18

02/26/2012 ----------NSR IMS - PROJECT RECORD ----------

PROJECT#: 172749 PERMIT#: 3275A STATUS: PENDING DISP CODE: C
RECEIVED: 12/19/2011 PROJTYPE: REVISION AUTHTYPE: CONSTRUCT ISSUED DT: 3/5/12
RENEWAL: 07/15/2014
PROJECT ADMIN NAME: ADMINISTRATIVE CHANGE
PROJECT TECH NAME: DAYTON PLANT

Assigned Team: CHEMICAL SECTION

STAFF ASSIGNED TO PROJECT:

HICKMAN , SHARON	- REVIEWR1_2 -	AP INITIAL REVIEW
GOERTZ , RICHARD	- REVIEW ENG -	CHEMICAL TEAM #1

RECEIVED
NOV 0 1 2012
TCEQ
CENTRAL FILE ROOM

CUSTOMER INFORMATION (OWNER/OPERATOR DATA)
ISSUED TO: HUNTSMAN PETROCHEMICAL LLC
COMPANY NAME: Huntsman Petrochemical, LLC
CUSTOMER REFERENCE NUMBER: CN603839317

REGULATED ENTITY/SITE INFORMATION
REGULATED ENTITY NUMBER: RN100225721 ACCOUNT: LH0005J
PERMIT NAME: HUNTSMAN PETROCHEMICAL DAYTON FACILITY

REGULATED ENTITY LOCATION: 3892 US HIGHWAY 90
REGION 12 - HOUSTON NEAR CITY: DAYTON COUNTY: LIBERTY

CONTACT DATA

CONTACT NAME: MR SCOTT WAGAMAN CONTACT ROLE: RESPONSIBLE OFFICIAL
JOB TITLE: TEAM LEADER ENVIRONMENTAL SERVICES ORGANIZATION: HUNTSMAN PETROCHEMICAL LLC
MAILING ADDRESS: PO BOX 310 , DAYTON, TX, 77535-0006
PHONE: (936) 258-5568 Ext: 0
FAX: (936) 257-4350 Ext: 0

CONTACT NAME: MR RYAN MAYCES CONTACT ROLE: TECHNICAL CONTACT
JOB TITLE: SENIOR ENGINEER ORGANIZATION: WAID ENVIRONMENTAL
MAILING ADDRESS: 2600 S SHORE BLVD STE 300 , LEAGUE CITY, TX, 77573-2944
PHONE: (281) 513-1936 Ext: 0
EMAIL:RMAYCES@WAID.COM

PROJECT NOTES:

12/20/2011	DFC 12/20/11

PERMIT NOTES:

07/24/2008	CONSOLIDATE OR REFERENCE PBR NO. 84261 AT NEXT AMENDMENT OR RENEWAL.
06/06/2008	PB REGISTRATION 84793 WILL NEED TO BE INCORPORATED INTO PERMIT 3275A WHEN THE PERMIT IS NEXT RENEWED OR AMENDED.
07/24/2008	CONSOLIDATE OR REFERENCE PBR NO. 85460 AT NEXT AMENDMENT OR RENEWAL.
11/20/2008	INCORPORATE OR REFERENCE PBR 86679 AT THE NEXT AMENDMENT OR RENEWAL.
02/17/2009	INCORPORATE OR REFERENCE PBR 87361 AT THE NEXT AMENDMENT OR RENEWAL.
03/04/2009	INCORPORATE PBR NO. 87410 AT NEXT AMEND. OR RENEWAL.
06/25/2009	PBR 88606 SHOULD BE INCORPORATED INTO PERMIT 3275A WHEN NEXT AMENDED OR RENEWED.
10/20/2009	PBR 91129 SHOULD BE INCORPORATED INTO PERMIT 3275A WHEN NEXT AMENDED OR RENEWED.
01/19/2010	INCORPORATE OR REFERENCE PBR 91581 AT THE NEXT AMENDMENT OR RENEWAL
03/16/2011	INCORPORATE PBR 95057 WHEN NEXT AMENDED OR RENEWED
05/27/2011	PBR REGISTRATION NO. 96152 SHOULD BE CONSOLIDATED INTO PERMIT NO. 3275A AT THE NEXT AMENDMENT OR RENEWAL.
01/06/2012	INCORPORATE OR REFERENCE PBR 99711 WHEN PERMIT IS AMENDED OR RENEWED

TRACKING ELEMENTS:

TE Name	Start Date	Complete Date
APIRT RECEIVED PROJECT (DATE)	12/19/2011	

APIRT TRANSFERRED PROJECT TO TECHNICAL STAFF (DATE)	12/20/2011	
PHONE CONFERENCE (DATE)	12/20/2011	
PROJECT RECEIVED BY ENGINEER (DATE)	12/22/2011	
DEFICIENCY CYCLE	01/25/2012	02/01/2012
WORKING DRAFT PERMIT REVIEW CYCLE	02/01/2012	02/15/2012
FINAL PACKAGE REWORK CYCLE	02/21/2012	02/22/2012
FINAL PACKAGE TO TEAM LEADER OR SUPERVISOR FOR REVIEW (DATE)	02/22/2012	
WPO FINAL PACKAGE CYCLE	02/22/2012	02/22/2012
FINAL PACKAGE TO SECTION MANAGER FOR REVIEW (DATE)	02/26/2012	
CENTRAL REGISTRY UPDATED		

Permit Alteration
Source Analysis & Technical Review

Company	**Huntsman Petrochemical, LLC**	Permit Number	**3275A**
City	**Dayton**	Project Number	**172749**
County	**Liberty**	Account Number	**LH-0005-J**
Project Type	**Revision**	Regulated Entity Number	**RN100225721**
Project Reviewer	**Mr. Rick Goertz**	Customer Reference Number	**CN603839317**
Site Name	**Dayton Plant**		

Project Overview

Huntsman Petrochemical Corporation owns and operates a Specialty Chemicals/Batch Manufacturing facility located in Dayton, Liberty County, Texas. Huntsman has submitted an alteration requesting to update Special Condition 29 to current MSS boilerplate language for fixed roof tanks and add the MSS Special Condition for open ended lines.

Review Summary

Special Condition Changes:

Current Permit	Proposed Permit	Change
1-28	1-28	No Change
-	29	Added MSS boilerplate condition for open ended lines
29.B	30.B	MSS condition for fixed roof tanks was updated to add a provision such that If it is documented that the material previously contained in the tank has a vapor pressure of less that 0.02 psia, no further demonstration that the VOC vapor pressure has been reduced to 0.02 psia is necessary.
-	30.B(2)(d)	A provision was added to allow demonstration that the calculated VOC partial pressure of the water/VOC mixture is less than 0.02 psia using available information and engineering calculations.
29.B(2)(c)	30.B(2)(c)	Corrected reference to sampling of vapor space concentration from Special Condition 38 to Special Condition 28.
29.C(3)	30.C(3)	Corrected reference to sampling of vapor space concentration from Special Condition 4 to Special Condition 28.
29.D(2)	30.D(2)	Condition was updated to clarify required recordkeeping.
30-33	31-34	No Change
34	35	The condition was updated to clarify that MSS Special Conditions 25 through 34 become effective 180 days from the issuance of the permit dated November 11, 2011.

Permit Concurrence and Related Authorization Actions

Is the applicant is in agreement with special conditions?	**Yes**
Company representative(s):	**Mr. Ryan Mayces**
Contacted Via:	**Phone**
Date of contact:	**February 15, 2012**
Other permit(s) or permits by rule affected by this action:	**None**
List permit and/or PBR number(s) and actions required or taken:	**N/A**

Project Reviewer 2/22/12 Date — Team Leader/Section Manager/Backup 02/26/12 Date

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 5, 2012

MR SCOTT WAGAMAN
TEAM LEADER ENVIRONMENTAL SERVICES
HUNTSMAN PETROCHEMICAL LLC
PO BOX 310
DAYTON TX 77535-0006

Re: Permit Alteration
Permit Number: 3275A
Dayton Plant
Dayton, Liberty County
Regulated Entity Number: RN100225721
Customer Reference Number: CN603839317
Account Number: LH-0005-J

Dear Mr. Wagaman:

This is in response to your letter received December 19, 2011, requesting alteration of the conditions of the above-referenced permit. We understand that Huntsman Petrochemical is requesting to update the Maintenance, Start-up, and Shutdown (MSS) Special Condition 29 to reflect current MSS boilerplate language for fixed roof tanks and add the boilerplate MSS condition for open ended lines.

As indicated in Title 30 Texas Administrative Code § 116.116(c) [30 TAC § 116.116(c)], and based on our review, Permit Number 3275A is altered. Enclosed are the altered permit conditions to replace those currently attached to your permit. Please attach these to your permit.

Planned maintenance, startup, and shutdown for the sources identified on the MAERT have been reviewed and included in the MAERT and specific maintenance activities are identified in the permit special conditions. Any other maintenance activities are not authorized by this permit and will need to obtain separate authorization.

As of July 1, 2008, all analytical data generated by a mobile or stationary laboratory in support of compliance with air permits must be obtained from a NELAC (National Environmental Laboratory Accreditation Conference) accredited laboratory under the Texas Laboratory Accreditation Program or meet one of several exemptions. Specific information concerning which laboratories must be accredited and which are exempt may be found in 30 TAC § 25.4 and § 25.6.

Re: Permit Number: 3275A

For additional information regarding the laboratory accreditation program and a list of accredited laboratories and their fields of accreditation, please see the following Web site:

www.tceq.texas.gov/compliance/compliance_support/qa/env_lab_accreditation.html

For questions regarding the accreditation program, you may contact the Texas Laboratory Accreditation Program at (512) 239-3754 or by e-mail at labprgms@tceq.texas.gov.

Your cooperation in this matter is appreciated. If you need further information or have any questions, please contact Mr. Rick Goertz at (512) 239-5606 or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality.

Sincerely,

Michael Wilson, P.E., Director
Air Permits Division
Office of Air
Texas Commission on Environmental Quality

MPW/RG/rg

Enclosure

cc: Mr. Ryan Mayces, Waid Environmental, League City
Air Section Manager, Region 12 - Houston

Project Number: 172749

SPECIAL CONDITIONS

Permit Number 3275A

Emission Standards

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit. **(2/04)**

   Planned startup and shutdown emissions due to the activities identified in Special Condition 26 are authorized from facilities and emission points in other construction permits at the site provided the facility and emissions are compliant with the respective MAERT and special conditions. **(2/11)**

Federal Program Applicability

2. The facility shall comply with the applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated for the following:

   A. Small Industrial-Commercial-Institutional Steam Generating Units in Title 40 Code of Federal Regulations Part 60, Subparts A and Dc (40 CFR Part 60, Subparts A and Dc).

   B. Volatile Organic Liquid Storage Vessels in 40 CFR Part 60, Subparts A and Kb.

   C. Emissions of Volatile Organic Compounds (VOC) from Equipment in the Synthetic Organic Chemicals Manufacturing Industry in 40 CFR Part 60, Subparts A and VV.

Production Limitations

3. Annual production from this facility shall not exceed that represented in the confidential "Production Limits List" submitted by Huntsman Petrochemical Corporation to the Texas Commission on Environmental Quality (TCEQ) dated August 27, 2003. Records shall be kept of annual production rates for each family group and for total plant production. Production records shall be in units of pounds per day and pounds per year. Annual production shall be based on a 12-month rolling total. A copy of the "Productions Limit List" shall be kept on-site and made available to representatives of the TCEQ, the EPA, or any local pollution control program having jurisdiction, upon request. **(2/04)**

4. Raw materials and products in this facility shall be limited to those listed on the "Approved Chemicals List" submitted by Huntsman Petrochemical Corporation to the TCEQ dated May 9, 1997. Storage, handling, or manufacture of any other chemicals in

this facility shall be prohibited unless the new raw materials and products meet the requirements of Special Condition No. 5.

5. Additions of new raw materials, products, by-products, or family groups are allowed under this permit according to the following conditions:

A. An impacts index will be calculated for each new raw material, by-product, or product using the following formula:

Impacts Index = Vapor Molecular Weight X Vapor Pressure at 34ºC (pounds per square inch, absolute [psia])/Effects Screening Level (ESL)

Vapor pressures may be either measured or calculated using derived constants. The ESL is defined as the short-term ESL ($\mu g/m^3$) published in the April 1996 TCEQ list or the derived short-term ESL, in $\mu g/m^3$, provided in writing by the TCEQ Toxicology Section.

B. A new raw material, by-product, or product will be subject to the following limitations based on its calculated impacts index:

(1) Control of truck loading and atmospheric storage tanks means venting through the Scrubber (Emission Point No. [EPN] FA-013).

(2) Each chemical with a calculated impacts index greater than 0.195 and less than or equal to 1.35 requires control of truck loading and atmospheric storage tanks and the operational limitations listed below:

a. A maximum tank filling rate of 15,000 gallons per hour (gal/hr), e.g., one tank at 15,000 gal/hr or two tanks filling at 7,500 gal/hr, and

b. No simultaneous truck loading and storage tank filling.

(3) Each chemical with a calculated impacts index greater than 0.00897 and less than or equal to 0.195 requires control of truck loading and atmospheric storage tanks;

(4) Each chemical with a calculated impacts index greater than 0.00473 and less than or equal to 0.00897 requires control of truck loading; and

(5) Each chemical with an impacts index less than or equal to 0.00473 requires no additional control.

C. The addition of new products and new family groups shall not increase the total annual plant production limit specified in Special Condition No. 3. **(2/04)**

D. Records of new raw materials, by-products, and products added per Special Condition No. 5 shall be maintained on a list entitled "Additional Approved Chemicals List." This list shall include the name, molecular weight, vapor pressure, ESL, and calculated Impacts Index of each new raw material or product.

E. Upon renewal of this permit, this flexibility for addition of new chemicals will be reviewed.

F. Notification that Special Condition No. 5 was exercised to add a new chemical must be submitted in writing, quarterly, to the TCEQ Houston Regional Office. **(02/11)**

G. The new chemical shall be identified in the next permit amendment or renewal application for review and incorporation within the permit.

Organic Compound Waste Gas

6. The scrubber shall operate with no less than 95 percent efficiency in disposing of the waste gas streams routed to it. **(09/02)**

Storage and Loading Operation Limitations

7. Storage tanks shall be limited to total throughput of 30,000 gallons per each hour of any specific compound with a maximum throughput of 87,555 gallons per each hour of all organic compounds. Total annual storage tank throughput is 665,000,000 pounds for all raw materials and products.

8. Controlled storage tanks and loading racks shall be vented to the Flare (EPN RD-250) or the Scrubber (EPN FA-013).

9. For uncontrolled loading, submerged loading is required for compounds with a vapor pressure greater than 1 mm Hg that are loaded without control.

10. Pressurized Tank Nos. 901, 902, 903, 904, and 905 are designated for ethylene oxide, propylene oxide, butylene oxide, or mixtures of these oxides. These tanks shall operate at no less than 15 psia. The only emissions from these tanks other than fugitives shall be from depressurizing the system after unloading. These emissions shall be routed to the Flare (EPN RD-250).

11. The loading rate for the loading racks shall be limited to total pumping rate of 15,000 gallons per each hour of any specific compound with a maximum pumping rate of 87,555 gallons per each hour of all organic compounds. The annual loading throughput is limited to 300,000,000 pounds.

12. For purpose of assuring compliance with VOC emission limitation, the holder of this permit shall maintain a monthly emissions record, to be completed on a quarterly basis, which describes calculated emissions of VOC from all storage tanks and loading operations. The record shall include tank or loading point identification number, control method used, tank or vessel capacity in gallons, name of material stored or loaded, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average temperature in psia, VOC throughput for the previous month and year-to-date in gallons, and total tons of emissions including controls for the previous month and year-to-date.

13. For trucks that are loaded using controls, the permittee shall comply with all applicable tank truck inspection requirements as defined in Title 30 Texas Administrative Code § 115.214, (30 TAC § 115.214) 49 CFR § 180.407(h)(ii)(2), and 49 CFR § 180.407(h)(ii)(3). The permittee shall not allow a tank truck to be filled unless the tank being filled has passed a leak-tight test within the past year as evidenced by a prominently displayed certification affixed near the Department of Transportation certification plate which:

    A. Shows the date the tank truck last passed the leak-tight test required by this condition; and

    B. Shows the identification number of the tank truck. **(10/99)**

Emission Controls and Control Devices

14. Flares shall be designed and operated in accordance with the following requirements:

    A. The flare system shall be designed such that the combined assist natural gas and waste stream to the flare meets the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal and planned maintenance flow conditions.

    The heating value and velocity requirements shall be satisfied during operations authorize by this permit. Flare testing per 40 CFR § 60.18 (f) may be requested by the appropriate regional office to demonstrate compliance with these requirements.

B. 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.

C. The flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours.

D. The permit holder shall install continuous flow monitors that provide a record of the vent stream to the flare. The flow monitors shall be installed such that the total vent stream to the flare is measured. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow shall be recorded each hour.

The minimum net heating value of the gas sent to the flare shall be 200 British thermal units/standard cubic foot of the gas. The natural gas enrichment shall be no less than 20 percent by volume of the total waste gas stream. Readings of the natural gas enrichment flow shall be taken at least once every 15 minutes and the average hourly values shall be recorded each hour.

The monitors and analyzers shall operate as required by this section at least 95% of the time when the flare is operational, averaged over a rolling 12 month period. Actual exit velocity determined in accordance with 40 CFR § 60.18 (f)(4) shall be recorded at least once every 15 minutes.

E. The requirements of this permit condition shall also apply to emissions generated by planned maintenance, startup and shutdown activities associated with EPN RD-250. (11/11)

15. Pilot and fuel gas fired in this facility and supplemental fuel gas fired in the flare systems, if required, are limited to pipeline-quality natural gas containing no more than 0.25 grain of hydrogen sulfide and 5 grains total sulfur per 100 dry standard cubic feet. Use of any other fuel will require a permit modification and approval from the TCEQ Executive Director. An analysis of the pilot and fuel gas used in this facility shall be conducted or a gas analysis from the gas supplier shall be obtained at least once per calendar year. Records of each fuel gas analysis shall be kept for a period of two years.

16. The water that returns to the Cooling Towers (EPNs UD-556 and UB-551) shall be monitored monthly for purgeable organic carbon (POC) using the El Paso method or another approved method. The POC shall be used as a qualitative indicator of process

leaks into the cooling tower. The appropriate equipment shall be maintained so as to minimize fugitive VOC emissions from the cooling tower. Faulty components shall be repaired at the earliest opportunity but no later than the next scheduled shutdown of the process unit in which the leak occurs. Records shall be kept of the monthly cooling tower and maintenance efforts. The records shall include the date the cooling water is checked for POC, the amount of POC, the cause of any leaks, and the date the leak is stopped. **(09/02)**

Piping, Valves, Flanges, Pumps, and Compressors in VOC Service – 28VHP

17. Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment.

A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 psia at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 pound per square inch) below ambient pressure. Equipment excluded from this condition shall be identified in a list to be made available upon request.

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

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

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. Non-accessible valves, as defined by 30 TAC Chapter 115, shall be identified in a list to be made available upon request.

E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas-tested or hydraulically-tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance. Flanges 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 a cap, blind flange, plug, or a second valve. Except during sampling, the second valve shall be closed.

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 notlimited 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. For valves equipped with rupture discs, a pressure sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

An approved gas analyzer shall conform to requirements listed in 40 CFR § 60.485(a)-(b).

Replaced 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 and compressor 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 an 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 flanges 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 and compressor 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.

I. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown, 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. The TCEQ Executive Director, at discretion, may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown.

J. The results of the required fugitive monitoring and maintenance program shall be made available to the TCEQ Executive Director or designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, and corrective actions taken for all components. Records of flange inspections are not required unless a leak is detected.

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

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

18. Damaged or leaking pump and compressor seals found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. The leak detection level of 500 ppmv shall be used instead of the 2,000 ppmv listed in Special Condition No. 17H.

Wastewater System and Controls

19. When in service each of the following components of the wastewater treatment system shall be controlled by at least two carbon canisters arranged in series: main sump, steam stripper, TD3200A, TD3200B, TD3300, TD3500, and CPI Separator. Each canister shall contain at least 180 pounds of activated carbon. **(2/04)**

Initial Demonstration of Compliance

20. Sampling ports and platform(s) shall be incorporated into the design of the Scrubber (EPN FA-013) stack according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the appropriate TCEQ Regional Director.

21. This sampling was performed in December 1997.

The holder of this permit shall perform stack sampling and other testing as required to demonstrate the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Scrubber (EPN FA-013). These emissions must be in compliance with this permit. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.

A. The appropriate TCEQ Regional Office in the region where the source is located shall be contacted as soon as testing is scheduled, but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

(1) 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.

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 submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit conditions or the TCEQ or the EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in B of this condition shall be submitted to the TCEQ Austin Office of Permitting, Remediation, and Registration, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for NSPS testing which must have the EPA approval shall be submitted to the TCEQ Regional Director.

B. Air contaminants emitted from the Scrubber (EPN FA-013) to be tested for include (but are not limited to) VOC.

C. Sampling shall occur within 180 days after initial start-up of the facilities and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate TCEQ Regional Office.

The proposed scrubber is not subject to any part of 40 CFR Part 60 or 40 CFR Part 61.

D. The plant shall operate at maximum production rates during stack emission testing. Primary operating parameters that enable determination of production rate shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. If the plant is unable to operate at maximum rates during testing, then future production rates may be limited to the rates established during testing. Additional stack testing may be required when higher production rates are achieved.

E. One copy of the final sampling report shall be forwarded to the TCEQ within 30 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Houston Regional Office.

Continuous Demonstration of Compliance

22. Each set of wastewater treatment system carbon canisters shall be monitored for breakthrough when associated equipment is in service in the following manner:

A. Each set of canisters shall be sampled and recorded weekly in order to determine when breakthrough of the first canister occurs. The sampling point shall be at the outlet of the first canister but before the inlet to the second or final polishing canister. Sampling shall be done when each component of the wastewater treatment system is operating in order to sample during maximum emission venting to the carbon canisters.

B. The method of VOC sampling and analysis shall be by flame ionization detector (FID) or a TCEQ-approved equivalent. On each day that sampling is required, the FID shall be calibrated prior to sampling with a certified gas mixture at 0 ppmv ±10 percent and at 100 ppmv ±10 percent.

C. Breakthrough shall be defined as a measured VOC concentration of 100 ppmv measured as methane. When the condition of breakthrough of VOC from the initial saturation canister occurs, a fresh canister shall be placed as the new final polishing canister within four hours of detection of breakthrough. Sufficient new activated carbon canisters shall be maintained at the site to replace spent carbon canisters such that replacements can be done in the above-specified time frames.

D. Records of the sampling of the carbon canisters maintained at the plant site shall include (but are not limited to) the following:

(1) Sample time and date.
(2) Monitoring results (ppmv).
(3) Corrective action taken including the time and date of that action.

E. The holder of this permit may request a change in frequency of breakthrough sampling after completing at least two weeks of sampling as specified above. The request shall include a copy of the carbon absorption system monitoring records specified in paragraph D of this condition and shall be submitted to the TCEQ Austin Office of Permitting, Remediation, and Registration, Air Permits Division for review and response. The permit holder may not change the sampling frequency until written approval is received from the TCEQ Executive Director.

Recording Requirements

23. Records required by Special Condition Nos. 3, 5D, 12, 15, 16, 17J, and 22D of this permit shall be kept and maintained at the plant site. These records shall be made available to representatives of the TCEQ, the EPA, or any local pollution control program having jurisdiction upon request. These records shall be kept for two years after the data are obtained.

24. To keep in compliance with the VOC and Hazardous Air Pollutants (HAPS) limits in the maximum allowable emission rates table, records of VOC and HAPS emissions shall be calculated on a quarterly basis. The HAP emissions shall be calculated according to the methodology represented in the letter dated May 12, 2000, and located in the public portion of the permit file. These records shall be kept for two years and made available to representatives of the TCEQ, the EPA, or any local pollution control program having jurisdiction, upon request. **(09/02)**

Planned Maintenance, Startup, and Shutdown

25. Planned maintenance, startup, and shutdown (MSS) activities for which the VOC partial pressure is less than 0.0002 psia at 104°F are exempt from the requirements found in Special Conditions 26-35. **(11/11)**

26. This permit authorizes the emissions for the planned maintenance, startup, and shutdown (MSS) activities summarized in the following MSS Activity Summary table provided the emissions are compliant with the respective MAERT and special conditions of this permit.

Facilities	Description	Emissions Activity	EPN	MSS Monitoring and Recordkeeping
All process units and tank farms	Line breaks other than process vessels (piping, valves, pumps, compressors, instrumentation, filters, sight glasses, exchangers, miscellaneous small equipment, etc)	Venting and evaporative losses to atmosphere	FUG-MSS	Level 1 - only if VOC vp <0.5 psi; Level 2 if VOC vp> 0.5 psi
All process units and tank farms	Pan emissions	Evaporative losses to atmosphere	FUG-MSS	Level 1
All process units and tank farms	Washpad emissions	Evaporative losses to atmosphere	FUG-MSS	Level 1
All process units and tank farms	Vacuum Truck Loading	Venting to atmosphere	FUG-MSS	Level 1 only if VOC vp < 0.5 psi; level 2 if VOC vp> 0.5 psi
All process units and tank farms	Portable/Frac Tanks	Venting to atmosphere	FUG-MSS	Level 1
All process units and tank farms	Aerosol Degreasing/ Lubrication/Painting	Evaporative losses to atmosphere	Various	Level 1
All process units and tank farms	Priming Pumps	Evaporative losses to atmosphere	Various	Level 1

Facilities	Description	Emissions Activity	EPN	MSS Monitoring and Recordkeeping
All process units and tank farms	Process vessel line breaks - shutdown/depressurize/ purge/degas/drain	Vent to atmosphere	Various	Level 1 only if VOC vp < 0.5 psi; Level 2 if VOC vp>o.5 psi.
Tank Trucks and Rail Cars	Oxide Depressurization	Venting to Flare	RD-250	Level 2

The Recordkeeping requirements for these activities are based on the notation in the final column of the above table. All vapor pressures referenced in the above table are at 95°F. Level 1 and Level 2 recordkeeping requirements are defined as follows: **(11/11)**

Level	Description
Level 1	Level 1 recordkeeping is for inherently low emitting MSS activities that may be performed at the site. Emissions from these activities shall be considered to be equal to the potential to emit represented in the permit application. The estimated emissions from these activities must be revalidated annually. This revalidation shall consist of the estimated emissions for each type of activity and the basis for that emission estimate.
Level 2	Level 2 recordkeeping is for activities that may be tracked through the work orders, purchase records, or equivalent. Emissions from these activities shall be calculated using the number of work orders or equivalent per month and the emissions associated with that activity identified in the permit application.

27. Process units and facilities, with the exception of inherently low emitting MSS activities (Level 1; VOC vp < 0.5 psi), kettles, and those complying with Special Conditions 29, 30 and 31, shall be depressurized, drained, and degassed 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 psia at the normal process temperature and 95°F may be opened to atmosphere and drained in accordance with paragraph C of this special condition without depressuring or degassing to a control device. 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 psia 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 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 psia 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 or as allowed under Special Condition 28. 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 as Level 2, the following requirement applies. The facilities being prepared for maintenance shall not be vented directly to atmosphere, except as necessary to verify an acceptable VOC concentration and establish isolation of the work area, until the VOC concentration has been verified to be less than 1 percent of the lower explosive limit (LEL) per the site safety procedures.

2. If the process equipment is purged with a gas and not subsequently washed, 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 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). 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 purge volume and recordkeeping requirements in this paragraph.

   Monitoring shall be performed the first time a piece of process equipment is degassed. Monitoring shall be performed the first time a piece of process equipment has VOC containing liquids and/or VOC containing gas purged pack to the process equipment. Additional monitoring of a piece of equipment is not required for subsequent degassing and/or subsequent purging back to the process equipment pursuant to the same procedures using an instrument meeting the requirements of Special Condition 28.

   The sampling point shall be upstream of the inlet to the control device or controlled recovery system when the process equipment is degassed. 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. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 1 percent of the LEL, per the safety procedures.

E. Gases and vapors with VOC partial pressure greater than 0.50 psia may be vented directly to atmosphere if all the following criteria are met:

1. It is not technically practicable to depressurize or degas, as applicable, into the process.

2. There is not an available connection to a plant control system (flare).

3. There are no more than 50 lbs of air contaminants to be vented to atmosphere during the MSS activity.

All instances of venting directly to atmosphere per Special Condition No. 27E must be documented when occurring as part of any MSS activity. The emissions associated with venting without control must be recorded for MSS activities identified as Level 2. **(11/11)**

28. 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. The calibration gas and the gas to be measured, and its approximate response factor (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

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 and the greatest VOC concentration recorded. This VOC concentration shall not exceed the specified VOC concentration limit prior to uncontrolled venting.

3. If a TVA-1000 series FID analyzer calibrated with methane is used to determine the VOC concentration, a measured concentration of 34,000 ppmv may be considered equivalent to 10,000 ppmv as VOC.

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 must be within the range of the colorimetric gas detector 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, and measured concentrations of the samples.

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

1. The detector shall be calibrated at the frequency recommended by the manufacturer with a certified pentane gas standard at 25 percent of the lower explosive limit (LEL) for pentane. Records of the calibration date and calibration result (pass/fail) shall be maintained.

2. A functionality test shall be performed on each day the detector is utilized using the same certified gas standard used for calibration. The LEL monitor shall read no lower than 90 percent of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.

3. A certified methane gas standard specified by the detector manufacturer may be used for calibration and functionality tests in lieu of the pentane gas standard. **(11/11)**

29. This condition applies only to piping and components subject to leak detection and repair monitoring requirements identified in other NSR permits. 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; **(03/12)**

    A. a cap, blind flange, plug, or second valve must be installed on the line or valve; or

    B. 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 by the end of the 72 hours 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

30. The following requirements apply to fixed roof storage tanks.

    A. The tank shall not be opened or ventilated without control, except when air circulation in the vapor space is minimized as specified below, until one of the criteria in part B of this condition is satisfied.

        1. 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.

        2. Access points shall be closed when not in use.

    B. 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 less than 0.02 psia. These criteria shall be demonstrated in any 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 hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).

   c. Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1% LEL through the procedure in Special Condition 28.

   d. Demonstrate that the calculated VOC partial pressure of the water/VOC mixture is less than 0.02 psia using available information and engineering calculations. **(03/12)**

3. No standing liquid verified through visual inspection.

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

If it is documented that the material previously contained in the tank has a vapor pressure of less than 0.02 psia, no further demonstration is necessary. **(03/12)**

C. If the ventilation of the vapor space is controlled, the emission control system shall meet the requirements of 1 through 5. Controlled degassing of the vapor space shall be completed as follows:

1. Any gas or vapor removed from the vapor space must be routed to a control device or a 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 when degassing to the control device or controlled recovery system.

2. The vapor space 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 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 28.

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. Verify the VOC concentration is less than 1% LEL through the procedure in Special Condition 28.

D. Records shall be maintained as follows:

1. For the purpose of estimating emissions, the date, time, and other information specified for each of the following events:

   a. start and completion of controlled degassing, and total volumetric flow,

b. 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 psi,

c. if there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow,

2. The estimated quantity of each air contaminant or mixture of air contaminants emitted and the data and methods used to determine it.

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

A. Vacuum pumps and blowers shall not be operated on trucks containing or vacuuming liquids with VOC partial pressure greater than 0.50 psi at 95°F unless the vacuum/blower exhaust is routed to a control device or a controlled recovery system.

B. Equip fill line intake with a "duckbill" or equivalent attachment if the hose end cannot be submerged in the liquid being collected.

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

1. Prior to initial use, identify any liquid in the truck. Record the liquid level and document that the VOC partial pressure is less than 0.50 psi if the vacuum exhaust is not routed to a control device or a controlled recovery system. After each liquid transfer, identify the liquid transferred and document that the VOC partial pressure is less than 0.50 psi if the vacuum exhaust is not routed to a control device or a controlled recovery system.

2. 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.

3. 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 28.

4. 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, record the VOC partial pressure 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 31.A through 31.D do not apply. **(11/11)**

32. The following requirements apply to containers, and frac or temporary tanks and vessels used in support of MSS activities. These requirements do not apply to drums, vessels and totes storing less than 275 gallons of liquid that do not vent to the atmosphere except adding or removing material.

A. The exterior surfaces of these tanks/vessels that are exposed to the sun shall be white or aluminum effective May 1, 2013. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled.

B. These tanks/vessels must be covered and equipped with fill pipes that discharge within 6 inches of the tank/vessel bottom.

C. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all frac tanks during the previous calendar month and the past consecutive 12 month period. The record shall include tank identification number, dates put into and removed from service, control method used, tank capacity and volume of liquid stored in gallons, name of the material stored, VOC molecular weight, and VOC partial pressure at the estimated monthly average material temperature in psia. Filling emissions for tanks shall be calculated using

the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations" and standing emissions determined using: the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Storage Tanks."

D. If the tank/vessel is used to store liquid with VOC partial pressure less than 0.10 psi at 95°F, records may be limited to the days the tank is in service and the liquid stored. Emissions may be estimated based upon the potential to emit as identified in the permit application. **(11/11)**

33. MSS activities represented in the permit application may be authorized under permit by rule only if the procedures, emission controls, monitoring, and recordkeeping are the same as those required by this permit. **(11/11)**

34. No visible emissions shall leave the property due to painting or abrasive blasting. **(11/11)**

35. With the exception of the MAERT emission limits, Special Conditions 25 through 34 become effective 180 days from the issuance of the permit dated November 14, 2011. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded. During this period, monitoring and recordkeeping shall satisfy the following requirements. The permit holder may maintain abbreviated records of emissions from Levels 1 and 2 activities as allowed in Special Condition No. 26 rather than documenting all the information required below. **(03/12)**

A. The process unit name and planned MSS EPN from the MAERT;

B. The type of planned MSS 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 of the planned MSS activity. **(11/11)**

Dated: March 5, 2012

HUNTSMAN

APIRT
DEC 19 2011

December 15, 2011

Via FEDEX

Texas Commission on Environmental Quality
Permits Administration Review Section
Air Permits Initial Review Team (MC 161)
12100 Park 35 Circle
Austin, TX 78753

RECEIVED
DEC 19 2011
AIR PERMITS DIVISION

Re: Permit Alteration Request
Huntsman Petrochemical LLC, Dayton Plant
TCEQ Permit No. 3275A
Account ID No. ~~LH-005-J~~ ✓
Customer Reference No. ~~CN600546543~~ 603839317
Regulated Entity No. ~~RN100870179~~ 100225721

To Whom It May Concern:

On behalf of Huntsman Petrochemical LLC, I am submitting this request for alteration of TCEQ Permit No. 3275A for the Conroe Plant. The proposed changes are administrative in nature and do not involve any changes in the method of control of emissions, changes in the character of emissions, or increases in the emissions rate of any air contaminant. Accordingly, the requested changes constitute permit alterations pursuant to 30 TAC §116.116(c). The proposed changes are as follows:

Special Condition No. 17E

The issued permit does not include the current version of TCEQ standard language for open-ended lines (OELs). Huntsman is proposing the following updates to the referenced condition incorporating the current standard language.

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.

APIRT 192749
DEC 19 2011

HUNTSMAN CORPORATION
3892 US Highway 90 • P.O. Box 310 • Dayton, Texas 77535 • 936-258-5568 • Fax 936-257-4350

SPECIAL CONDITIONS

Permit Number 3275A

Emission Standards

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit. **(2/04)**

   Planned startup and shutdown emissions due to the activities identified in Special Condition 26 are authorized from facilities and emission points in other construction permits at the site provided the facility and emissions are compliant with the respective MAERT and special conditions. **(2/11)**

Federal Program Applicability

2. The facility shall comply with the applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated for the following:

   A. Small Industrial-Commercial-Institutional Steam Generating Units in Title 40 Code of Federal Regulations Part 60, Subparts A and Dc (40 CFR Part 60, Subparts A and Dc).

   B. Volatile Organic Liquid Storage Vessels in 40 CFR Part 60, Subparts A and Kb.

   C. Emissions of Volatile Organic Compounds (VOC) from Equipment in the Synthetic Organic Chemicals Manufacturing Industry in 40 CFR Part 60, Subparts A and VV.

Production Limitations

3. Annual production from this facility shall not exceed that represented in the confidential "Production Limits List" submitted by Huntsman Petrochemical Corporation to the Texas Commission on Environmental Quality (TCEQ) dated August 27, 2003. Records shall be kept of annual production rates for each family group and for total plant production. Production records shall be in units of pounds per day and pounds per year. Annual production shall be based on a 12-month rolling total. A copy of the "Productions Limit List" shall be kept on-site and made available to representatives of the TCEQ, the EPA, or any local pollution control program having jurisdiction, upon request. **(2/04)**

4. Raw materials and products in this facility shall be limited to those listed on the "Approved Chemicals List" submitted by Huntsman Petrochemical Corporation to the TCEQ dated May 9, 1997. Storage, handling, or manufacture of any other chemicals in this facility shall

be prohibited unless the new raw materials and products meet the requirements of Special Condition No. 5.

5. Additions of new raw materials, products, by-products, or family groups are allowed under this permit according to the following conditions:

   A. An impacts index will be calculated for each new raw material, by-product, or product using the following formula:

      Impacts Index = Vapor Molecular Weight X Vapor Pressure at 34ºC (pounds per square inch, absolute [psia])/Effects Screening Level (ESL)

      Vapor pressures may be either measured or calculated using derived constants. The ESL is defined as the short-term ESL ($\mu g/m^3$) published in the April 1996 TCEQ list or the derived short-term ESL, in $\mu g/m^3$, provided in writing by the TCEQ Toxicology Section.

   B. A new raw material, by-product, or product will be subject to the following limitations based on its calculated impacts index:

      (1) Control of truck loading and atmospheric storage tanks means venting through the Scrubber (Emission Point No. [EPN] FA-013).

      (2) Each chemical with a calculated impacts index greater than 0.195 and less than or equal to 1.35 requires control of truck loading and atmospheric storage tanks and the operational limitations listed below:

         a. A maximum tank filling rate of 15,000 gallons per hour (gal/hr), e.g., one tank at 15,000 gal/hr or two tanks filling at 7,500 gal/hr, and

         b. No simultaneous truck loading and storage tank filling.

      (3) Each chemical with a calculated impacts index greater than 0.00897 and less than or equal to 0.195 requires control of truck loading and atmospheric storage tanks;

      (4) Each chemical with a calculated impacts index greater than 0.00473 and less than or equal to 0.00897 requires control of truck loading; and

      (5) Each chemical with an impacts index less than or equal to 0.00473 requires no additional control.

C. The addition of new products and new family groups shall not increase the total annual plant production limit specified in Special Condition No. 3. **(2/04)**

D. Records of new raw materials, by-products, and products added per Special Condition No. 5 shall be maintained on a list entitled "Additional Approved Chemicals List." This list shall include the name, molecular weight, vapor pressure, ESL, and calculated Impacts Index of each new raw material or product.

E. Upon renewal of this permit, this flexibility for addition of new chemicals will be reviewed.

F. Notification that Special Condition No. 5 was exercised to add a new chemical must be submitted in writing, quarterly, to the TCEQ Houston Regional Office. **(02/11)**

G. The new chemical shall be identified in the next permit amendment or renewal application for review and incorporation within the permit.

Organic Compound Waste Gas

6. The scrubber shall operate with no less than 95 percent efficiency in disposing of the waste gas streams routed to it. **(09/02)**

Storage And Loading Operation Limitations

7. Storage tanks shall be limited to total throughput of 30,000 gallons per each hour of any specific compound with a maximum throughput of 87,555 gallons per each hour of all organic compounds. Total annual storage tank throughput is 665,000,000 pounds for all raw materials and products.

8. Controlled storage tanks and loading racks shall be vented to the Flare (EPN RD-250) or the Scrubber (EPN FA-013).

9. For uncontrolled loading, submerged loading is required for compounds with a vapor pressure greater than 1 mm Hg that are loaded without control.

10. Pressurized Tank Nos. 901, 902, 903, 904, and 905 are designated for ethylene oxide, propylene oxide, butylene oxide, or mixtures of these oxides. These tanks shall operate at no less than 15 psia. The only emissions from these tanks other than fugitives shall be from depressurizing the system after unloading. These emissions shall be routed to the Flare (EPN RD-250).

11. The loading rate for the loading racks shall be limited to total pumping rate of 15,000 gallons per each hour of any specific compound with a maximum pumping rate of 87,555 gallons per each hour of all organic compounds. The annual loading throughput is limited to 300,000,000 pounds.

12. For purpose of assuring compliance with VOC emission limitation, the holder of this permit shall maintain a monthly emissions record, to be completed on a quarterly basis, which describes calculated emissions of VOC from all storage tanks and loading operations. The record shall include tank or loading point identification number, control method used, tank or vessel capacity in gallons, name of material stored or loaded, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average temperature in psia, VOC throughput for the previous month and year-to-date in gallons, and total tons of emissions including controls for the previous month and year-to-date.

13. For trucks that are loaded using controls, the permittee shall comply with all applicable tank truck inspection requirements as defined in Title 30 Texas Administrative Code § 115.214, (30 TAC § 115.214) 49 CFR § 180.407(h)(ii)(2), and 49 CFR § 180.407(h)(ii)(3). The permittee shall not allow a tank truck to be filled unless the tank being filled has passed a leak-tight test within the past year as evidenced by a prominently displayed certification affixed near the Department of Transportation certification plate which:

    A. Shows the date the tank truck last passed the leak-tight test required by this condition; and

    B. Shows the identification number of the tank truck. **(10/99)**

Emission Controls And Control Devices

14. Flares shall be designed and operated in accordance with the following requirements:

    A. The flare system shall be designed such that the combined assist natural gas and waste stream to the flare meets the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal, and planned maintenance flow conditions.

    The heating value and velocity requirements shall be satisfied during operations authorize by this permit. Flare testing per 40 CFR § 60.18 (f) may be requested by the appropriate regional office to demonstrate compliance with these requirements.

    B. 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.

C. The flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours.

D. The permit holder shall install continuous flow monitors that provide a record of the vent stream to the flare. The flow monitors shall be installed such that the total vent stream to the flare is measured. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow shall be recorded each hour.

The minimum net heating value of the gas sent to the flare shall be 200 British thermal units/standard cubic foot of the gas. The natural gas enrichment shall be no less than 20 percent by volume of the total waste gas stream. Readings of the natural gas enrichment flow shall be taken at least once every 15 minutes and the average hourly values shall be recorded each hour.

The monitors and analyzers shall operate as required by this section at least 95% of the time when the flare is operational, averaged over a rolling 12 month period. Actual exit velocity determined in accordance with 40 CFR § 60.18 (f)(4) shall be recorded at least once every 15 minutes.

E. The requirements of this permit condition shall also apply to emissions generated by planned maintenance, startup and shutdown activities associated with EPN RD-250. **(11/11)**

15. Pilot and fuel gas fired in this facility and supplemental fuel gas fired in the flare systems, if required, are limited to pipeline-quality natural gas containing no more than 0.25 grain of hydrogen sulfide and 5 grains total sulfur per 100 dry standard cubic feet. Use of any other fuel will require a permit modification and approval from the TCEQ Executive Director. An analysis of the pilot and fuel gas used in this facility shall be conducted or a gas analysis from the gas supplier shall be obtained at least once per calendar year. Records of each fuel gas analysis shall be kept for a period of two years.

16. The water that returns to the Cooling Towers (EPNs UD-556 and UB-551) shall be monitored monthly for purgeable organic carbon (POC) using the El Paso method or another approved method. The POC shall be used as a qualitative indicator of process leaks into the cooling tower. The appropriate equipment shall be maintained so as to minimize fugitive VOC emissions from the cooling tower. Faulty components shall be

repaired at the earliest opportunity but no later than the next scheduled shutdown of the process unit in which the leak occurs. Records shall be kept of the monthly cooling tower and maintenance efforts. The records shall include the date the cooling water is checked for POC, the amount of POC, the cause of any leaks, and the date the leak is stopped. **(09/02)**

Piping, Valves, Flanges, Pumps, And Compressors In VOC Service – 28VHP

17. Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment.

    A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 psia at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 pound per square inch) below ambient pressure. Equipment excluded from this condition shall be identified in a list to be made available upon request.

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

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

    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. Non-accessible valves, as defined by 30 TAC Chapter 115, shall be identified in a list to be made available upon request.

    E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas-tested or hydraulically-tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance. Flanges 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 a cap, blind flange, plug, or a second valve. Except during sampling, the second valve shall be closed.

    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

notlimited 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. For valves equipped with rupture discs, a pressure sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

An approved gas analyzer shall conform to requirements listed in 40 CFR § 60.485(a)-(b).

Replaced 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 and compressor 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 an 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 flanges 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 and compressor 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.

I. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown, 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. The TCEQ Executive Director, at discretion, may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown.

J. The results of the required fugitive monitoring and maintenance program shall be made available to the TCEQ Executive Director or designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, and corrective actions taken for all components. Records of flange inspections are not required unless a leak is detected.

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

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

18. Damaged or leaking pump and compressor seals found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. The leak detection level of 500 ppmv shall be used instead of the 2,000 ppmv listed in Special Condition No. 17H.

Wastewater System And Controls

19. When in service each of the following components of the wastewater treatment system shall be controlled by at least two carbon canisters arranged in series: main sump, steam stripper, TD3200A, TD3200B, TD3300, TD3500, and CPI Separator. Each canister shall contain at least 180 pounds of activated carbon. **(2/04)**

Initial Demonstration Of Compliance

20. Sampling ports and platform(s) shall be incorporated into the design of the Scrubber (EPN FA-013) stack according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the appropriate TCEQ Regional Director.

21. This sampling was performed in December 1997.

The holder of this permit shall perform stack sampling and other testing as required to demonstrate the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Scrubber (EPN FA-013). These emissions must be in compliance

with this permit. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.

A. The appropriate TCEQ Regional Office in the region where the source is located shall be contacted as soon as testing is scheduled, but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

(1) 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.

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 submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit conditions or the TCEQ or the EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in B of this condition shall be submitted to the TCEQ Austin Office of Permitting, Remediation, and Registration, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for NSPS testing which must have the EPA approval shall be submitted to the TCEQ Regional Director.

B. Air contaminants emitted from the Scrubber (EPN FA-013) to be tested for include (but are not limited to) VOC.

C. Sampling shall occur within 180 days after initial start-up of the facilities and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate TCEQ Regional Office.

The proposed scrubber is not subject to any part of 40 CFR Part 60 or 40 CFR Part 61.

D. The plant shall operate at maximum production rates during stack emission testing. Primary operating parameters that enable determination of production rate shall be

monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. If the plant is unable to operate at maximum rates during testing, then future production rates may be limited to the rates established during testing. Additional stack testing may be required when higher production rates are achieved.

E. One copy of the final sampling report shall be forwarded to the TCEQ within 30 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Houston Regional Office.

Continuous Demonstration Of Compliance

22. Each set of wastewater treatment system carbon canisters shall be monitored for breakthrough when associated equipment is in service in the following manner:

A. Each set of canisters shall be sampled and recorded weekly in order to determine when breakthrough of the first canister occurs. The sampling point shall be at the outlet of the first canister but before the inlet to the second or final polishing canister. Sampling shall be done when each component of the wastewater treatment system is operating in order to sample during maximum emission venting to the carbon canisters.

B. The method of VOC sampling and analysis shall be by flame ionization detector (FID) or a TCEQ-approved equivalent. On each day that sampling is required, the FID shall be calibrated prior to sampling with a certified gas mixture at 0 ppmv ±10 percent and at 100 ppmv ±10 percent.

C. Breakthrough shall be defined as a measured VOC concentration of 100 ppmv measured as methane. When the condition of breakthrough of VOC from the initial saturation canister occurs, a fresh canister shall be placed as the new final polishing canister within four hours of detection of breakthrough. Sufficient new activated carbon canisters shall be maintained at the site to replace spent carbon canisters such that replacements can be done in the above-specified time frames.

D. Records of the sampling of the carbon canisters maintained at the plant site shall include (but are not limited to) the following:

(1) Sample time and date.
(2) Monitoring results (ppmv).
(3) Corrective action taken including the time and date of that action.

E. The holder of this permit may request a change in frequency of breakthrough sampling after completing at least two weeks of sampling as specified above. The request shall include a copy of the carbon absorption system monitoring records specified in paragraph D of this condition and shall be submitted to the TCEQ Austin Office of Permitting, Remediation, and Registration, Air Permits Division for review and response. The permit holder may not change the sampling frequency until written approval is received from the TCEQ Executive Director.

Recording Requirements

23. Records required by Special Condition Nos. 3, 5D, 12, 15, 16, 17J, and 22D of this permit shall be kept and maintained at the plant site. These records shall be made available to representatives of the TCEQ, the EPA, or any local pollution control program having jurisdiction upon request. These records shall be kept for two years after the data are obtained.

24. To keep in compliance with the VOC and Hazardous Air Pollutants (HAPS) limits in the maximum allowable emission rates table, records of VOC and HAPS emissions shall be calculated on a quarterly basis. The HAP emissions shall be calculated according to the methodology represented in the letter dated May 12, 2000, and located in the public portion of the permit file. These records shall be kept for two years and made available to representatives of the TCEQ, the EPA, or any local pollution control program having jurisdiction, upon request. **(09/02)**

Planned Maintenance, Startup, And Shutdown **(11/11)**

25. Planned maintenance, startup, and shutdown (MSS) activities for which the VOC partial pressure is less than 0.0002 psia at 104°F are exempt from the requirements found in Special Conditions 26-34. **(11/11)**

26. This permit authorizes the emissions for the planned maintenance, startup, and shutdown (MSS) activities summarized in the following MSS Activity Summary table provided the emissions are compliant with the respective MAERT and special conditions of this permit.

Facilities	Description	Emissions Activity	EPN	MSS Monitoring and Recordkeeping

Facilities	Description	Emissions Activity	EPN	MSS Monitoring and Recordkeeping
All process units and tank farms	Line breaks other than process vessels (piping, valves, pumps, compressors, instrumentation, filters, sight glasses, exchangers, miscellaneous small equipment, etc)	Venting and evaporative losses to atmosphere	FUG-MSS	Level 1 - only if VOC vp <0.5 psi; Level 2 if VOC vp> 0.5 psi
All process units and tank farms	Pan emissions	Evaporative losses to atmosphere	FUG-MSS	Level 1
All process units and tank farms	Washpad emissions	Evaporative losses to atmosphere	FUG-MSS	Level 1
All process units and tank farms	Vacuum Truck Loading	Venting to atmosphere	FUG-MSS	Level 1 only if VOC vp < 0.5 psi; level 2 if VOC vp> 0.5 psi
All process units and tank farms	Portable/Frac Tanks	Venting to atmosphere	FUG-MSS	Level 1
All process units and tank farms	Aerosol Degreasing/ Lubrication/Painting	Evaporative losses to atmosphere	Various	Level 1
All process units and tank farms	Priming Pumps	Evaporative losses to atmosphere	Various	Level 1

Facilities	Description	Emissions Activity	EPN	MSS Monitoring and Recordkeeping
All process units and tank farms	Process vessel line breaks - shutdown/depressurize/ purge/degas/drain	Vent to atmosphere	Various	Level 1 only if VOC vp < 0.5 psi; Level 2 if VOC vp>o.5 psi.
Tank Trucks and Rail Cars	Oxide Depressurization	Venting to Flare	RD-250	Level 2

The Recordkeeping requirements for these activities are based on the notation in the final column of the above table. All vapor pressures referenced in the above table are at 95°F. Level 1 and Level 2 recordkeeping requirements are defined as follows: **(11/11)**

Level	Description
Level 1	Level 1 recordkeeping is for inherently low emitting MSS activities that may be performed at the site. Emissions from these activities shall be considered to be equal to the potential to emit represented in the permit application. The estimated emissions from these activities must be revalidated annually. This revalidation shall consist of the estimated emissions for each type of activity and the basis for that emission estimate.
Level 2	Level 2 recordkeeping is for activities that may be tracked through the work orders, purchase records, or equivalent. Emissions from these activities shall be calculated using the number of work orders or equivalent per month and the emissions associated with that activity identified in the permit application.

27. Process units and facilities, with the exception of inherently low emitting MSS activities (Level 1; VOC vp < 0.5 psi), kettles, and those complying with Special Conditions 29, 30 and 31, shall be depressurized, drained, and degassed 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 psia at the normal process temperature and 95°F may be opened to atmosphere and drained in accordance with paragraph C of this special condition without depressuring or degassing to a control device. 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 psia 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 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 psia 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 or as allowed under Special Condition 28. 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.

i. For MSS activities identified as Level 2, the following requirement applies. The

facilities being prepared for maintenance shall not be vented directly to atmosphere, except as necessary to verify an acceptable VOC concentration and establish isolation of the work area, until the VOC concentration has been verified to be less than 1 percent of the lower explosive limit (LEL) per the site safety procedures.

ii If the process equipment is purged with a gas and not subsequently washed, 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 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). 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 purge volume and recordkeeping requirements in this paragraph.

Monitoring shall be performed the first time a piece of process equipment is degassed. Monitoring shall be performed the first time a piece of process equipment has VOC containing liquids and/or VOC containing gas purged pack to the process equipment. Additional monitoring of a piece of equipment is not required for subsequent degassing and/or subsequent purging back to the process equipment pursuant to the same procedures using an instrument meeting the requirements of Special Condition 28.

The sampling point shall be upstream of the inlet to the control device or controlled recovery system when the process equipment is degassed. 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. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 1 percent of the LEL, per the safety procedures.

E. Gases and vapors with VOC partial pressure greater than 0.50 psia may be vented directly to atmosphere if all the following criteria are met:

i. It is not technically practicable to depressurize or degas, as applicable, into the process.

ii. There is not an available connection to a plant control system (flare).

iii. There are no more than 50 lbs of air contaminants to be vented to atmosphere during the MSS activity.

All instances of venting directly to atmosphere per Special Condition No. 27E must be documented when occurring as part of any MSS activity. The emissions associated with venting without control must be recorded for MSS activities identified as Level 2. **(11/11)**

28. 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:

i. The instrument shall be calibrated within 24 hours of use. The calibration gas and the gas to be measured, and its approximate response factor (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

ii. 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 and the greatest VOC concentration recorded. This VOC concentration shall not exceed the specified VOC concentration limit prior to uncontrolled venting.

iii. If a TVA-1000 series FID analyzer calibrated with methane is used to determine the VOC concentration, a measured concentration of 34,000 ppmv may be considered equivalent to 10,000 ppmv as VOC.

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

i. The air contaminant concentration measured must be within the range of the

colorimetric gas detector tube

ii. The tube is used in accordance with the manufacturer's guidelines.

iii. 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, and measured concentrations of the samples.

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

i. The detector shall be calibrated at the frequency recommended by the manufacturer with a certified pentane gas standard at 25 percent of the lower explosive limit (LEL) for pentane. Records of the calibration date and calibration result (pass/fail) shall be maintained.

ii. A functionality test shall be performed on each day the detector is utilized using the same certified gas standard used for calibration. The LEL monitor shall read no lower than 90 percent of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.

iii. A certified methane gas standard specified by the detector manufacturer may be used for calibration and functionality tests in lieu of the pentane gas standard. **(11/11)**

29. The following requirements apply to fixed roof storage tanks.

A. The tank shall not be opened or ventilated without control, except as allowed by i below until one of the criteria in part B of this condition is satisfied.

i. 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

B. 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 less than 0.02 psia. These criteria shall be demonstrated in any one of the following ways.

i. 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.

ii. 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 hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).

c. Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1% LEL through the procedure in Special Condition 38.

iii. No standing liquid verified through visual inspection.

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

C. If the ventilation of the vapor space is controlled, the emission control system shall meet the requirements of i through v. Controlled degassing of the vapor space shall be completed as follows:

i. Any gas or vapor removed from the vapor space must be routed to a control device or a 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 when degassing to the control device or controlled recovery system.

ii. The vapor space 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.

iii. A volume of purge gas equivalent to twice the volume of the vapor space 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 4.

iv. 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.

v. 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. Verify the VOC concentration is less than 1% LEL through the procedure in Special Condition 28.

D. Records shall be maintained as follows.

i. for the purpose of estimating emissions, the date, time, and other information

specified for each of the following events:

a. start and completion of controlled degassing, and total volumetric flow,

b. 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 psi,

c. if there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow,

ii. the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events a with the data and methods used to determine it. **(11/11)**

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

A. Vacuum pumps and blowers shall not be operated on trucks containing or vacuuming liquids with VOC partial pressure greater than 0.50 psi at 95°F unless the vacuum/blower exhaust is routed to a control device or a controlled recovery system.

B. Equip fill line intake with a "duckbill" or equivalent attachment if the hose end cannot be submerged in the liquid being collected.

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

i. Prior to initial use, identify any liquid in the truck. Record the liquid level and document that the VOC partial pressure is less than 0.50 psi if the vacuum exhaust is not routed to a control device or a controlled recovery system. After each liquid transfer, identify the liquid transferred and document that the VOC partial pressure is less than 0.50 psi if the vacuum exhaust is not routed to a control device or a controlled recovery system.

ii. 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.

iii. 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 28.

iv. 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, record the VOC partial pressure 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 30.A through 30.D do not apply. **(11/11)**

31. The following requirements apply to containers, and frac or temporary tanks and vessels used in support of MSS activities. These requirements do not apply to drums, vessels and totes storing less than 275 gallons of liquid that do not vent to the atmosphere except adding or removing material.

A. The exterior surfaces of these tanks/vessels that are exposed to the sun shall be white or aluminum effective May 1, 2013. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled.

B. These tanks/vessels must be covered and equipped with fill pipes that discharge within 6 inches of the tank/vessel bottom.

C. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all frac tanks during the previous calendar month and the past consecutive 12 month period. The record shall include tank identification number,

dates put into and removed from service, control method used, tank capacity and volume of liquid stored in gallons, name of the material stored, VOC molecular weight, and VOC partial pressure at the estimated monthly average material temperature in psia. Filling emissions for tanks shall be calculated using the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations" and standing emissions determined using: the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Storage Tanks."

D. If the tank/vessel is used to store liquid with VOC partial pressure less than 0.10 psi at 95°F, records may be limited to the days the tank is in service and the liquid stored. Emissions may be estimated based upon the potential to emit as identified in the permit application. **(11/11)**

32. MSS activities represented in the permit application may be authorized under permit by rule only if the procedures, emission controls, monitoring, and recordkeeping are the same as those required by this permit. **(11/11)**

33. No visible emissions shall leave the property due to painting or abrasive blasting. **(11/11)**

34. With the exception of the MAERT emission limits, these permit conditions become effective 180 days from the date of permit issuance. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded. During this period, monitoring and recordkeeping shall satisfy the following requirements. The permit holder may maintain abbreviated records of emissions from Levels 1 and 2 activities as allowed in Special Condition No. 26 rather than documenting all the information required below.

A. The process unit name and planned MSS EPN from the MAERT;

B. The type of planned MSS 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 of the planned MSS activity. **(11/11)**

Dated: November 14, 2011

Richard Goertz

From: Richard Goertz
Sent: Wednesday, January 25, 2012 10:02 AM
To: Mayces, Ryan S.
Subject: InRe: Huntsman Alteration request for permit 3275A
Attachments: 28VHP.doc

Ryan,
I am currently working on the Huntsman alteration. The request to update Special Condition 17E cannot be accommodated unless the entire 28VHP condition is updated to reflect current boilerplate language. For your convenience, I have attached the current boilerplate condition. Please let me know by COB on Friday what you would like to do. I am working on the other changes requested. Call is you have any questions. Please confirm receipt of this email.

Richard Goertz
Texas Commission on Environmental Quality
Phone: 239-5606
Fax: 239-1070

Richard Goertz

From: Ryan S. Mayces [RMayces@WAID.com]
Sent: Thursday, January 26, 2012 4:13 PM
To: Richard Goertz
Subject: RE: InRe: Huntsman Alteration request for permit 3275A

Rick,

I spoke with Huntsman and they would like to replace the existing 28 VHP provision with the updated language.

Regards,

Ryan S. Mayces
Waid Environmental
2600 South Shore Blvd., Suite 300
League City, TX 77573
Cell: (281) 513-1936
Phone: (281) 333-9990 Fax: (512) 255-8780

From: Richard Goertz [mailto:Richard.Goertz@tceq.texas.gov]
Sent: Wednesday, January 25, 2012 10:02 AM
To: Ryan S. Mayces
Subject: InRe: Huntsman Alteration request for permit 3275A

Ryan,
I am currently working on the Huntsman alteration. The request to update Special Condition 17E cannot be accommodated unless the entire 28VHP condition is updated to reflect current boilerplate language. For your convenience, I have attached the current boilerplate condition. Please let me know by COB on Friday what you would like to do. I am working on the other changes requested. Call is you have any questions. Please confirm receipt of this email.

Richard Goertz
Texas Commission on Environmental Quality
Phone: 239-5606
Fax: 239-1070

Richard Goertz

From: Richard Goertz
Sent: Wednesday, February 01, 2012 11:23 AM
To: Mayces, Ryan S.
Subject: Huntsman alteration draft permit.
Attachments: Working CND Permit 3275A Project 135734 Huntsman Petrochemical MSS Amendment.doc

Ryan,
Attached is the draft of the Huntsman alteration. Changes/updates are highlighted. Comments to the draft should be provided no later than COB on Wednesday, February 8th. If comments are not received by that time it will be assumed that Huntsman is in agreement and the package will be sent to signature for approval.

The following changes have been made
1) Special condition 17 has been updated to reflect the current boilerplate language for 28VHP.
2) Special Condition 29 has been updated to correct reference to Special Condition 28 rather than 38 and include two of the proposed changes. Other clarifying changes have also been made and are highlighted. Please note that the conditions added are not standard language for fixed roof tank MSS, however, there is no objection.
3) Special Condition 34 has been modified to specify conditions 25 though 33.

Changes not implemented.
1) The requested change to SC 29 adding the provision to allow sampling and verifying that TOC concentration is less than 1000 ppmw using EPA method 415.1. This condition is not standard and has only been allowed under certain cases. Justification to support use of this method will need to be provided and evaluated before it can be added.

2) The request to indicate that special condition 17 becomes effective 180 days after the issuance of the permit will not be added. Changes to the condition are not substantive from the current condition and does not warrant a 180 day grace period.

Richard Goertz
Texas Commission on Environmental Quality
Phone: 239-5606
Fax: 239-1070

Richard Goertz

From: Richard Goertz
Sent: Monday, February 06, 2012 2:44 PM
To: Mayces, Ryan S.
Subject: Huntsman Petrochemical

Ryan,
Per your request, I have looked at Special Condition 17E again to consider allowing additional time to implement the monitoring as requested in the alteration. As I am sure you are aware, the provision in the current permit already requires each open-ended valve or line be equipped with a cap, blind flange, plug, or second valve. The new condition has the same requirement but also gives the option to allow the open-ended valve or line to be monitored for leaks. The new provision simply provides another option. Until the facility is ready to implement the new option, the current requirement for a cap, blind flange, plug or second valve may be utilized. I have taken this by Teresa and she is in agreement. No provision to allow additional time to implement the monitoring program is warranted.

Richard Goertz
Texas Commission on Environmental Quality
Phone: 239-5606
Fax: 239-1070

12/20/2011 ----------NSR IMS - PROJECT RECORD ----------

PROJECT#: 172749 PERMIT#: 3275A STATUS: PENDING DISP CODE: _____
RECEIVED: 12/19/2011 PROJTYPE: REVISION AUTHTYPE: CONSTRUCT ISSUED DT: _____
RENEWAL: 07/15/2014
PROJECT ADMIN NAME: ADMINISTRATIVE CHANGE
PROJECT TECH NAME: DAYTON PLANT

Assigned Team: CHEMICAL SECTION

STAFF ASSIGNED TO PROJECT:

HICKMAN , SHARON	- REVIEWR1_2 -	AP INITIAL REVIEW
~~TEAM LEADER, CHEM~~ Rick	- REVIEW ENG -	CHEMICAL SECTION

CUSTOMER INFORMATION (OWNER/OPERATOR DATA)
ISSUED TO: HUNTSMAN PETROCHEMICAL LLC
COMPANY NAME: Huntsman Petrochemical, LLC
CUSTOMER REFERENCE NUMBER: **CN603839317**

REGULATED ENTITY/SITE INFORMATION
REGULATED ENTITY NUMBER: **RN100225721** ACCOUNT: LH0005J
PERMIT NAME: HUNTSMAN PETROCHEMICAL DAYTON FACILITY

REGULATED ENTITY LOCATION: 3892 US HIGHWAY 90
REGION 12 - HOUSTON NEAR CITY: DAYTON COUNTY: LIBERTY

CONTACT DATA

CONTACT NAME: MR SCOTT WAGAMAN CONTACT ROLE: RESPONSIBLE OFFICIAL

JOB TITLE: TEAM LEADER ENVIRONMENTAL SERVICES ORGANIZATION: HUNTSMAN PETROCHEMICAL LLC

MAILING ADDRESS: PO BOX 310 , DAYTON, TX, 77535-0006
PHONE: (936) 258-5568 Ext: 0
FAX: (936) 257-4350 Ext: 0

CONTACT NAME: MR RYAN MAYCES CONTACT ROLE: TECHNICAL CONTACT
JOB TITLE: SENIOR ENGINEER ORGANIZATION: WAID ENVIRONMENTAL
MAILING ADDRESS: 2600 S SHORE BLVD STE 300 , LEAGUE CITY, TX, 77573-2944
PHONE: (281) 513-1936 Ext: 0
EMAIL:RMAYCES@WAID.COM

PROJECT NOTES:
12/20/2011 DFC 12/20/11

PERMIT NOTES:
07/24/2008 CONSOLIDATE OR REFERENCE PBR NO. 84261 AT NEXT AMENDMENT OR RENEWAL.
06/06/2008 PB REGISTRATION 84793 WILL NEED TO BE INCORPORATED INTO PERMIT 3275A WHEN THE

06/06/2008	PBR REGISTRATION 84795 WILL NEED TO BE INCORPORATED INTO PERMIT 3275A WHEN THE PERMIT IS NEXT RENEWED OR AMENDED.
07/24/2008	CONSOLIDATE OR REFERENCE PBR NO. 85460 AT NEXT AMENDMENT OR RENEWAL.
11/20/2008	INCORPORATE OR REFERENCE PBR 86679 AT THE NEXT AMENDMENT OR RENEWAL.
02/17/2009	INCORPORATE OR REFERENCE PBR 87361 AT THE NEXT AMENDMENT OR RENEWAL.
03/04/2009	INCORPORATE PBR NO. 87410 AT NEXT AMEND. OR RENEWAL.
06/25/2009	PBR 88606 SHOULD BE INCORPORATED INTO PERMIT 3275A WHEN NEXT AMENDED OR RENEWED.
10/20/2009	PBR 91129 SHOULD BE INCORPORATED INTO PERMIT 3275A WHEN NEXT AMENDED OR RENEWED.
01/19/2010	INCORPORATE OR REFERENCE PBR 91581 AT THE NEXT AMENDMENT OR RENEWAL
03/16/2011	INCORPORATE PBR 95057 WHEN NEXT AMENDED OR RENEWED
05/27/2011	PBR REGISTRATION NO. 96152 SHOULD BE CONSOLIDATED INTO PERMIT NO. 3275A AT THE NEXT AMENDMENT OR RENEWAL.

TRACKING ELEMENTS:

TE Name	Start Date	Complete Date
APIRT RECEIVED PROJECT (DATE)	12/19/2011	
APIRT TRANSFERRED PROJECT TO TECHNICAL STAFF (DATE)	12/20/2011	
PHONE CONFERENCE (DATE)	12/20/2011	
CENTRAL REGISTRY UPDATED		
COMPLIANCE HISTORY REVIEW COMPLETED (DATE)		
DEFICIENCY CYCLE		
DRAFT PERMIT RFC SENT TO REGION (DATE)		
EMISSIONS MODELING CYCLE DONE BY APPLICANT		
FINAL PACKAGE REWORK CYCLE		
FINAL PACKAGE TO SECTION MANAGER FOR REVIEW (DATE)		
FINAL PACKAGE TO TEAM LEADER OR SUPERVISOR FOR REVIEW (DATE)		
MODELING AUDIT CYCLE		
PROJECT RECEIVED BY ENGINEER (DATE)		
PROJECT RECEIVED BY TECHNICAL STAFF FROM APIRT (DATE)		
WORKING DRAFT PERMIT REVIEW CYCLE		
WPO FINAL PACKAGE CYCLE		

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

TELEPHONE MEMO TO THE FILE

Please complete with typewriter or black pen.

Call to: Ryan Mayes

Date of call: 12-20

Phone no.: 281 513 1936

Call from: Alicia

File no.:

Subject: 3275A

Information for file: Confirm revising 3275A for Huntsman LLC - ✓ Dayton plant not correct ✓

Need TC contact mailing info — ✓

Signed

HUNTSMAN

APIRT
DEC 19 2011

December 15, 2011

Via FEDEX

Texas Commission on Environmental Quality
Permits Administration Review Section
Air Permits Initial Review Team (MC 161)
12100 Park 35 Circle
Austin, TX 78753

RECEIVED
DEC 19 2011
AIR PERMITS DIVISION

Re: Permit Alteration Request
Huntsman Petrochemical LLC, Dayton Plant
TCEQ Permit No. 3275A
Account ID No. ~~LH-005-J~~ ✓
Customer Reference No. ~~CN600546543~~ 603839317
Regulated Entity No. ~~RN100870179~~ 100225721

To Whom It May Concern:

On behalf of Huntsman Petrochemical LLC, I am submitting this request for alteration of TCEQ Permit No. 3275A for the Conroe Plant. The proposed changes are administrative in nature and do not involve any changes in the method of control of emissions, changes in the character of emissions, or increases in the emissions rate of any air contaminant. Accordingly, the requested changes constitute permit alterations pursuant to 30 TAC §116.116(c). The proposed changes are as follows:

Special Condition No. 17E

The issued permit does not include the current version of TCEQ standard language for open-ended lines (OELs). Huntsman is proposing the following updates to the referenced condition incorporating the current standard language.

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.

APIRT 192749
DEC 19 2011

HUNTSMAN CORPORATION
3892 US Highway 90 • P.O. Box 310 • Dayton, Texas 77535 • 936-258-5568 • Fax 936-257-4350

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 by the end of the 72 hours 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.

Special Condition No. 29

The issued permit does not include the current version of TCEQ standard language for fixed roof tanks. Huntsman is proposing the following updates to the referenced condition incorporating the current standard language.

The following requirements apply to fixed roof storage tanks.

A. The tank shall not be opened or ventilated without control, except when air circulation in the vapor space is minimized as allowed below, until one of the criteria in part B of this condition is satisfied.

(1) 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.

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

B. 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 less than 0.02 psia. These criteria shall be demonstrated in any 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 hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).

c. Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1000 ppmv or 1% of the LEL through the procedure in Special Condition 28.

d. Demonstrate that the calculated VOC partial pressure of the water/VOC mixture is less than 0.02 psia using available information and engineering calculations.

e. Take a representative sample of the liquid remaining in the tank and verify that the TOC concentration is less than 1000 ppmw using EPA method 415.1.

(3) No standing liquid verified through visual inspection.

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

If it is documented that the material previously contained in the tank has a vapor pressure of less than 0.02 psia, no further demonstration is necessary.

C. If the ventilation of the vapor space is controlled, the emission control system shall meet the requirements of i through v. Controlled degassing of the vapor space shall be completed as follows:

(1) Any gas or vapor removed from the vapor space must be routed to a control device or a 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 when degassing to the control device or controlled recovery system.

(2) The vapor space 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 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 28.

(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.

D. Records shall be maintained as follows.

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

a. start and completion of controlled degassing, and total volumetric flow,

b. 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 psi,

c. if there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow;

(2) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events a with the data and methods used to determine it.

Special Condition No. 34

Huntsman is proposing the following language to clarify the applicability of the referenced condition.

> With the exception of the MAERT emission limits, Special Conditions 25 through 33 and Special Condition 17E become effective 180 days after this permit has been issued. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded. During this period, monitoring and recordkeeping shall satisfy the following requirements. The permit holder may maintain abbreviated records of emissions from Levels 1 and 2 activities as allowed in Special Condition No. 26 rather than documenting all the information required below.
>
> A. The process unit name and planned MSS EPN from the MAERT;
>
> B. The type of planned MSS 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 of the planned MSS activity.

If you have any questions or require any additional information to approve this alteration request, please contact me at (936) 760-6265 or our consultant Ryan Mayces at 281-513-1936.

Sincerely,

Scott Wagaman
Team Leader – Environmental Services

cc: TCEQ Region 12, Houston
ENV.DY.10.00.01