 7 during planned floating roof landings. Tank roof landings include all operations when the tank floating roof is on its supporting legs. These emissions are subject to the maximum allowable emission rates indicated in the MAERT. The following requirements apply to tank roof landings.

A. At all times that the roof is resting on its leg supports, the tank emissions shall be controlled by a closed vent system and control device meeting the following specifications:

(1) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, § 60.485(b).

(2) The locations and identifiers of vents other than permanent roof fittings and seals, control device or controlled recovery system, and controlled exhaust stream shall be recorded. There shall be no other gas/vapor flow out of the vapor space under the floating roof when the vapor space is directed to the control device. The vapor recovery system collection rate shall be no less than 100 cubic feet per minute when the tank is

idle or the tank is being drained, and two times the fill rate when the tank is being refilled.

(3) The control device shall be operated as required by the Special Conditions.

The roof shall be landed on its lowest legs unless entry or inspection is planned.

The requirements of this paragraph do not apply to uncontrolled degassing and/or ventilation conducted pursuant to paragraphs B–E of this Special Condition.

B. After the tank has been completely emptied, the tank shall not be opened except as necessary to set up for degassing and cleaning. Floating roof tanks with liquid capacities less than 100,000 gallons may be degassed without control if the VOC partial pressure of the standing liquid in the tank has been reduced to less than 0.02 psia prior to ventilating the tank. Controlled degassing of the vapor space under the landed roof shall be completed as follows:

(1) Any gas or vapor removed from the vapor space under the floating roof must be routed to a control device or controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. The locations and identifiers of vents other than permanent roof fittings and seals, control device or controlled recovery system, and controlled exhaust stream shall be recorded. There shall be no other gas/vapor flow out of the vapor space under the floating roof when degassing to the control device or controlled recovery system.

(2) The vapor space under the floating roof shall be vented using good engineering practice to ensure air contaminants are flushed out of the tank through the control device or controlled recovery system to the extent allowed by the storage tank design.

(3) A volume of purge gas equivalent to twice the volume of the vapor space under the floating roof must have passed through the control device or into a controlled recovery system, before the vent stream may be sampled to verify acceptable VOC concentration. The measurement of purge gas volume shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in Special Condition No. 26.

(4) The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged.

(5) Degassing must be performed every 24 hours unless there is no standing liquid in the tank or the VOC partial pressure of the remaining liquid in the tank is less than 0.15 psia.

C. The tank shall not be opened or ventilated without control, except as allowed below, until one of the criteria in paragraph D of this condition is satisfied.

(1) Minimize air circulation in the tank vapor space.

(a) One manway may be opened to allow access to the tank to remove or de-volatilize the remaining liquid. Other manways or access points may be opened as necessary to remove or de-volatilize the remaining liquid. Wind barriers shall

be installed at all open manways and access points to minimize air flow through the tank.

(b) Access points shall be closed when not in use.

D. The tank may be opened without restriction and ventilated without control after all standing liquid has been removed from the tank or the liquid remaining in the tank has a VOC partial pressure of less than 0.02 psia. These criteria shall be demonstrated in one of the following ways:

(1) Low VOC partial pressure liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC partial pressure of the liquid mixture remaining in the tank to less than 0.02 psia. This liquid shall be added during tank degassing if practicable. The estimated volume of liquid remaining in the drained tank and the volume and type of liquid added shall be recorded. The liquid VOC partial pressure may be estimated based on this information and engineering calculations.

(2) If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:

(a) Take a representative sample of the liquid remaining in the tank and verify no visible sheen using the static sheen test from 40 CFR 435 Subpart A Appendix 1.

(b) Take a representative sample of the liquid remaining in the tank and verify that the hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664.

(c) Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify that the VOC concentration is less than 1000 ppmw through the procedure in Special Condition No. 26.

(3) No standing liquid, verified through visual inspection.

The permit holder shall maintain records to document the method used to release the tank.

E. The occurrence of each roof landing and the associated emissions shall be recorded and the rolling 12-month tank roof landing emissions shall be updated on a monthly basis. These records shall include at least the following information (as applicable):

(1) The identification of the tank and emission point number, and any control devices or controlled recovery systems used to reduce emissions;

(2) The reason for the tank roof landing;

(3) For the purpose of estimating emissions, the date, time, and other information specified for each of the following events:

(a) The roof was initially landed;

(b) All liquid was pumped from the tank to the extent practicable;

(c) Start and completion of controlled degassing, and total volumetric flow;

(d) All standing liquid was removed from the tank or any transfers of low VOC partial pressure liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC partial pressure to < 0.02 psia.

(e) If there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow;

(f) Refilling commenced, liquid filling the tank, and the volume necessary to float the roof; and

(g) Tank roof off supporting legs, floating on liquid.

(4) The estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events (c) and (g) with the data and methods used to determine it. The emissions associated with roof landing activities shall be calculated using the methods, described in Sections 7.1.3.3 and 7.1.3.4 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" dated March 2020 and the permit application, Form PI-1 dated October 6, 2020.

23. Fixed roof storage tanks are subject to the requirements of Special Condition 22.C. and 22.D. If the ventilation of the vapor space is controlled, the emission control system shall meet the requirements of Special Condition 22.B.(1) through 22.B.(4). Records shall be maintained per Special Condition 22.F.(3)c through 22.F.(3)e, and 22.F.(4).

24. The following requirements apply to vacuum and air mover truck operations to support planned MSS at this site:

A. Prior to initial use, identify any liquid in the truck. Record the liquid level and document the VOC partial pressure. After each liquid transfer, identify the liquid, the volume transferred, and its VOC partial pressure.

B. If vacuum pumps or blowers are operated when liquid is in or being transferred to the truck, the following requirements apply:

(1) If the VOC partial pressure of the liquid in or being transferred to the truck is greater than 0.50 psi at 95°F, the vacuum/blower exhaust shall be routed to a control device or a controlled recovery system.

(2) Equip fill line intake with a “duckbill” or equivalent attachment if the hose end cannot be submerged in the liquid being collected.

(3) A daily record containing the information identified below is required for each vacuum truck in operation at the site each day.

(a) For each liquid transfer made with the vacuum operating, record the duration of any periods when air may have been entrained with the liquid transfer. The reason for operating in this manner and whether a “duckbill” or equivalent was used shall be recorded. Short, incidental periods, such as those necessary to walk from the truck to the fill line intake, do not need to be documented.

(b) If the vacuum truck exhaust is controlled with a control device other than an engine or oxidizer, VOC exhaust concentration upon commencing each transfer, at the end of each transfer, and at least every hour during each transfer shall be recorded, measured using an instrument meeting the requirements of Special Condition 26.A or B.

C. Record the volume in the vacuum truck at the end of the day, or the volume unloaded, as applicable.

D. The permit holder shall determine the vacuum truck emissions each month using the daily vacuum truck records and the calculation methods utilized in the permit application. If records of the volume of liquid transferred for each pick-up are not maintained, the emissions shall be determined using the physical properties of the liquid vacuumed with the greatest potential emissions. Rolling 12-month vacuum truck emissions shall also be determined on a monthly basis.

E. If the VOC partial pressure of all the liquids vacuumed into the truck is less than 0.10 psi, this shall be recorded when the truck is unloaded or leaves the plant site and the emissions may be estimated as the maximum potential to emit for a truck in that service as documented in the permit application. The recordkeeping requirements in Special Condition 23.A through D do not apply.

25. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

26. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below.

A. VOC concentration shall be measured using an instrument meeting all the requirements specified in EPA Method 21 (40 CFR 60, Appendix A) with the following exceptions:

(1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate RF shall be recorded. If the RF of the VOC (or mixture of VOCs) to be monitored is greater than 2.0, the VOC concentration shall be determined as follows:

VOC Concentration = Concentration as read from the instrument*RF

In no case should a calibration gas be used such that the RF of the VOC (or mixture of VOCs) to be monitored is greater than 5.0.

(2) Sampling shall be performed as directed by this permit in lieu of section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least 5 minutes, recording VOC concentration each minute. As an alternative the VOC concentration may be monitored over a five-minute period with an instrument designed to continuously measure concentration and record the highest concentration read. The highest measured VOC concentration shall be recorded and shall not exceed the specified VOC concentration limit prior to uncontrolled venting.

B. Colorimetric gas detector tubes may be used to determine air contaminant concentrations if they are used in accordance with the following requirements.

(1) The air contaminant concentration measured as defined in (3) is less than 80 percent of the range of the tube and is at least 20 percent of the maximum range of the tube.

(2) The tube is used in accordance with the manufacturer's guidelines.

(3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

10,000*mole fraction of the total air contaminants present that can be detected by the tube.

The mole fraction may be estimated based on process knowledge. The release concentration and basis for its determination shall be recorded.

Records shall be maintained of the tube type, range, measured concentrations, and time the samples were taken.

C. Lower explosive limit measured with a lower explosive limit detector.

(1) The detector shall be calibrated within 30 days of use with a certified pentane gas standard at 25% of the lower explosive limit (LEL) for pentane. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.

(2) A functionality test shall be performed on each detector within 24 hours of use with a certified gas standard at 25% of the LEL for pentane. The LEL monitor shall read no lower than 90% of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.

(3) A certified methane gas standard equivalent to 25% of the LEL for pentane may be used for calibration and functionality tests provided that the LEL response is within 95% of that for pentane.

27. Portable control devices required by this permit for emissions from planned MSS activities are limited to those types identified in this condition. Portable control devices shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Each device used must meet all the requirements identified for that type of control device.

Controlled recovery systems identified in this permit shall be directed to an operating process or to a collection system that is vented through a control device meeting the requirements of this permit condition.

A. Portable Vapor Combustor

(1) The portable vapor combustion unit shall provide no less than 99% DRE control of the waste gas directed to it or allow a VOC exit stream concentration of no greater than 10 ppmv dry, corrected to 3% oxygen. This shall be demonstrated by:

(a) Maintaining the vapor combustor firebox exit temperature at not less than 1400°F and waste gas flows shall be limited to assure at least a 0.5 second residence time in the fire box while waste gas is being fed into the combustor; or

(b) having completed a control efficiency demonstration (stack test) in accordance with the approved test methods in 30 TAC 115.545 (relating to Approved Test Methods) within the past 12-months and maintaining the vapor combustor firebox exit temperature at not less than that temperature maintained during the

demonstration with waste gas flow limited to that maintained during the demonstration while waste gas is being fed into the combustor.

(2) The vapor combustor exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the combustor. The temperature measurements shall be made at intervals of six minutes or less and recorded at that frequency.

The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ±0.75 percent of the temperature being measured expressed in degrees Celsius or ±2.5ºC.

B. Emergency Flare (EPN EMERGFLARE)

(1) The heating value and velocity requirements in 40 CFR 60.18 shall be satisfied during operations authorized by this permit.

(2) The flare shall be operated with a flame present at all times and/or have a constant pilot flame. The pilot flame shall be continuously monitored by a thermocouple or an infrared monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications.

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Attachment A

Routine Maintenance Activities

In addition to the activities reviewed and identified below, any other planned maintenance activity where the isolated system volume is less than 50 cubic feet may be performed with work orders.

Pump repair/replacement

Fugitive component (valve, pipe, flange) repair/replacement

Compressor repair/replacement

Vessel repair/replacement

Date: TBD

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Attachment B

MSS Activity Summary

Facilities	Description/Activity	EPN
Storage Tanks	Controlled off-float standing idle, degas, cleaning, and refill emissions.	MSS-C
Storage Tanks	Uncontrolled off-float venting emissions	MSS-U
Piping with isolated volume > 50 ft^3	Drain liquid and degas to control	MSS-C
Piping with isolated volume > 50 ft^3	Vent to atmosphere post control	MSS-U
Piping with isolated volume > 50 ft^3	Refill vent to control	MSS-C
Air movers and vacuum trucks	Drain liquid from tanks for planned maintenance	MSS-C & MSS-U
Repair and maintenance of minor facilities: pumps, valves, piping, filters, etc. with an isolated volume of less than 50 cubic feet	Isolate, drain, degas to atmosphere, and refill to support planned maintenance	MSS-U

Dated: TBD

Emission Sources - Maximum Allowable Emission Rates

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This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
TK-06-01	Tank TK-06-01	VOC	13.40	-
		H_2S	0.13	-
TK-06-02	Tank TK-06-02	VOC	18.42	-
		H_2S	0.18	-
TK-06-03	Tank TK-06-03	VOC	13.40	-
		H_2S	0.13	-
TK-06-04	Tank TK-06-04	VOC	13.40	-
		H_2S	0.13	-
TK-06-05	Tank TK-06-05	VOC	13.40	-
		H_2S	0.13	-
TK-06-06	Tank TK-06-06	VOC	13.40	-
		H_2S	0.13	-
TK-06-07	Tank TK-06-07	VOC	13.40	-
		H_2S	0.13	-
TK-06-08	Tank TK-06-08	VOC	9.51	-
		H_2S	0.10	-
TK-06-09	Tank TK-06-09	VOC	9.51	-
		H_2S	0.10	-
TK-06-10	Tank TK-06-10	VOC	9.51	-
		H_2S	0.10	-
TK-06-11	Tank TK-06-11	VOC	9.51	-
		H_2S	0.10	-
TK-06-12	Tank TK-06-12	VOC	9.51	-
		H_2S	0.10	-
TK-06-13	Tank TK-06-13	VOC	9.51	-
		H_2S	0.10	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
TK-06-14	Tank TK-06-14	VOC	9.51	-
		H_2S	0.10	-
TK-06-15	Tank TK-06-15	VOC	9.51	-
		H_2S	0.10	-
TKCAP	Storage Tank Emissions Cap	VOC	-	42.86
		H_2S	-	<0.01
DIESEL-1	Diesel Storage Tank	VOC	0.06	<0.01
DIESEL-2	Diesel Storage Tank	VOC	0.06	<0.01
DIESEL-3	Diesel Storage Tank	VOC	0.06	<0.01
FUG	Piping Fugitive Components (5)	VOC	2.3	10.05
		H_2S	<0.01	<0.01
MDOCK-1	Marine Dock No. 1	VOC	5.88	-
		H_2S	0.01	-
MDOCK-2	Marine Dock No. 2	VOC	5.88	-
		H_2S	0.01	-
MDOCK-3	Marine Dock No. 3	VOC	5.88	-
		H_2S	0.01	-
MDOCK-4	Marine Dock No. 4	VOC	5.88	-
		H_2S	0.01	-
MDOCK-5	Marine Dock No. 5	VOC	5.88	-
		H_2S	0.01	-
MDOCK-6	Marine Dock No. 6	VOC	5.88	-
		H_2S	0.01	-
MDOCK-7	Marine Dock No. 7	VOC	5.88	-
		H_2S	0.01	-
MDOCKCAP	Marine Dock Emissions Cap	VOC	-	11.80
		H_2S	-	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CONT-1	Marine Control No. 1	VOC	5.14	
		NO_x	16.00	-
		CO	16.00	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-2	Marine Control No. 2	VOC	5.14	-
		NO_x	16.00	-
		CO	16.00	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-3	Marine Control No. 3	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CONT-4	Marine Control No. 4	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-5	Marine Control No. 5	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-6	Marine Control No. 6	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CONT-7	Marine Control No. 7	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-8	Marine Control No. 8	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-9	Marine Control No. 9	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CONT-10	Marine Control No. 10	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-11	Marine Control No. 11	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-15	Marine Control No. 15	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CONT-16	Marine Control No. 16	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-17	Marine Control No. 17	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-18	Marine Control No. 18	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CONT-19	Marine Control No. 19	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-20	Marine Control No. 20	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-21	Marine Control No. 21	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CONT-22	Marine Control No. 22	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
CONT-23	Marine Control No. 23	VOC	5.14	-
		NO_x	3.20	-
		CO	3.20	-
		PM	1.19	-
		PM_{10}	1.19	-
		$PM_{2.5}$	1.19	-
		H_2S	0.10	-
		SO_2	9.68	-
MCONTCAP	Marine Control Emissions Cap	VOC		17.33
		NO_x	-	87.56
		CO	-	87.56
		PM	-	10.73
		PM_{10}	-	10.73
		$PM_{2.5}$	-	10.73
		H_2S	-	0.43
		SO_2	-	20.91

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
FWPUMP-1	Firewater Pump 1	VOC	0.89	0.04
		NO_x	11.05	0.55
		CO	1.01	0.05
		PM	0.26	0.01
		PM_{10}	0.26	0.01
		$PM_{2.5}$	0.26	0.01
		SO_2	1.59	0.08
FWPUMP-2	Firewater Pump 2	VOC	0.89	0.04
		NO_x	11.05	0.55
		CO	1.01	0.05
		PM	0.26	0.01
		PM_{10}	0.26	0.01
		$PM_{2.5}$	0.26	0.01
		SO_2	1.59	0.08
FWPUMP-3	Firewater Pump 3	VOC	0.89	0.04
		NO_x	11.05	0.55
		CO	1.01	0.05
		PM	0.26	0.01
		PM_{10}	0.26	0.01
		$PM_{2.5}$	0.26	0.01
		SO_2	1.59	0.08
FWPUMP-4	Firewater Pump 4	VOC	0.89	0.04
		NO_x	11.05	0.55
		CO	1.01	0.05
		PM	0.26	0.01
		PM_{10}	0.26	0.01
		$PM_{2.5}$	0.26	0.01
		SO_2	1.59	0.08

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
FWPUMP-5	Firewater Pump 5	VOC	0.89	0.04
		NO_x	11.05	0.55
		CO	1.01	0.05
		PM	0.26	0.01
		PM_{10}	0.26	0.01
		$PM_{2.5}$	0.26	0.01
		SO_2	1.59	0.08
EMG-GEN1	Emergency Generator	VOC	1.00	0.05
		NO_x	1.00	0.05
		CO	1.25	0.06
		PM	0.08	<0.01
		PM_{10}	0.08	<0.01
		$PM_{2.5}$	0.08	<0.01
		SO_2	0.28	0.01
EMERGFLARE	Emergency Flare	VOC	0.02	0.07
		NO_x	0.05	0.23
		CO	0.21	0.91
		H_2S	<0.01	<0.01
		SO_2	<0.01	0.01
MSS-C	Controlled MSS Emissions Cap	VOC	1.12	0.32
		NO_x	3.00	6.43
		CO	4.00	8.57
		PM	0.15	0.32
		PM_{10}	0.15	0.32
		$PM_{2.5}$	0.15	0.32
		H_2S	0.05	0.02
		SO_2	1.88	0.59

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
MSS-U	Uncontrolled MSS Emissions Cap	VOC	15.62	1.44
		H_2S	0.02	<0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
CO - carbon monoxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
SO_2 - sulfur dioxide
H_2S - hydrogen sulfide
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: TBD

Construction Permit
Source Analysis & Technical Review

Company	**Max Midstream Texas LLC**	Permit Number	**162941**
City	**Point Comfort**	Project Number	**320923**
County	**Calhoun**	Regulated Entity Number	**RN106209190**
Project Type	**Initial**	Customer Reference Number	**CN605726959**
Project Reviewer	**Ariel Ramirez**	Received Date	**October 6, 2020**
Site Name	**Seahawk Crude Condensate Terminal**		

Project Overview

Max Midstream Texas LLC (Max Midstream) owns and operates a for-hire bulk petroleum terminal located in Port Comfort, Calhoun County, Texas. On October 6, 2020, Max Midstream Texas LLC Max Midstream submitted an expedited initial permit application to expand the existing Seahawk Crude Condensate Terminal. Existing facilities for this site are authorized under Permit by Rule (PBR) registration no. 98075, which is proposed to be consolidated as part of this project. Maintenance, Startup, and Shutdown (MSS) activities will be authorized by this permit.

Emission Summary

Air Contaminant	Consolidated emissions from PBR 98075 (tpy)	Proposed Allowable Emission Rates (tpy)	Change in Allowable Emission Rates (tpy)*
VOC	20.98	82.39	82.39
PM	0.51	10.79	10.79
PM_{10}	0.51	10.79	10.79
$PM_{2.5}$	0.51	10.79	10.79
NO_X	9.40	90.59	90.59
CO	10.62	88.78	88.78
SO_2	2.28	21.33	21.33
H_2S	0.05	0.47	0.47

*Change in allowable emission rates conservatively assumed a baseline of zero, so proposed allowable emissions are equal to change in allowable emission rate.

Compliance History Evaluation - 30 TAC Chapter 60 Rules

A compliance history report was reviewed on:	October 7, 2020
Site rating & classification:	Unclassified
Company rating & classification:	Unclassified
Has the permit changed on the basis of the compliance history or rating?	No
Did the Regional Office have any comments? If so, explain.	No

Public Notice Information

Requirement	Date
Legislator letters mailed	10/7/2020
Date 1st notice published	10/28/2020
Publication Name: The Port Lavaca Wave	
Pollutants: carbon monoxide, hazardous air pollutants, hydrogen sulfide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less and sulfur dioxide	
Date 1st notice Alternate Language published	10/27/2020

Requirement	Date
Publication Name (Alternate Language): La Prensa Comunidad	
1st public notice tearsheet(s) received	11/10/2020
1st public notice affidavit(s) received	11/30/2020
1st public notice certification of sign posting/application availability received	12/08/2020
SB709 Notification mailed	10/7/2020
Date 2nd notice published	5/5/2021
Publication Name: The Port Lavaca Wave	
Pollutants: carbon monoxide, hazardous air pollutants, hydrogen sulfide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less and sulfur dioxide	
Date 2nd notice published (Alternate Language)	5/4/2021
Publication Name (Alternate Language): La Prensa Comunidad	
2nd public notice tearsheet(s) received	5/6/2021
2nd public notice affidavit(s) received	5/6/2021
2nd public notice certification of sign posting/application availability received	6/15/2021

Public Interest

Number of comments received	868
Number of meeting requests received	847
Number of hearing requests received	848
Date meeting held	8/17/21
Date response to comments filed with OCC	
Date of SOAH hearing	

Federal Rules Applicability

Requirement	
Subject to NSPS?	**Yes**
Subparts **A, Kb, & IIII**	
Subject to NESHAP?	**No**
Subparts &	
Subject to NESHAP (MACT) for source categories?	**Yes**
Subparts **A & Y**	
Nonattainment review applicability: Calhoun County designated as in attainment or unclassified for all pollutants; therefore, nonattainment review is not applicable.	
PSD review applicability: The facility is an unnamed source and does not have the potential to emit greater than 250 tons per year of any pollutant; therefore, PSD review is not applicable.	

Title V Applicability - 30 TAC Chapter 122 Rules

Requirement
Title V applicability: The site is a minor source and not subject to the Title V program.
Periodic Monitoring (PM) applicability: This site is a minor source and is not subject to 40 CFR 70 periodic monitoring requirements; however, the following monitoring requirements apply. • Storage tanks: Monthly calculations and recordkeeping of emissions; monitor of H2S concentration in crude oil and oil vapor annually or within 60 days of changing the oil, whichever is more frequent; monitoring of concentration and recordkeeping for planned tank roof landings; • Fugitives: utilize the 28VHP LDAR fugitive monitoring program • Marine Loading: temperature and hourly volume loaded for each product copy of annual vessel vapor tightness certification, observation for connection leaks, Vacuum monitoring for 100% capture, not required for pressure vessel loading; volume of each product loaded each hour with knowledge of H2S content • VCUs: continuous exhaust temperature monitoring and recording in six-minute averages; waste gas flow monitoring or operation record that provides flow by design; visible emissions monitoring quarterly • Emergency Engine/Firewater pump: monitoring and recording of hours of operation • Emergency Flare: continuous monitoring of pilot flame; waste gas flow and composition monitored continuously with hourly avg recorded
Compliance Assurance Monitoring (CAM) applicability: CAM is not applicable because the site is not a major source.

Process Description

The Seahawk Terminal is a for-hire bulk petroleum storage terminal. Petroleum products are stored in various storage tanks and transferred in and out of the terminal tankage by external customers via pipeline and marine vessel. Isobutane is stored in two pressurized spheres and transferred in and out of the terminal by external customers via pipeline and/or pressurized truck loading rack. The facility consists of various storage tanks, pressurized spheres, pressurized truck loading racks, marine vessel docks, sumps, emergency generator, fire water pumps, vapor combustion units, emergency flare, and the associated piping equipment. As part of the expansion project, Max Midstream proposes to add eight new tanks for storage of crude/crude condensates (EPNs: TK-06-08 to TK-06-15). Ship and barge loading of crude/crude condensates will occur at new marine loading docks (EPNs MDOCK-3 to MDOCK-7). Marine loading emissions will be controlled by new VCUs (EPNs: CONT-1 through CONT-11 and CONT-15 through CONT-23). Max Midstream also proposes construction of three additional firewater pumps (EPNs: FWPUMP-3 to FWPUMP-5). The expansion project will include additional fugitive piping components and ancillary equipment (EPN: FUG).

Project Scope

As part of this expansion permit application, Max Midstream proposes to consolidate PBR 98075, authorize additional storage tanks, marine loading docks and associated marine control vapor combustion units (VCUs), firewater pumps, additional piping fugitive components, and MSS activities. The following table summarizes all proposed emission points for normal operation, as well as all emission points for MSS:

EPN(s)	Description
TK-06-01 through TK-06-07	Existing storage tanks consolidated from PBR
TK-06-08 through TK-06-15	Proposed new storage tanks
TKCAP	Annual cap for all storage tanks
DIESEL-1 through DIESEL-3	Existing diesel tanks consolidated from PBR
FUG	Consolidated fugitive emissions from PBR plus additional components being added as part of this project
MDOCK-1 and MDOCK-2	Existing marine docks consolidated from PBR
MDOCK-3 through MDOCK-7	Proposed new marine dock
MDOCKCAP	Annual cap for marine docks
CONT-1 and CONT-2	Existing marine control VCUs
CONT-3 through CONT-11, CONT-15 through CONT-23	Proposed new marine control VCUs

EPN(s)	Description
MCONTCAP	Annual cap for all marine control VCUs
FWPUMP-1 and FW-PUMP-2	Existing firewater pumps consolidated from PBR
FWPUMP-3 and FW-PUMP-5	Proposed new firewater pumps
EMG-GEN1	Existing emergency generator consolidated from PBR
EMERGFLARE	Proposed emergency flare
MSS-C and MSS-U	Controlled and uncontrolled MSS emissions caps

A summary of the draft permit requirements, including control, monitoring, recordkeeping and reporting requirements, is given below.

SC No.	Comment
1	Incorporates MAERT and limits scope of authorization to sources listed on MAERT.
2	Generic prohibition on releases from uncontrolled process vents, limits on permit holder's ability to claim affirmative defense under 30 TAC Chap. 101 for releases from pressure relief devices.
3, 4	Incorporates Federal Applicability standards by reference.
5	Limit on fuel gas combusted at facility
6	Operational limits for emergency engine and firewater pumps
7-11	Control, monitoring and recordkeeping requirements and service restrictions for tanks, as well as limits for pressurized spheres and hydrogen sulfide concentration limits in crude/condensate. Sentence added in subpart E per applicant request referencing tank landing requirements (MSS).
12-16	Control, monitoring and recordkeeping requirements for loading operations, including marine loading operations and work practice requirements for disconnecting hoses and loading lines.
17	Operational requirements for VCUs
18	Stack sampling requirements for VCUs; subpart C added to specify preliminary emission factors for NOx and CO until vendors have been finalized
19	28VHP Leak Detection and Repair program for components in VOC service.
20-27	Control, monitoring and recordkeeping requirements for planned floating roof tank landings, vacuum truck operations, approved analytical methods for demonstrating compliance with control requirements, and operational requirements for the temporary control devices.
Attachment A	Routine Maintenance Activities
Attachment B	MSS Activity Summary

Best Available Control Technology

Source Name	EPN	Best Available Control Technology Description
Fugitives	FUG	Uncontrolled sitewide VOC fugitive emissions are less than 25 tpy; therefore the site will comply with the 28VHP LDAR program for monitoring of VOC emissions. H2S is present only in crude, which will be monitored as specified by 28 VHP.
Tanks	Existing: TK-06-01 through TK-06-07 New: TK-06-08 through TK-06-15	IFR tanks with TVP <11 psia. The tanks will be painted white, utilize submerged fill, and drain-dry. The tanks are/will be designed with a mechanical shoe primary seal and a rim-mounted secondary seal.
	DIESEL-1, DIESEL-2, DIESEL-3	Existing fixed roof tanks with capacity <25,000 gal or TVP <0.5 psia. The tanks are painted white and utilize submerged fill.
Marine Loading	MDOCK-1 through MDOCK-7	VOC >0.5 psia will route to VCUs for control, submerged fill and vacuum collection system utilized when loading barges with crude oil/crude oil condensates. Inland barges: Vessel leak testing: annual vapor tightness

Source Name	EPN	Best Available Control Technology Description
		test as specified in 40 CFR §63.565(c) or 40 CFR §61.304(f); 100% collection efficiency. Ships and Ocean barges: 99.89% collection efficiency claimed as ships cannot be vacuum loaded.
Marine Control (VCUs)	CONT-1 through CONT-11 and CONT-15-23	Collected emissions from marine vessels will be routed to the MVCUs, with a VOC destruction efficiency of 99.9%. The temperature will be monitored, and an initial stack test will be required. Emission factors are 0.10 lb/MMBtu NOx and 0.10 lb/MMBtu CO for EPNs CONT-1 and CONT-2, and 0.02 lb/MMBtu NOx and 0.02 lb/MMBtu CO for CONT-3 through CONT-11, and CONT-15 through CONT-23. PM and SO_2 emissions will be minimized by utilizing low sulfur natural gas and good combustion practices.
Emergency Flare	EMERGFLARE	Meets 40 CFR 60.18 requirements with DRE of 99% for certain compounds up to three carbons, 98% otherwise. No flaring of halogenated compounds is allowed. Use of low-sulfur pilot gas
Emergency Generator and Firewater Pump Engines	FWPUMP-1 through FWPUMP-5 and EMG-GEN1	Meets 40 CFR 60, Subpart IIII requirements, firing ultra-low sulfur diesel fuel (no more than 15 ppm sulfur by weight; limited to 100 hrs/year of non-emergency operation and will have a non-resettable runtime meter. No visible emissions shall leave the property. Visible emissions shall be determined by a standard of no visible emissions exceeding 30 seconds in duration in any six-minute period as determined using EPA TM22 or equivalent.
MSS	MSS-C and MSS-U	Best Management Practices: minimize number and duration of events; beginning tank degassing within 24 hr after roof landed and tank completely drained; degassing tanks, process equipment, and piping with volumes >45 cubic ft to max outlet concentration of 10,000 ppmv, and maintain that concentration until maintenance activities completed or refilling begins; routing degassed vapor to VCU with minimum 99% DRE; and managing residual products with VP>0.5 psia that are removed from equipment and piping as a result of an MSS activity in a controlled manner.

Permits Incorporation

PBR Permit No.	Description (include affected EPNs)	Action (Reference / Consolidate / Void)
98075	Authorized storage tanks, marine loading operations, firewater pumps, emergency generator, fugitive emissions, an emergency flare, and associated MSS activities for the terminal. EPNs TK-06-01 through TK-06-07, FUG, MDOCK-1, MDOCK-2, MVCU-1, MVCU-2, MSS, DIESEL-1 through DIESEL-3, FWPUMP-1, FWPUMP-2, EMG-GEN1, and EMERGFLARE	Consolidate

Impacts Evaluation

Was modeling conducted? **Yes** Type of Modeling: **AERMOD (Version 19191)**

Is the site within 3,000 feet of any school? **No**

Additional site/land use information: Low roughness and elevated terrain were used in the modeling analysis. These selections are consistent with the AERSURFACE analysis, DEMs, and aerial photography. The selection of low roughness is reasonable.

Based on the modeling review, the air quality analysis (AQA) is acceptable for all review types and pollutants. Exceedances of crude oil and crude condensate were reviewed by TCEQ Toxicology Division and determined to be

acceptable. The health effects review is complete and no adverse health effects are expected to occur among the public health, welfare, or the environment as a result of exposure to the emissions from the facilities authorized by this permit. Please see the first model audit dated January 26, 2021 (WCC Content ID 5528768), second model audit dated March 4, 2021 (WCC No. 5549643), and Toxicology memo dated March 5, 2021for full details.

Project Reviewer	Date	Team Leader	Date
Ariel Ramirez		Joel Stanford	

TCEQ Interoffice Memorandum

To: Ariel Ramirez
Mechanical/Coatings Section

Thru: Chad Dumas, Team Leader
Air Dispersion Modeling Team (ADMT)

From: Rhys Davies
ADMT

Date: January 26, 2021

Subject: Air Quality Analysis Audit – Max Midstream Texas, LLC (RN106209190)

1. Project Identification Information

Permit Application Number: 162941
NSR Project Number: 320923
ADMT Project Number: 7145
County: Calhoun
Project Map: \\tceq4avmgisdata\GISWRK\APD\MODEL PROJECTS\7145\7145.pdf

Air Quality Analysis: Submitted by DiSorbo Consulting, LLC, December 2020, on behalf of Max Midstream Texas, LLC. Additional information was provided December 2020 and January 2021.

2. Report Summary

The air quality analysis is acceptable for all review types and pollutants. The results are summarized below.

A. Minor Source NSR and Air Toxics Analysis

Table 1. Site-wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m^3)	Standard (µg/m^3)
SO_2	1-hr	140	1021
H_2S	1-hr	14	108 (If property is residential, recreational, business, or commercial)
H_2S	1-hr	30	162 (If property is not residential, recreational, business, or commercial)

Table 2. Modeling Results for Minor NSR De Minimis

Pollutant	Averaging Time	GLCmax (µg/m^3)	De Minimis (µg/m^3)
SO_2	1-hr	33	7.8

Pollutant	Averaging Time	GLCmax (µg/m^3)	De Minimis (µg/m^3)
SO_2	3-hr	36	25
PM_{10}	24-hr	2	5
$PM_{2.5}$	24-hr	1.3	1.2
$PM_{2.5}$	Annual	0.1	0.2
NO_2	1-hr	47	7.5
NO_2	Annual	0.8	1
CO	1-hr	89	2000
CO	8-hr	43	500

The 1-hr SO_2, 24-hr and annual $PM_{2.5}$, and 1-hr NO_2 GLCmax are based on the highest five-year averages of the maximum predicted concentrations over five years of meteorological data. The 3-hr SO_2 and annual NO_2 GLCmax represent the maximum predicted concentrations over five years of meteorological data.

For all other pollutants and averaging times, the GLCmax are the maximum predicted concentrations associated with one year of meteorological data.

EPA intermittent guidance was relied on for the 1-hr SO_2 and 1-hr NO_2 De Minimis analyses. Please refer to the Modeling Emissions Inventory section for more details.

The primary standards for 24-hr and annual SO_2 have been revoked for Calhoun County and are not reported above.

The justification for selecting the EPA's interim 1-hr NO_2 and 1-hr SO_2 De Minimis levels was based on the assumptions underlying EPA's development of the 1-hr NO_2 and 1-hr SO_2 De Minimis levels. As explained in EPA guidance memoranda[1,2], the EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr NO_2 and 1-hr SO_2 NAAQS.

The $PM_{2.5}$ De Minimis levels are the EPA recommended De Minimis levels. The use of the EPA recommended De Minimis levels is sufficient to conclude that a proposed source will not cause or contribute to a violation of a $PM_{2.5}$ NAAQS based on the analyses documented in EPA guidance and policy memorandums[3].

[1] www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf
[2] www.tceq.texas.gov/assets/public/permitting/air/memos/guidance_1hr_no2naaqs.pdf
[3] www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html

To evaluate secondary $PM_{2.5}$ impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's Guideline on Air Quality Models (GAQM). Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as Modeled Emission Rates for Precursors (MERPs). The basic idea behind the MERPs is to use technically credible air quality modeling to relate precursor emissions and peak secondary pollutants impacts from a source. Using data associated with the worst-case source, the applicant estimated 24-hr and annual secondary $PM_{2.5}$ concentrations of 0.1 µg/m^3 and 0.004 µg/m^3, respectively. When these estimates are added to the GLCmax listed in the table above, the results for annual $PM_{2.5}$ are less than the De Minimis level. Since the combined direct and secondary 24-hr $PM_{2.5}$ impacts are above the De Minimis level, a full impacts analysis is required.

Table 3. Total Concentrations for Minor NSR NAAQS (Concentrations > De Minimis)

Pollutant	Averaging Time	GLCmax (µg/m^3)	Background (µg/m^3)	Total Conc. = [Background + GLCmax] (µg/m^3)	Standard (µg/m^3)
SO_2	1-hr	31	15	46	196
SO_2	3-hr	30	25	55	1300
$PM_{2.5}$	24-hr	1	23	24	35
NO_2	1-hr	42	85	127	188

The 1-hr SO_2 GLCmax is based on the highest five-year average of 99th percentile of the annual distribution of the maximum daily 1-hr predicted concentrations, or high, fourth high (H4H), determined for each receptor. The 3-hr SO_2 GLCmax represents the maximum high, second high (H2H) predicted concentration over five years of meteorological data.

The 24-hr $PM_{2.5}$ GLCmax is based on the highest five-year average of the 98th percentile of the annual distribution of the maximum 24-hr predicted concentrations, or high, eighth high (H8H), determined for each receptor. The 1-hr NO_2 GLCmax is based on the highest five-year average of the 98th percentile of the annual distribution of predicted daily maximum 1-hr concentrations, or high, eighth high (H8H), determined for each receptor.

EPA intermittent guidance was relied on for the 1-hr SO_2 and 1-hr NO_2 NAAQS analyses. Please refer to the Modeling Emissions Inventory section for more details.

The primary standards for 24-hr and annual SO_2 have been revoked for Calhoun County and are not reported above.

Background concentrations for SO_2 were obtained from the EPA AIRS monitor 483550025 at 902 Airport Blvd., Corpus Christi, Nueces County. The applicant used a three-year average (2017-2019) of the 99th percentile of the annual distribution of daily maximum 1-hr concentrations for the 1-hr value. The applicant used the second highest 3-hr monitored concentration from the 2019 monitoring data for the 3-hr value. The use of this monitor is reasonable based on the applicant's comparison of county-wide emissions, population, analysis of the surrounding land use, and a quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site.

A background concentration for $PM_{2.5}$ was obtained from the EPA AIRS monitor 483550034 at 5707 Up River Rd., Corpus Christi, Nueces County. The applicant calculated a three-year average (2017-2019) of the 98th percentile of the annual distribution of 24-hr average concentrations for the 24-hr value. The use of this monitor is reasonable based on the applicant's comparison of county-wide emissions, population, analysis of the surrounding land use, and a quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site.

A background concentration for NO_2 was obtained from the EPA AIRS monitor 482011035 at 9525 ½ Clinton Dr., Houston, Harris County. The three-year average (2017-2019) of the 98^{th} percentile of the annual distribution of the maximum daily 1-hr concentrations was used for the 1-hr value. The use of this monitor is reasonable based on the applicant's comparison of county-wide emissions, population, analysis of the surrounding land use, and a quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site.

As stated above, to evaluate secondary $PM_{2.5}$ impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as MERPs. Using data associated with the worst-case source, the applicant estimated a 24-hr secondary $PM_{2.5}$ concentration of 0.1 $\mu g/m^3$. When this estimate is added to the GLCmax listed in Table 3 of NAAQS table above, the results are less than the NAAQS.

Table 4. Minor NSR Site-wide Modeling Results for Health Effects

Pollutant	CAS#	Averaging Time	GLCmax (µg/m^3)	GLCmax Location	GLCni (µg/m^3)	GLCni Location	ESL (µg/m^3)
Crude oil, <1% benzene	-	1-hr	8782	Eastern Property Line	1718	972m East	3500
Crude oil, <1% benzene	-	Annual	16	Northern Property Line	7	78m West	350
Crude condensate	-	1-hr	8782	Eastern Property Line	1718	972m East	3500
Crude condensate	-	Annual	16	Northern Property Line	7	78m West	350
Diesel fuel	68334-30-5	1-hr	15	Eastern Property Line	15	Northern Property Line	1000

Table 5. Minor NSR Hours of Exceedance for Health Effects

Pollutant	Averaging Time	2 X ESL GLCmax
Crude oil,	1-hr	9
Crude condensate	1-hr	9

The GLCmax and the GLCni locations are listed in Table 4 above. The locations are listed by their approximate distance and direction from the property line of the project site.

3. Model Used and Modeling Techniques

AERMOD (Version 19191) was used in a refined screening mode.

Generic modeling was used to determine the worst-case location for the tank venting MSS activity. For the short-term analysis, the location of the worst-case tank was determined from each tank's unit impact being multiplied by its respective emission rate. The tank with the highest predicted concentration (Model ID TK06_13M) was included in the pollutant specific modeling.

Model ID MVCUCAP represents the annual emission cap for marine control devices CONT_1 through CONT_23. Generic modeling was used to determine the worst-case marine control device. The worst-case marine control device (CONT_1) was used to model the entire emission cap in pollutant specific modeling.

EPNs MDOCK-1 through MDOCK-8 have an annual emission cap. Generic modeling was used to determine the worst-case dock. The worst-case dock (MDOCK-4) was used to model the entire emission cap in pollutant specific modeling.

The applicant conducted the 1-hr and annual NO_2 NAAQS analyses using the ARM2 model option following EPA guidance.

A. Land Use

Low roughness and elevated terrain were used in the modeling analysis. These selections are consistent with the AERSURFACE analysis, DEMs, and aerial photography. The selection of low roughness is reasonable.

B. Meteorological Data

Surface Station and ID: Rockport, TX (Station #: 12972)
Upper Air Station and ID: Corpus Christi, TX (Station #: 12924)
Meteorological Dataset: 2014-2018 for NO_2, SO_2, and $PM_{2.5}$ analyses
2016 for all other analyses
Profile Base Elevation: 5.8 meters

The profile base elevation was input as 6.7 meters. However, this discrepancy does not significantly affect the modeling results.

C. Receptor Grid

The grid modeled was sufficient in density and spatial coverage to capture representative maximum ground-level concentrations and exceedances.

D. Building Wake Effects (Downwash)

Input data to Building Profile Input Program Prime (Version 04274) are consistent with the aerial photography, plot plan, and modeling report.

4. Modeling Emissions Inventory

The modeled emission point and volume source parameters and rates were consistent with the modeling report. The source characterizations used to represent the sources were appropriate.

The computation of the effective stack diameters for the flares is consistent with TCEQ modeling guidance.

For the 1-hr SO_2 and 1-hr NO_2 de minimis and NAAQS analyses, emissions from the emergency engine (Model ID: EGEN_1) and firewater pump engines (Model IDs: FWP_1 through FWP_5) were modeled with an annual average emission rate, consistent with EPA guidance for evaluating intermittent emissions. Emissions from each emergency engine and firewater pump engine were represented to occur for no more than 100 hours per year.

For the 3-hr SO_2 analyses, the 3-hr average emission rates for the emergency engine (Model IDs: EGEN_1) and firewater pump engines (Model IDs: FWP_1 through FWP_5) were based on the maximum hourly emission rate being divided by 3 hours.

For the 24-hr PM_{10} and $PM_{2.5}$ analyses, the 24-hr average emission rates for the emergency engine (Model IDs: EGEN_1) and firewater pump engines (Model IDs: FWP_1 through FWP_5) were based on the maximum hourly emission rate being divided by 24 hours.

Except as noted above, maximum allowable hourly emission rates were used for the short-term averaging time analyses, and annual average emission rates were used for the annual averaging time analyses.

TCEQ Interoffice Memorandum

To: Ariel Ramirez
Mechanical/Coatings Section

Thru: Chad Dumas, Team Leader
Air Dispersion Modeling Team (ADMT)

From: Rhys Davies
ADMT

Date: March 4, 2021

Subject: Second Air Quality Analysis Audit – Max Midstream Texas, LLC (RN106209190)

1. Project Identification Information

Permit Application Number: 162941
NSR Project Number: 320923
ADMT Project Number: 7237
County: Calhoun
Project Map: \\tceq4avmgisdata\GISWRK\APD\MODEL PROJECTS\7237\7237.pdf

Air Quality Analysis: Submitted by DiSorbo Consulting, LLC, February 2021, on behalf of Max Midstream Texas, LLC.

2. Report Summary

The air quality analysis is acceptable for all pollutants. The results are summarized below.

This is the second modeling audit for this NSR project number, and the audit was conducted to review revised modeling submitted to address the evaluation of crude oil and crude condensate. This second modeling audit memo represents supplemental information to the first modeling audit memo dated January 26, 2021 (WCC Content ID 5528768).

A. Minor Source NSR Air Toxics Analysis

Table 1. Minor NSR Site-wide Modeling Results for Health Effects

Pollutant	CAS#	Averaging Time	GLCmax ($\mu g/m^3$)	GLCmax Location	GLCni ($\mu g/m^3$)	GLCni Location	ESL ($\mu g/m^3$)
Crude oil, <1% benzene	-	Annual	45	Northern Property Line	7	47m West	350
Crude Condensate	-	Annual	45	Northern Property Line	7	47m West	350

The GLCmax and the GLCni locations are listed in Table 1 above. The locations are listed by their approximate distance and direction from the property line of the project site.

3. Model Used and Modeling Techniques

AERMOD (Version 19191) was used in a refined screening mode.

EPNs TK_06_01 through TK_06_15 have an annual emission cap. Generic modeling was used to determine the worst-case tank. The worst-case tank (TK_06_04) was used to model the entire emission cap in pollutant specific modeling.

EPNs TK_06_01M through TK_06_15M have an annual emission cap. Generic modeling was used to determine the worst-case tank. The worst-case tank (TK_06_04M) was used to model the entire emission cap in pollutant specific modeling.

Model ID MVCUCAP represents the annual emission cap for marine control devices CONT_1 through CONT_23. Generic modeling was used to determine the worst-case marine control device. The worst-case marine control device (CONT_1) was used to model the entire emission cap in pollutant specific modeling.

EPNs MDOCK-1 through MDOCK-8 have an annual emission cap. Generic modeling was used to determine the worst-case dock. The worst-case dock (MDOCK-4) was used to model the entire emission cap in pollutant specific modeling.

A. Land Use

Low roughness and elevated terrain were used in the modeling analysis. These selections are consistent with the AERSURFACE analysis, DEMs, and aerial photography. The selection of low roughness is reasonable.

B. Meteorological Data

Surface Station and ID: Rockport, TX (Station #: 12972)
Upper Air Station and ID: Corpus Christi, TX (Station #: 12924)
Meteorological Dataset: 2016
Profile Base Elevation: 5.8 meters

The profile base elevation was input as 6.7 meters. However, this discrepancy does not significantly affect the modeling results.

C. Receptor Grid

The grid modeled was sufficient in density and spatial coverage to capture representative maximum ground-level concentrations.

D. Building Wake Effects (Downwash)

Input data to Building Profile Input Program Prime (Version 04274) are consistent with the aerial photography, plot plan, and modeling report.

4. Modeling Emissions Inventory

The modeled emission point and volume source parameters and rates were consistent with the modeling report. The source characterizations used to represent the sources were appropriate.

The computation of the effective stack diameters for the flares is consistent with TCEQ modeling guidance.

Annual average emission rates were used for the annual averaging time analyses.

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Ariel Ramirez
Air Permits Division
Office of Air

Date: March 5, 2021

From: Stanley Aniagu, MSc., Ph.D.
Toxicology, Risk Assessment and Research Division
Office of the Executive Director

Subject: Health effects review of air emissions from **Max Midstream Texas LLC,** Point Comfort, Calhoun County, TX (Permit No. 162941 and Tox Control No. 7669)

As requested, the Toxicology, Risk Assessment, and Research Division conducted a health effects review of air emissions from Max Midstream Texas LLC, Texas (herein referred to as Max Midstream). The company has submitted an expedited initial permit application to expand the existing Seahawk Crude Condensate Terminal, a for-hire bulk terminal. In addition to Maintenance, Startup, and Shutdown (MSS) activities which will be authorized by this permit, existing facilities for this site already authorized under Permit by Rule (PBR) will be consolidated into the NSR permit as part of this new project. Therefore, the goal of the following health effects review is to evaluate the modeled emissions predicted to occur at this facility, and to ascertain whether these emissions would be of concern to human health and welfare (odor and vegetation).

The Max Midstream facility is surrounded by rural land (see attached maps). AERMOD site-wide refined modeling was used to predict the impacts of on-site operations at this facility. The maximum off-property ground level industrial concentrations (GLC_{max}) are predicted to occur directly on the east property line, on industrial land, whereas the maximally affected off-property non-industrial ground level concentrations ($GLCs_{ni}$) are to occur 972 meters from the east property line, over non-industrial water. The predicted ground level concentrations of Crude Oil and Crude Condensate were then compared to their short-and long-term Effects Screening Levels (ESLs).

For routine and MSS emissions, sitewide modelling predicts that the short-term $GLCs_{max}$ for both Crude Oil and Crude Condensate will 2.5 times their respective short-term ESLs (i.e. 3500 $\mu g/m^3$). The predicted corresponding frequency of two-times ESL exceedance for each chemical would be 9 hours per year. On the other hand, the predicted short-term $GLCs_{ni}$ as well as the annual $GLCs_{max}$ and long-term $GLCs_{ni}$ for these two chemicals would be far less than their corresponding short- and long-term ESLs respectively. Hence considering the magnitude and frequency of ESL exceedance, the conservative nature of the modeling assumptions for worst-case scenarios at a continuous 8760 hours of operation per year, that public exposure is unlikely at this site and the fact that long-term ESLs are not exceeded at any receptors, the predicted short-and long-term emissions for Crude Oil and Crude Condensate are allowable.

In conclusion, assuming that the modeled impacts are correct, we do not anticipate any short- or long-term adverse health effects to occur among the general public as a result of exposure to the proposed emissions from this facility.

If you have any further questions, please do not hesitate to contact me at the following phone number: 512-239-0558 or e-mail address: stanley.aniagu@tceq.texas.gov

Request for Comments – TCEQ Toxicology Division

Date Submitted	**March 4, 2021**	**RUSH?**	Expedite
Toxicology Control No.	7669/Aniagu		
Company Name	Max Midstream Texas LLC		
Physical Location	1975 s fm 1593		
City / County / Region	Point Comfort	Calhoun	Corpus Christi-R14
Facility Type	Seahawk Crude Condensate Terminal		
Map Location			
Customer No. (CN)	CN605726959	**Permit No.**	162941
Regulated Entity No. (RN)	RN106209190	**Project Number**	320923
Modeling Software Used	Refined	**Permit Review Type**	Initial
Air Pollutant Watch List Area	No	**Permit Reviewer**	Ariel Ramirez
Watch List Pollutants Involved	N/A		

Project Overview
Max Midstream Texas LLC (Max Midstream) submitted an expedited initial permit application to expand the existing Seahawk Crude Condensate Terminal, a for-hire bulk terminal. Existing facilities for this site authorized under Permit by Rule (PBR) will be consolidated into the NSR permit as part of this project. Maintenance, Startup, and Shutdown (MSS) activities will be authorized by this permit.

This RFC is related to storage tanks which will be authorized on-site and have minor short-term exceedances of crude oil and crude condensate.

Emission Calculation Approach
Storage tank emission rates were calculated using AP-42 emission factors (Sections 7.1.3.3 and 7.1.3.4 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" dated March 2020).

Emission Controls
A summary of proposed emission controls are summarized below and meet current BACT.

Source Name	Best Available Control Technology Description
Tanks	IFR tanks with TVP <11 psia. Tanks will be painted white, utilize submerged fill, and drain-dry. The tanks are/will be designed with a mechanical shoe primary seal and a rim-mounted secondary seal.
	Existing fixed roof tanks with capacity <25,000 gal or TVP <0.5 psia. The tanks are painted white and utilize submerged fill.
MSS	Best Management Practices: minimize number and duration of events; beginning tank degassing within 24 hr after roof landed and tank completely drained; degassing tanks, process equipment, and piping with volumes >45 cubic ft to max outlet concentration of 10,000 ppmv, and maintain that concentration until maintenance activities completed or

Source Name	Best Available Control Technology Description
	refilling begins; routing degassed vapor to VCU with minimum 99% DRE; and managing residual products with VP>0.5 psia that are removed from equipment and piping as a result of an MSS activity in a controlled manner.

Surrounding Land Use

Surrounding land is rural, shown in the map below.

Sources Included in the Impacts Analysis

All pollutants with the exception of crude oil and crude condensate satisfy the MERA criteria and therefore are not expected to cause adverse health effects. Crude oil and crude condensate did not meet the criteria of the MERA guidance document and required further analysis. Site-wide modeling was performed and demonstrated that the predicted annual concentrations will not exceed the ESL. The short-term concentrations exceeded the ESL and are summarized in the Location of Maximum Impacts section below.

Modeling Approach and Worst-Case Scenarios
The short-term crude modeling results for the routine + MSS scenario are driven by the uncontrolled tank venting emissions (89% of max). The emissions from this activity are very infrequent in nature, but the model conservatively included the maximum hourly emission rate out of the single highest impact tank for the entire year (8,760 hours). This was done to provide the site operations maximum flexibility to operate within the permit limits without unnecessary permit conditions. In actual operation, these emissions will occur from a given tank about once every ten years when taken out of service

Facility Operating Limitations and Scenarios
The applicant will be required to maintain emission records for the tanks which show compliance with the permitted emission rates. There are no specific limitations around MSS or hours of operation.

Nothing outside of boilerplate has been added to the permit for tanks, not sure what limits to mention here. They don't have throughput limitations for tanks in the CNDs since they opted to maintain emission records instead (subpart G of the tank boilerplate language); anything from the section above I can reiterate here?

Complaints

N/A

Additional Comments

N/A

Location of Maximum Impacts

Constituents and CAS No.	Receptors	Distance from Property line	Cardinal Direction	Receptor Type
Crude oil, <1% benzene	GLC_{MAX}	0, property line	East	industrial
	GLC_{ni}	972m	East	Non-industrial over water
Crude condensate	GLC_{MAX}	0, property line	East	industrial
	GLC_{ni}	972m	East	Non-industrial over water

IMPACTS SUMMARY - REFINED

Table 1. Total GLCmax and GLCni Exceedances

CAS No.	N/A		N/A
Constituent	Crude Oil, <1% benzene		Crude Condensate
Routine or MSS?	Routine + MSS		Routine + MSS
Short Term Impacts			
ESL	3500		3500
GLCMAX	8782		8782
1*λMAX			
2*λMAX	9		9
4*λMAX	-		-
10*λMAX	-		-
GLCni	1718		1718
Λni			
Annual Impacts			
ESL	350		350
GLCMAX	16		16
GLCni	7		7

- The term *nonindustrial* or the letters ***ni*** are used to identify any receptor on nonindustrial property or land not zoned as industrial. A receptor on the property line is considered to be the same type of receptor as the nearest receptor off property. For example, if the land adjacent to an industrial property line is unzoned, then a receptor on the property line would be identified as nonindustrial.
- **ESL** - effects screening level in µg/m^3.
- **GLC_{MAX}** - Maximum off-property ground-level concentration in µg/m^3.
- **$2*\lambda_{MAX}$** - (same value as $2xGLC_{MAX}$ as stated by Air Dispersion Modeling Team) number of hours per year that the GLC_{MAX} exceeds two times the ESL at an industrial receptor, other **$1*\lambda_{MAX}$** should apply if GLC_{MAX} is at a non-industrial receptor.
- **$4*\lambda_{MAX}$** - (same value as $4xGLC_{MAX}$ as stated by Air Dispersion Modeling Team) number of hours per year that the GLC_{MAX} exceeds four times the ESL at an industrial receptor, other **$1*\lambda_{MAX}$** should apply if GLC_{MAX} is at a non-industrial receptor.
- **$10*\lambda_{MAX}$** - (same value as $10xGLC_{MAX}$ as stated by Air Dispersion Modeling Team) number of hours per year that the GLC_{MAX} exceeds ten times the ESL at an industrial receptor, other **$1*\lambda_{MAX}$** should apply if GLC_{MAX} is at a non-industrial receptor.
- **GLC_{ni}** - ground-level concentration in µg/m^3 at maximally affected nonindustrial receptor. Supply this information only if the GLCmax is greater than the ESL and is at an industrial receptor.
- **λ_{ni}** - (same value as $1xGLC_{ni}$ as stated by Air Dispersion Modeling Team) number of times the ESL is exceeded (hours/year) at GLC_{ni}.

Toxicology Division Comments:	**Toxicology Division Approval**
	 March 5, 2021