



10/20/2026

John Mural
ASK Chemicals
2191 WEST 110TH ST
CLEVELAND, OH 44102

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1318000303
Permit Number: P0139338
Permit Type: Renewal
County: Cuyahoga

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
Yes	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency Weekly Review and Public Notices website, [Weekly Review and Public Notices](#). A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Ohio EPA document search webpage: [eDocument Search | Ohio Environmental Protection Agency](#). The permit can also be commented on and accessed electronically at: <https://ohioepa.commentinput.com>. Search by entering the permit # (P0139338) in the "Search Projects" search box and selecting "Review Document" or "Draft Permit." Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Written (paper) comments must be sent to the following:

Andrea Moore
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street Suite 700
PO Box 1049
Columbus, Ohio 43216-1049

Cleveland Division of Air Quality
2nd Floor
75 Erieview Plaza
Cleveland, OH 44114

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice appears on the Ohio EPA Weekly Review and Public Notices website, [Weekly Review and Public Notices | Ohio Environmental Protection Agency](#). You will be notified if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Cleveland Division of Air Quality at (216)664-2297.

Sincerely,

Robert Hodanbosi
Chief, Division of Air Pollution Control

cc: U.S. EPA Region 5 Via E-Mail Notification
CDAQ; Pennsylvania; Canada

PUBLIC NOTICE

The following matters are the subject of this public notice by the Ohio Environmental Protection Agency. The complete public notice, including any additional instructions for submitting comments, requesting information, a public hearing, or filing an appeal may be obtained at: [Weekly Review and Public Notices | Ohio Environmental Protection Agency](#) or Hearing Clerk, Ohio EPA, 50 W. Town St., Columbus, Ohio 43215. Ph: 614-644-3037 email: HClerk@epa.ohio.gov

Draft Air Pollution Permit-to-Install and Operate Renewal

ASK Chemicals
2191 WEST 110TH ST
Cleveland, OH 44102

ID#: P0139338

Date of Action: 10/20/2026

Permit Desc: FEPTIO renewal for a facility that distributes bulk chemicals and is a manufacturer of chemical specialty and performance products

The permit and complete instructions for requesting information or submitting comments may be obtained at: <https://ohioepa.commentinput.com> - Search by entering the permit P0139338 in the "Search Projects" search box.

Permit Strategy Write-Up

1. Check all that apply:

☒ Synthetic Minor Determination

☐ Netting Determination

2. Source Description:

ASK Chemicals distributes bulk chemicals and manufactures chemical specialty and performance products.

3. Facility Emissions and Attainment Status:

ASK's facility-wide potential to emit (PTE) for volatile organic compound(s) (VOC) and hazardous air pollutant(s) (HAP) emissions is in excess of 100 tons/year (TPY) for VOC, 10 TPY (individual HAP), and 25 TPY (combined HAP), which would result in Title V applicability. ASK has accepted throughput limits for several sources in order to bring the facility-wide emissions below the Title V thresholds.

The actual facility-wide emissions for calendar year 2024 from the annual Fee Emissions Report were 0.6446 tpy VOC and 9.66-05E combined HAPS.

Cuyahoga County is currently attainment status for 8-Hour Ozone.

4. Source Emissions:

Source Emissions at this site include various storage tanks, boilers, loading racks, container filling operations and blend tanks. The VOC, single HAP and combined HAP emissions will be restricted to below Title V Thresholds. ASK will maintain monthly records of the material throughput for several sources along with the VOC and HAP content to determine the rolling 12-month summation of VOC and HAPs.

5. Conclusion:

Through facility-wide throughput limitations, monitoring, and recordkeeping, the VOC, single HAP, and combined HAP emissions will be restricted below the Title V thresholds. Recordkeeping requirements for the rolling, 12-month summation of materials usage and the VOC ton/month averaged over a 12-month rolling period will ensure the facility stays below the limits in this permit.

6. Please provide additional notes or comments as necessary:

None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	61.98
PE	4.38
Individual HAP (Methanol)	1.1
Individual HAP (Formaldehyde)	0.28



**Environmental
Protection
Agency**

DRAFT

Division of Air Pollution Control
Permit-to-Install and Operate
for
ASK Chemicals

Facility ID:	1318000303
Permit Number:	P0139338
Permit Type:	Renewal
Issued:	10/20/2026
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Division of Air Pollution Control
Permit-to-Install and Operate
for
ASK Chemicals

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Authorization

Facility ID: 1318000303
Application Number(s): A0081913, A0082830, A0080806, A0082485A0081913, A0082830, A0080806, A0082485
Permit Number: P0139338
Permit Description: FEPTIO renewal for a facility that distributes bulk chemicals and is a manufacturer of chemical specialty and performance products
Permit Type: Renewal
Permit Fee: \$0.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 10/20/2026
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page to:

ASK Chemicals
2191 WEST 110TH ST
Cleveland, OH 44102

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Cleveland Division of Air Quality
2nd Floor
75 Erieview Plaza
Cleveland, OH 44114
(216)664-2297

The above-named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and Federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

John Logue
Director



Authorization (continued)

Permit Number: P0139338

Permit Description: FEPTIO renewal for a facility that distributes bulk chemicals and is a manufacturer of chemical specialty and performance products

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID: B007

Company Equipment ID: Boiler #3
Superseded Permit Number: P0128849
General Permit Category and Type: Not Applicable

Emissions Unit ID: J001

Company Equipment ID: J001
Superseded Permit Number: P0128849
General Permit Category and Type: Not Applicable

Emissions Unit ID: J002

Company Equipment ID: J002
Superseded Permit Number: P0128849
General Permit Category and Type: Not Applicable

Emissions Unit ID: J003

Company Equipment ID: J003
Superseded Permit Number: P0128849
General Permit Category and Type: Not Applicable

Emissions Unit ID: J005

Company Equipment ID: J005
Superseded Permit Number: P0128849
General Permit Category and Type: Not Applicable

Emissions Unit ID: J006

Company Equipment ID: Bulk Railcar Loading/Unloading Station #2
Superseded Permit Number: P0128849
General Permit Category and Type: Not Applicable

Emissions Unit ID: J007

Company Equipment ID: J007
Superseded Permit Number: P0128849
General Permit Category and Type: Not Applicable

Emissions Unit ID: J008

Company Equipment ID: J008
Superseded Permit Number: P0128849
General Permit Category and Type: Not Applicable



Emissions Unit ID:	J012
Company Equipment ID:	J012
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	J013
Company Equipment ID:	J013
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	J014
Company Equipment ID:	J014
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	J015
Company Equipment ID:	J015
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	J017
Company Equipment ID:	J017
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	J018
Company Equipment ID:	J018
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	J021
Company Equipment ID:	J021
Superseded Permit Number:	P0128959
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P001
Company Equipment ID:	Foundry Resin Blending System
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P010
Company Equipment ID:	R-301
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable



Emissions Unit ID:	P011
Company Equipment ID:	R-302
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	P015
Company Equipment ID:	BT-221
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	P022
Company Equipment ID:	Methanol Recovery Unit
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	P028
Company Equipment ID:	BT-218
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	P029
Company Equipment ID:	BT-87
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable

Group Name:Boilers

Emissions Unit ID:	B005
Company Equipment ID:	Boiler
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable P0128849
Emissions Unit ID:	B006
Company Equipment ID:	Boiler
Superseded Permit Number:	P0128849
General Permit Category and Type:	Not Applicable P0128849

List of Commonly Used Abbreviations

AP-42 = U.S. EPA's Compilation of Air Pollution Emissions Factors	HVLP = high volume, low pressure	PER = Permit Evaluation Report
ASTM = American Society for Testing and Materials	LAER = lowest achievable emission rate	PM = particulate matter
BACT = Best Available Control Technology	lb(s)/hr = pound(s) per hour	PM ₁₀ = particulate matter with an aerodynamic diameter less than or equal to 10 microns
BAT = Best Available Technology	LDAR = leak detection and repair	PM _{2.5} = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
CAA = Clean Air Act	LPG = liquefied petroleum gas/propane	ppb = parts per billion
CAM = compliance assurance monitoring	MACT = maximum achievable control technology	ppm = parts per million
CEMS = continuous emissions monitoring system	MAGLC = maximum acceptable ground level concentration	PSD = Prevention of Significant Deterioration
CFC = chlorofluorocarbon	mg/m ³ = milligrams per cubic meter	psi = pounds per square inch
CFR = Code of Federal Regulations	MM = million	psia = pounds per square inch absolute
CH ₄ = methane	MMBtu = million British Thermal Units	PTE = potential-to-emit
CI = compression ignition	MSDS = material safety data sheet	PTI = Permit-to-Install
CO = carbon monoxide	MSW = municipal solid waste	PTIO = Permit-to-Install and Operate
CO ₂ = carbon dioxide	NAAQS = National Ambient Air Quality Standard	PTO = Permit-to-Operate
COM = continuous opacity monitor	NESHAP = National Emission Standard for Hazardous Air Pollutants	PWR = process weight rate
DAPC = Division of Air Pollution Control	NG = natural gas	RACM = reasonably available control measures
DO/LAA = District Office/Local Air Agency	ng/m ³ = nanograms per cubic meter	RACT = reasonably available control technology
dscf = dry standard cubic foot	NH ₃ = ammonia	RATA = relative accuracy test audit
EAC = emissions activity category	NMHC = non-methane hydrocarbons	RTO = regenerative thermal oxidizer
eDocs = electronic documents database	NMOC = non-methane organic compound	SB265 = Senate Bill 265
ERAC = Environmental Review Appeals Commission	NO = nitrogen oxide	scfm = standard cubic feet per minute
ESP = electrostatic precipitator	NO ₂ = nitrogen dioxide	SI = spark ignition
EU = emissions unit	NO _x = nitrogen oxides	SIP = State Implementation Plan
FEPTIO = Federally Enforceable Permit-to-Install and Operate	NSPS = New Source Performance Standard	SO ₂ = sulfur dioxide
FER = Fee Emissions Report	NSR = New Source Review	SSMP = startup, shutdown, and malfunction plan
FR = Federal Register	NTV = Non-Title V	TDS = total dissolved solids
GACT = generally achievable control technology	O&M = operation and maintenance	TLV = threshold limit value
GHG = greenhouse gases	OAC = Ohio Administrative Code	TO = thermal oxidizer
gr/dscf = grains per dry standard cubic foot	OC = organic compound	TPH = ton(s) per hour
H ₂ S = hydrogen sulfide	Ohio EPA = Ohio Environmental Protection Agency	TPY = ton(s) per year
H ₂ SO ₄ = sulfuric acid	ORC = Ohio Revised Code	TSP = total suspended particulates
HAP = hazardous air pollutant	Pb = lead	VE = visible emissions
HCl = hydrogen chloride	PBR = Permit-By-Rule	VMT = vehicle miles traveled
HF = hydrogen fluoride	PCB = polychlorinated biphenyl	VOC = volatile organic compound
Hg = mercury	PE = particulate emissions	WPP = work practice plan
hp = horsepower	PEMS = predictive emissions monitoring system	µg/m ³ = micrograms per cubic meter

A. Standard Terms and Conditions



1. What does this permit-to-install and operate (PTIO) allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- a) PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11 or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- b) Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is very important that you submit a complete renewal permit application (either electronically through Ohio EPA's eBusiness Center: Air Services web service or postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended once by 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and permit evaluation report (PER) obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Cleveland Division of Air Quality in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his/her authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shut down emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, the new owner or operator must follow the procedures in OAC Chapter 3745-31-07, including notifying Ohio EPA or the local air agency of the change in ownership or operator within thirty days of the transfer date. Any transferee of this permit shall assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a PTI document, the facility-wide T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a PTO document, the facility-wide T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) B.2.

2. Applicable Emissions Limitations and/or Control Requirements

- a) The specific operation(s), property, and/or equipment that constitute each emissions unit, along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/ Control Measures
a.	OAC rule 3745-31-05(D) FEPTIO to avoid Title V	Volatile Organic Compound (VOC) emissions from the facility shall not exceed 99.5 tons per rolling, 12-month summation. See b)(1) and b)(2) below.

b) Additional Terms and Conditions

- (1) The emissions of Hazardous Air Pollutants (HAPs) from this facility shall not exceed 9.9 tons for any single HAP and 24.9 tons from any combination of HAPs based on a rolling, 12-month summation of the monthly HAP material usage rates.
- (2) The facility-wide VOC and HAP emissions limitation shall include the following units: B005 through B007, B008, B009, J001 through J003, J005 through J008, J010 through J022, P001, P010 through P015, P020, P022, P024, , P028 through P033, T004, T005, T029, T034 through T046, T049, T050, T077 through T079, T082 through T083, T097, T098, T104, T105, T108 through T110, T113, T114, T116, T124 through T136, T138 through T140, T148, T149, T152 through T157, and T164 through T199.

c) Operational Restrictions

- (1) The maximum annual triethylamine (TEA), dimethylpropylamine (DMPA), dimethylisopropylamine (DMIPA), and dimethylethylamine (DMEA) throughput shall not exceed 890,000 gallons for each amine, based on a rolling, 12-month summation of usage rates. Based on the facility-wide potential to emit established by the permittee, a maximum of 890,000 gallons of each amine can be unloaded through emissions unit J003 into the storage tank, a maximum of 890,000 gallons of DMIPA and DMPA can each be loaded through J003



from the storage tank, and a maximum of 890,000 gallons of each of the four amines can be subsequently packaged into containers through emissions unit J008.

- (2) The maximum annual volatile organic material usage for all of the emissions units listed in 2.b)(2) shall not exceed 99.5 tons, based on a rolling, 12-month summation of the volatile organic material usage figures.

d) **Monitoring and Recordkeeping Requirements**

- (1) The permittee shall collect and record the following information each month for this facility:
 - a. the company identification for each VOC-containing material processed;
 - b. the total VOC content of each VOC-containing material processed;
 - c. the amount of each VOC-containing material processed during the previous calendar month;
 - d. the gallons processed, or other emissions determining rationale, of all VOC-emitting sources (i.e. mixing, blending, container filling, loading and unloading);
 - e. the total VOC emissions from all VOC-containing materials processed from all VOC-emitting sources, in pounds or tons per month; and
 - f. the rolling, 12-month summation of VOC emissions from all VOC-emitting sources, in tons.
- (2) The permittee shall collect and record the following information each month for this facility:
 - a. the company identification for each HAP-emitting material processed;
 - b. the individual HAP content of each HAP-emitting material processed;
 - c. the total combined HAP content of each HAP-emitting material (i.e. sum of all individual HAP contents from b. above) processed;
 - d. the amount of each HAP-emitting material processed during the previous calendar month;
 - e. the gallons processed, or other emissions determining rationale, of all HAP-generating sources (i.e. mixing, blending, container filling, loading and unloading);
 - f. the total individual HAP emissions from all HAP-emitting materials processed and all HAP-generating sources, in pounds or tons per month;
 - g. the total combined HAP emissions from all HAP-emitting materials processed and all HAP-generating sources, in pounds or tons per month;
 - h. the rolling, 12-month summation of individual HAP emissions from all HAP-emitting materials processed and all HAP-generating sources, in tons; and
 - i. the rolling, 12-month summation of total combined HAP emissions from all HAP-emitting materials processed, and all HAP-generating sources, in tons.
- (3) The permittee shall collect and record the throughput (in gallons) for each amine identified in c)(1) above.



- (4) The permittee shall maintain monthly records of the amount of natural gas burned, in MMCF, facility-wide.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emissions limitations, operational restrictions, and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and that have been detected by the monitoring, recordkeeping, and/or testing requirements in this permit:
 - i. identification of each month during which the rolling, 12-month summation of triethylamine (TEA), dimethylpropylamine (DMPA), dimethylisopropylamine (DMIPA), and dimethylethylamine (DMEA) throughput exceeds 890,000-gallons for each amine;
 - ii. identification of each month during which the rolling, 12-month individual HAP emissions exceeded 9.9 tons;
 - iii. identification of each month during which the rolling, 12-month combined HAP emissions exceeded 24.9 tons;
 - iv. identification of each month during which the rolling, 12-month VOC emissions exceeded 99.5 tons;
 - v. identification of each month during which the rolling, 12-month VOC material usage exceeds 99.5 tons, based on a rolling, 12-month summation.
 - b. the probable cause for each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or to prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted electronically through Ohio EPA Air Services each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the appropriate Ohio EPA District Office or Local Air Agency (DO/LAA).

- (2) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or



organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the emissions limitation(s) in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

VOC emissions shall not exceed 99.5 tons per rolling, 12-month summation for this facility.

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping requirements specified in d)(1).

To calculate VOC emissions rates, the permittee shall employ the following:

- i. VOC emissions from mixing, blending, container filling, and loading and unloading shall be determined using loading loss calculation equation one (1), from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where: L_L = loading loss, pounds per 1,000 gallons ($lb/10^3 \text{ gal}$)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (at 70°F)

M = molecular weight of vapors, pounds per pound-mole ($lb/lb - mol$)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = lb \text{ VOC}/10^3 \text{ gal}$$

$$(lb \text{ VOC}/10^3 \text{ gal}) \times (total \text{ gal of material transferred}/yr) = lb \text{ VOC emitted}/yr$$

- ii. VOC emissions from the methanol recovery and purification system were established at the emissions unit's potential to emit as determined by the following calculations:

$$Total \text{ VOC} = (VOC \text{ distillation column}) + (VOC \text{ surge tank}) \times (1 - control \text{ efficiency})$$

$$Total \text{ VOC} = (0.55 \text{ lb/hr}) + (2.0942 \text{ lb}/10^3 \text{ gal}) \times (189.2 \text{ gal/hr}) \times (1 - 0.85)$$



Total VOC is the sum of methanol and formaldehyde emissions. Trace amounts of phenol also contribute to the total VOC.

- iii. VOC emissions from reactors equipped with caustic scrubbers shall be calculated as follows:

$$\begin{aligned} & \text{lbs material processed} \times \% \text{ by weight VOC} \\ & \times \text{control efficiency of caustic scrubber} \times \frac{1 \text{ tn}}{2000 \text{ lb}} \\ & = \text{tn VOC/yr} \end{aligned}$$

- iv. VOC emissions from boilers capable of burning natural gas and/or phenolic resin distillate shall be calculated as follows:

VOC emissions from the combustion of natural gas shall be calculated by multiplying an emissions factor of 5.5 lb VOC/MMscf by the annual amount of natural gas burned then divided by 2000 lb:

$$5.5 \text{ lb VOC/MMscf} \times \frac{\text{MMscf}}{\text{yr}} \times \frac{1 \text{ tn}}{2000 \text{ lb}} = \text{tn VOC/yr}$$

This emissions factor is specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emissions Factors, Section 1.4, Table 1.4-2(1/95).

- v. VOC emissions from storage tanks shall be determined using a current version of U.S. EPA's TANKS software program and the recordkeeping requirements specified in d)(1) above.

- b. Emissions Limitation:

Individual HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation for this facility.

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping requirements specified in d)(2).

To calculate the individual HAP emissions rates, the permittee shall employ the following:

- i. HAP emissions from mixing, blending, container filling, and loading and unloading shall be determined using loading loss calculation equation one (1), from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where: L_L = loading loss, pounds per 1,000 gallons ($\text{lb}/10^3 \text{ gal}$)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (at 70°F)



M = molecular weight of vapors, pounds per pound-mole
($lb/lb - mol$)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}F + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{T} = lb \text{ VOC}/10^3 \text{ gal}$$

$$(lb \text{ VOC}/10^3 \text{ gal}) \times (total \text{ gal of material transferred}/yr) \times$$
$$(\% \text{ by weight individual HAP}) \times \left(\frac{1 \text{ tn}}{2000 \text{ lb}} \right) =$$
$$tn \text{ individual HAP emitted}/yr$$

- ii. HAP emissions from the methanol recovery and purification system were established at the emissions unit's potential to emit as determined by the following calculations:

- (a) Formaldehyde emissions:

This emissions limitation was established at the unit's potential to emit as determined by the following calculations:

$$Total \text{ formaldehyde} = (formaldehyde \text{ distillation column}) +$$
$$(formaldehyde \text{ surge tank}) \times (1 - control \text{ efficiency})$$

$$Total \text{ formaldehyde} = (0.05 \text{ lb/hr}) + (1.9931 \text{ lb}/10^3 \text{ gal}) \times$$
$$(189.2 \text{ gal/hr}) \times (1 - 0.85)$$

The annual emissions limitation was established by multiplying the hourly emissions rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emissions limitations shall be assumed provided compliance is maintained with the pound per hour limitation.

- (b) Methanol emissions:

$$Total \text{ methanol} = (methanol \text{ distillation column}) +$$
$$(methanol \text{ surge tank}) \times (1 - CE)$$

$$Total \text{ methanol} = (0.05 \text{ lb/hr}) + (1.1011 \text{ lb}/10^3 \text{ gal}) \times$$
$$(189.2 \text{ gal/hr}) \times (1 - 0.85)$$

The annual emissions limitation was established by multiplying the hourly emissions rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emissions limitations shall be assumed provided compliance is maintained with the pound per hour limitation.

- iii. HAP emissions from reactors equipped with caustic scrubbers shall be calculated as follows:

$$lb \text{ material processed} \times \% \text{ by weight individual HAP} \times$$
$$control \text{ efficiency of caustic scrubber} * 1 \text{ tn}/2000 \text{ lb} =$$
$$tn \text{ individual HAP}/yr$$

- iv. HAP emissions from boilers capable of burning natural gas and/or phenolic resin distillate shall be calculated as follows:



- (a) HAP emissions from natural gas combustion:

HAP emissions from combustion of natural gas shall be calculated by multiplying the appropriate HAP emissions factors HAP/MMscf by the annual amount of natural gas burned then divided by 2000 lb.

The emissions factors are specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emissions Factors, Section 1.4, Table 1.4-3(1/95).

- (b) HAP emissions from phenolic resin distillate:

HAP emissions from combustion phenolic resin distillate shall be calculated by multiplying the HAP components of phenolic resin distillate (i.e. phenol and formaldehyde) (in percent by weight) by the amount in gallons burned annually, divided by 2000 lbs.

- v. HAP emissions from storage tanks shall be determined using a current version of U.S. EPA's TANKS software program and the recordkeeping requirements specified in d)(2) above.

c. Emissions Limitation:

Combined HAP emissions shall not exceed 24.9 tons per rolling, 12-month summation for this facility.

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping requirements specified in d)(2).

To determine total combined HAP emissions, sum the calculated annual emissions rates for each individual HAP from each source type identified above.

- (2) VOC and HAP emissions were calculated utilizing worst-case scenario process data (materials, molecular weights, vapor pressure, etc.) as provided by ASK Chemicals in FEPTIO P0128849 and renewal application A0080806.

C. Emissions Unit Terms and Conditions



1. B007, Boiler #3

Operations, Property and/or Equipment Description:

8.4 MMBTU natural gas fired boiler.

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).
- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
- a. None.
- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
- a. b)(1)e.
- b) Applicable Emissions Limitations and/or Control Requirements
- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-02243 issued 1/30/1991	Particulate emissions (PE) shall not exceed 0.02 pounds per million BTU of heat input. Visible particulate emissions (PE) shall not exceed 5% opacity.
b.	OAC rule 3745-17-07(A)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rule 3745-17-10(C)(1)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-18-06(B)	Exempt. See b)(2)a. below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-31-05(D) FEPTIO to avoid Title V	See Section B.

(2) Additional Terms and Conditions

- a. The emissions unit is exempt from the requirements of OAC rule 3745-18-06 because the total rated heat input capacity for this boiler is less than 10 MMBtu/hr.

c) Operational Restrictions

- (1) The permittee shall only burn natural gas in this emissions unit.
- (2) The permittee shall operate and maintain the fuel burners in accordance with the manufacturer's recommendations to ensure efficient combustion of the fuel(s).

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
- (2) The permittee shall identify in the PER each day during which a fuel other than natural gas is burned in this emissions unit.
- (3) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:



a. Emissions Limitation

PE shall not exceed 0.02 lb per MMBtu.

Applicable Compliance Method

If required, compliance with the allowable particulate emissions limit shall be determined through emissions testing conducted in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

b. Emissions Limitation

Visible PE shall not exceed 5% opacity.

Applicable Compliance Method

If required, compliance shall be determined by visible emissions evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA Reference Method 9.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1991, with a PTI issued January 1991.
- (2) This permit supersedes P0128849.

2. J001, J001

Operations, Property and/or Equipment Description:

Bulk Unloading Station #1 (200-gallons per minute)

a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

(1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 657.5 pounds per month and 3.95 tons per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

(2) Additional Terms and Conditions

a. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.

- b. The pounds of VOC per month and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) This emissions unit shall not transfer more than 52,560,000 gallons of material in any rolling, 12-month period.
 - (2) All leaks in the liquid lines shall be repaired within five days after identification.
 - (3) The permittee shall not permit liquid to be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for the VOC-containing materials loaded at this emissions unit:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute.
 - (2) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions, in pounds, divided by 2,000 pounds per ton).
- e) Reporting Requirements
 - (1) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (2) The permittee shall include in the annual PER, any such record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling 12-month period during which the material transferred exceeded 52,560,000 gallons; and
 - b. a description of any corrective actions taken to address the exceedances identified above.
 - (3) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date



the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 657.5 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons ($lb/10^3 \text{ gal}$)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (at 70°F)

M = molecular weight of vapors, pounds per pound-mole ($lb/lb - mol$)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 0.1501 \text{ lb VOC}/10^3 \text{ gal}$$

$$(0.1501 \text{ lb VOC}/10^3 \text{ gal}) \times (\text{total gal of material transferred/month}) = \text{lb VOC emitted/month}$$

**Materials transferred shall not exceed 52,560,000 gallons per rolling, 12-month period.*

b. Emissions Limitation

VOC emissions shall not exceed 3.95 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 pounds.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1970 and modified in the early to middle 1990s.
(2) This permit supersedes P0128849.

3. J002, J002

Operations, Property and/or Equipment Description:

Bulk Product Loading Station #2 (150-gallons per minute)

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b.

- b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 1,600 pounds per month and 9.6 tons per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions

- a. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.



- b. The pounds of VOC per month and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) This emissions unit shall not transfer more than 14,000,000 gallons of material in any rolling, 12-month period.
 - (2) All leaks in the liquid lines shall be repaired within five days after identification.
 - (3) The permittee shall not permit liquid to be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for the VOC-containing materials loaded at this emissions unit:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute.
 - (2) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions, in pounds, divided by 2,000 pounds per ton).
- e) Reporting Requirements
 - (1) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (2) The permittee shall include in the annual PER, any such record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling 12-month period during which the material transferred exceeded 14,000,000 gallons; and
 - b. a description of any corrective actions taken to address the exceedances identified above.
 - (3) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date



the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 1,600 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons ($lb/10^3 \text{ gal}$)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (at 70°F)

M = molecular weight of vapors, pounds per pound-mole ($lb/lb - mol$)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}F + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 1.3708 \text{ lb VOC}/10^3 \text{ gal}$$

$$(1.3708 \text{ lb VOC}/10^3 \text{ gal}) \times (\text{total gal of material transferred/month}) = \text{lb of VOC emitted/month}$$

**Materials transferred shall not exceed 14,000,000 gallons per rolling, 12-month period.*

b. Emissions Limitation

VOC emissions shall not exceed 9.6 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 pounds.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1970 and modified with a new reactor building in 1988.
(2) This permit supersedes P0128849.

4. J003, J003

Operations, Property and/or Equipment Description:

Bulk Flammable Loading/Unloading Station #3 (200-gallons per minute).

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).
- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
- a. None.
- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
- a. b(1)b, c(1), c)(3) and e(1).
- b) Applicable Emissions Limitations and/or Control Requirements
- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 32.73 pounds per hour from this emissions unit. VOC emissions shall not exceed 3.08 tons per year (TPY) from this emissions unit. Methanol emissions shall not exceed 26.03 pounds per hour and 0.76 TPY from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B. See c)(1), c)(3), and e)(1) below.



- (2) Additional Terms and Conditions
 - a. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future, the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA through the Cleveland Division of Air Quality and ASK Chemicals.
 - b. The pounds of VOC per hour and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) The maximum annual methanol throughput from J003 shall not exceed 700,000 gallons, based on a rolling, 12-month summation of usage rates.
 - (2) All loading and unloading through this emissions unit shall employ vapor balance systems. The amine emissions, except for storage tank breathing losses, shall be vented to the acid scrubber at all times this emissions unit is in operation.
 - (3) The permittee shall employ a submerged fill process when safely possible.
 - (4) There shall be no leaks in the vapor or liquid lines during the transfer of material.
 - (5) All leaks in the liquid or vapor lines shall be repaired within five days after identification.
 - (6) The permittee shall not permit liquid to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for the VOC-containing materials loaded at this emissions unit:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute.
 - (2) The permittee shall maintain records of the results of any leak checks, including at a minimum, the following information:
 - a. the date of the inspection;
 - b. findings (may indicate that no leaks were discovered or the location, nature, and severity of each leak);
 - c. leak determination method utilized (e.g. visual, odor, etc.); and
 - d. corrective action(s) taken (date each leak was repaired and any reason a repair interval exceeded fifteen calendar days).



- (3) The permittee shall maintain a log of the date and description of all repair/maintenance work performed and/or any other modifications made to the vapor balance system.
 - (4) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions, in pounds, divided by 2,000 pounds per ton).
- e) Reporting Requirements
- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. identification of each month during which the rolling, 12-month summation of Methanol exceeds a throughput of 700,000 gallons;
 - b. the probable cause for each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or to prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted electronically through Ohio EPA Air Services each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the appropriate Ohio EPA DO/LAA.
 - (2) The permittee shall submit reports that outline the occurrence of any leak from the vapor balance system that is not repaired within 15 days after identification of the leak. These reports shall be submitted to the Cleveland DAQ within 30 days after the repair is completed.
 - (3) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (4) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:



a. Emissions Limitation

VOC emissions shall not exceed 32.73 pounds per hour from this emissions unit.

Applicable Compliance Method

The loading loss was established using a pumping rate of 200-gallons per minute and the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons ($lb/10^3 \text{ gal}$)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (at 70°F)

M = molecular weight of vapors, pounds per pound-mole ($lb/lb - mol$)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 16.33 \text{ lb VOC}/10^3 \text{ gal}$$

$$(16.33 \text{ lb VOC}/10^3 \text{ gal}) \times (200 \text{ gal}/\text{min}) \times (60 \text{ min}/\text{hr}) = 195.96 \text{ lb of VOC emitted}/\text{hr}$$

$$(0.02 \times 195.96 \text{ lb of VOC emitted}/\text{hr}) \times (0.98 \times 0.15 \times 195.96 \text{ lb of VOC emitted}/\text{hr}) = 32.73 \text{ lb of VOC emitted}/\text{hr}$$

b. Emissions Limitation

VOC emissions shall not exceed 3.08 TPY from this emissions unit.

Applicable Compliance Method

The annual VOC emissions limitation was established using the following equations:

$$DMEA (\text{unload bulk to tank}) = (890,000 \text{ gal}/\text{yr}) \times (16.33 \text{ lb VOC}/10^3 \text{ gal}) \times (1 \text{ tn}/2,000 \text{ lb}) = 7.27 \text{ tn}/\text{yr}$$

$$\begin{aligned} DMEA (\text{unload bulk to tank}) \\ &= (0.02 \times 7.27 \text{ tn}/\text{yr}) + (0.98 \times 0.15 \times 7.27 \text{ tn}/\text{yr}) \\ &= 1.21 \text{ tn}/\text{yr} \end{aligned}$$

$$DMIPA (\text{unload bulk to tank}) = (890,000 \text{ gal}/\text{yr}) \times (5.66 \text{ lb VOC}/10^3 \text{ gal}) \times (1 \text{ tn}/2,000 \text{ lb}) = 2.52 \text{ tn}/\text{yr}$$

$$\begin{aligned} DMIPA (\text{unload bulk to tank}) \\ &= (0.02 \times 2.52 \text{ tn}/\text{yr}) + (0.98 \times 0.15 \times 2.52 \text{ tn}/\text{yr}) \\ &= 0.42 \text{ tn}/\text{yr} \end{aligned}$$

$$DMPA (\text{unload bulk to tank}) = (890,000 \text{ gal}/\text{yr}) \times (5.66 \text{ lb VOC}/1,000 \text{ gal}) \times (1 \text{ tn}/2,000 \text{ lb}) = 2.52 \text{ tn}/\text{yr}$$



$$\begin{aligned} \text{DMPA (unload bulk to tank)} \\ &= (0.02 \times 2.52 \text{ tn/yr}) + (0.98 \times 0.15 \times 2.52 \text{ tn/yr}) \\ &= 0.42 \text{ tn/yr} \end{aligned}$$

$$\begin{aligned} \text{TEA (unload bulk to tank)} &= (890,000 \text{ gal/yr}) \times (2.61 \text{ lb VOC/1,000 gal}) \times \\ &(1 \text{ tn/2,000 lb}) = 1.16 \text{ tn/yr} \end{aligned}$$

$$\begin{aligned} \text{TEA (unload bulk to tank)} \\ &= (0.02 \times 1.16 \text{ tn/yr}) + (0.98 \times 0.15 \times 1.16 \text{ tn/yr}) \\ &= 0.19 \text{ tn/yr} \end{aligned}$$

$$\begin{aligned} \text{DMIPA (load tank to tanker)} &= (890,000 \text{ gal/yr}) \times (5.66 \text{ lb VOC/1,000 gal}) \times \\ &(1 \text{ tn/2,000 lb}) = 2.52 \text{ tn/yr} \end{aligned}$$

$$\begin{aligned} \text{DMIPA (load tank to tanker)} \\ &= (0.02 \times 2.52 \text{ tn/yr}) + (0.98 \times 0.15 \times 2.52 \text{ tn/yr}) \\ &= 0.42 \text{ tn/yr} \end{aligned}$$

$$\begin{aligned} \text{DMPA (load tank to tanker)} &= (890,000 \text{ gal/yr}) \times (5.66 \text{ lb VOC/1,000 gal}) \times \\ &(1 \text{ tn/2,000 lb}) = 2.52 \text{ tn/yr} \end{aligned}$$

$$\begin{aligned} \text{DMPA (load tank to tanker)} \\ &= (0.02 \times 2.52 \text{ tn/yr}) + (0.98 \times 0.15 \times 2.52 \text{ tn/yr}) \\ &= 0.42 \text{ tn/yr} \end{aligned}$$

$$\begin{aligned} &(1.21 \text{ tn/yr [DMEA | bulk to tank]}) + (0.42 \text{ tn/yr [DMIPA | bulk to tank]}) + \\ &(0.42 \text{ tn/yr [DMPA | bulk to tank]}) + (0.19 \text{ tn/yr [TEA | bulk to tank]}) + \\ &(0.42 \text{ tn/yr [DMIPA | tank to tanker]}) + \\ &(0.42 \text{ tn/yr [DMPA | tank to tanker]}) = 3.08 \text{ tn/yr} \end{aligned}$$

Therefore, compliance with the annual VOC emissions limitation is ensured while compliance is maintained with unloading with the maximum of 890,000-gallons each for triethylamine (TEA), dimethylisopropylamine (DMIPA), dimethylpropylamine (DMPA) and dimethylethylamine (DMEA), and loading the maximum of 890,000-gallons each dimethylisopropylamine (DMIPA), dimethylpropylamine (DMPA), based on a rolling, 12-month summation of usage rates.

c. Emissions Limitation

Methanol emissions shall not exceed 26.028 pounds per hour from this emissions unit.

Applicable Compliance Method

The loading loss was established using a pumping rate of 200-gallons per minute and the methanol liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (lb/1,000 gal)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (at 70°F)



M = molecular weight of vapors, pounds per pound-mole ($lb/lb - mol$)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}F + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{T} = 2.169 \text{ lb VOC}/1,000 \text{ gal}$$

$$(2.169 \text{ lb VOC}/1,000 \text{ gal}) \times (200 \text{ gal}/\text{min}) \times (60 \text{ min}/\text{hr}) = 26.028 \text{ lb of methanol emitted}/\text{hr}$$

d. Emissions Limitation

Methanol emissions shall not exceed 0.76 TPY from this emissions unit.

Applicable Compliance Method

The annual methanol emissions limitation was established using the following equation:

$$\begin{aligned} \text{Methanol} &= (700,000 \text{ gal}/\text{yr}) \times (2.169 \text{ lb VOC}/1,000 \text{ gal}) \times (1 \text{ tn}/2,000 \text{ lb}) \\ &= 0.76 \text{ TPY} \end{aligned}$$

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1986 with T123, modified in 1989 (T124), 1992 (T140), and again in 2005 (T154).
- (2) This permit supersedes P0128849.

5. J005, J005

Operations, Property and/or Equipment Description:

Bulk Unloading Station #5 (200-gallons per minute).

a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

(1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 173.89 pounds per month and 1.04 tons per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

(2) Additional Terms and Conditions

a. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future, the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.



- b. The pounds of VOC per month and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) This emissions unit shall not transfer more than 52,560,000 gallons of material in any rolling 12-month period.
 - (2) The permittee shall utilize railcar dip-tubes when provided during railcar unloading.
 - (3) All leaks in the liquid lines shall be repaired within five days after identification.
 - (4) The permittee shall not permit liquid to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for the VOC-containing materials loaded at this emissions unit:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute (*PSIA*).
 - (2) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions, in pounds, divided by 2,000 pounds per ton).
- e) Reporting Requirements
 - (1) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12-months for each air contaminant source identified in this permit.
 - (2) The permittee shall include in the annual PER, any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling 12-month period during which the material transferred (unloaded) exceeded 52,560,000 gallons; and
 - b. a description of any corrective actions taken to address the exceedances identified above.
 - (3) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with



OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 173.89 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (*at 70°F*)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{T} = 0.04 \text{ lb VOC}/1,000 \text{ gal}$$

$$(0.04 \text{ lb VOC}/1,000 \text{ gal}) \times (\text{total gal of material transferred}/\text{month}) = \text{lb of VOC emitted}/\text{month}$$

* *Materials transferred shall not exceed 52,560,000 gallons per rolling, 12-month period.*

b. Emissions Limitation

VOC emissions shall not exceed 1.04 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 pounds.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1970 and modified in 1989.
(2) This permit supersedes 0128849.



6. J006, Bulk Railcar Loading/Unloading Station #2

Operations, Property and/or Equipment Description:

Bulk Railcar Station #2 for Loading (150 gallons per minute) and Unloading (200 gallons per minute)

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b.

- b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 229.72 pounds per month and 1.38 tons per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions

- a. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.



- b. The pounds of VOC per month and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) This emissions unit shall not transfer more than 40,000,000 gallons of material in any rolling, 12-month period.
 - (2) All leaks in the liquid lines shall be repaired within five days after identification.
 - (3) The permittee shall not permit liquid to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for the VOC-containing materials loaded at this emissions unit:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute (*PSIA*).
 - (2) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions, in pounds, divided by 2,000 pounds per ton).
- e) Reporting Requirements
 - (1) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12-months for each air contaminant source identified in this permit.
 - (2) The permittee shall include in the annual PER, any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling, 12-month period during which the material transferred exceeded 40,000,000 gallons; and
 - b. a description of any corrective actions taken to address the exceedances identified above.
 - (3) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date



the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 229.72 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (*at 70°F*)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 0.0689 \text{ lb VOC/1,000 gal}$$

$$(0.0689 \text{ lb VOC/1,000 gal}) \times (\text{total gal of material transferred/month}) = \text{lb of VOC emitted/month}$$

** Materials transferred shall not exceed 40,000,000 gallons per rolling, 12-month period.*

b. Emissions Limitation

VOC emissions shall not exceed 1.38 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 pounds.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1986 and modified in 2016 to include rail car loading with existing unloading capabilities.
- (2) This permit supersedes P0128849.

7. J007, J007

Operations, Property and/or Equipment Description:

Bulk Unloading Station #7 (150 gallons per minute)

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b.

- b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 217.8 pounds per month and 1.307 tons per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions

- a. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.



- b. The pounds of VOC per month and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) This emissions unit shall not transfer more than 39,420,000 gallons of material in any rolling 12-month period.
 - (2) All leaks in the liquid lines shall be repaired within five days after identification.
 - (3) The permittee shall not permit liquid to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for the VOC-containing materials loaded at this emissions unit:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute (psia).
 - (2) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions, in pounds, divided by 2,000 pounds per ton).
- e) Reporting Requirements
 - (1) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (2) The permittee shall include in the annual PER, of any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling, 12-month period during which the material transferred (unloaded) exceeded 39,420,000 gallons; and
 - b. a description of any corrective actions taken to address the exceedances identified above.
 - (3) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date



the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 217.8 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (*at 70°F*)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 0.07 \text{ lb VOC/1,000 gal}$$

$$(0.07 \text{ lb VOC/1,000 gal}) \times (\text{total gal of material transferred/month}) = \text{lb of VOC emitted/month}$$

** Materials transferred shall not exceed 39,420,000 gallons, per rolling 12-month period.*

b. Emissions Limitation

VOC emissions shall not exceed 1.31 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 pounds.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1977.
(2) This permit supersedes P0128849.

8. J008, J008

Operations, Property and/or Equipment Description:

Amine Cylinder and Pail Filling Station #8 (50 gallons per minute).

a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

(1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 8.18 pounds per hour from this emissions unit. VOC emissions shall not exceed 2.24 tons per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

(2) Additional Terms and Conditions

a. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future, the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA through the Cleveland Division of Air Quality (Cleveland DAQ) and ASK Chemicals.



- b. The pounds of VOC per month and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) Cylinder filling operations, emissions from the return cylinders and the ventilation air from the drumming hood shall be vented to the acid scrubber.
 - (2) The permittee shall employ a submerged fill process when safely possible.
 - (3) There shall be no leaks in the liquid lines during the transfer of material.
 - (4) All leaks in the liquid lines shall be repaired within five days after identification.
 - (5) The permittee shall not permit liquid to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for the VOC-containing materials loaded at this emissions unit:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute.
 - (2) The permittee shall maintain records of the results of any leak checks, including at a minimum, the following information:
 - a. the date of the inspection;
 - b. findings (may indicate that no leaks were discovered or the location, nature, and severity of each leak);
 - c. leak determination method utilized (e.g. visual, odor, etc.); and
 - d. corrective action(s) taken (date each leak was repaired and any reason a repair interval exceeded fifteen calendar days).
 - (3) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions, in pounds, divided by 2,000 pounds per ton).
- e) Reporting Requirements
 - (1) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (2) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air



Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 8.18 pounds per hour from this emissions unit.

Applicable Compliance Method

The loading loss was established using a pumping rate of 50-gallons per minute and the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (at 70°F)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin (°F + 460)

$$\begin{aligned} L_L &= 12.46 \times \frac{S \times P \times M}{530} = 16.33 \text{ lb VOC/1,000 gal} \\ (16.33 \text{ lb VOC/1,000 gal}) &\times (50 \text{ gal/min}) \times (60 \text{ min/hr}) = \\ &48.99 \text{ lb of VOC emitted/hr} \\ (0.02 \times 48.99 \text{ lb of VOC emitted/hr}) &+ (0.98 \times 0.15 \times \\ &48.99 \text{ lb of VOC emitted/hr}) = 8.18 \text{ lb of VOC emitted/hr} \end{aligned}$$

b. Emissions Limitation

VOC emissions shall not exceed 2.24 TPY from this emissions unit.

Applicable Compliance Method

The annual VOC emissions limitation was established using the following equations:

$$\begin{aligned} DMEA &= (890,000 \text{ gal/yr}) \times (16.33 \text{ lb VOC/1,000 gal}) \times (1 \text{ tn/2,000 lb}) = \\ &7.27 \text{ tn/yr} \end{aligned}$$



$$DMEA = (0.02 \times 7.27 \text{ tn/yr}) + (0.98 \times 0.15 \times 7.27 \text{ tn/yr}) = 1.21 \text{ tn/yr}$$

$$DMIPA = (890,000 \text{ gal/yr}) \times (5.66 \text{ lb VOC/1,000 gal}) \times (1 \text{ tn/2,000 lb}) = 2.52 \text{ tn/yr}$$

$$\begin{aligned} DMIPA &= (0.02 \times 2.52 \text{ tn/yr}) + (0.98 \times 0.15 \times 2.52 \text{ tn/yr}) \\ &= 0.42 \text{ tn/yr DMPA} \\ &= (890,000 \text{ gal/yr}) \times (5.66 \text{ lb VOC/1,000 gal}) \\ &\quad \times (1 \text{ tn/2,000 lb}) = 2.52 \text{ tn/yr} \end{aligned}$$

$$DMPA = (890,000 \text{ gal/yr}) \times (5.66 \text{ lb VOC/1,000 gal}) \times (1 \text{ tn/2,000 lb}) = 2.52 \text{ tn/yr}$$

$$DMPA = (0.02 \times 2.52 \text{ tn/yr}) + (0.98 \times 0.15 \times 2.52 \text{ tn/yr}) = 0.42 \text{ tn/yr}$$

$$TEA = (890,000 \text{ gal/yr}) \times (2.61 \text{ lb VOC/1,000 gal}) \times (1 \text{ tn/2,000 lb}) = 1.16 \text{ tn/yr}$$

$$\begin{aligned} TEA &= (0.02 \times 1.16 \text{ tn/yr}) + (0.98 \times 0.15 \times 1.16 \text{ tn/yr}) = 0.19 \text{ tn/yr} \\ (1.21 \text{ tn/yr [DMEA]}) &+ (0.42 \text{ tn/yr [DMIPA]}) + (0.42 \text{ tn/yr [DMPA]}) + \\ (0.19 \text{ tn/yr [TEA]}) &= 2.24 \text{ tn/yr} \end{aligned}$$

Therefore, compliance with the annual VOC emissions limitation is ensured while compliance is maintained with the maximum of 890,000-gallons each for triethylamine (TEA), dimethylisopropylamine (DMIPA), dimethylpropylamine (DMPA) and dimethylethylamine (DMEA), and, based on a rolling, 12-month summation of usage rates.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1986 and modified in 1992 and 2005 with additions of T140 and T154, respectively.
- (2) This permit supersedes P0128849.

9. J012, J012

Operations, Property and/or Equipment Description:

Mini Tank Filling Station #12 (100 gallons per minute).

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b.

- b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 378.43 pounds per month and 2.27 tons per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions

- a. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.

- b. The pounds of VOC per month and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) This emissions unit shall not transfer more than 26,280,000 gallons of material in any rolling 12-month period.
 - (2) All leaks in the liquid lines shall be repaired within five days after identification.
 - (3) The permittee shall not permit liquid to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for the VOC-containing materials loaded at this emissions unit:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute (psia).
 - (2) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions, in pounds, divided by 2,000 pounds per ton).
- e) Reporting Requirements
 - (1) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (2) The permittee shall include in the annual PER, of any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling 12-month period during which the material transferred (loaded) exceeded 26,280,000 gallons; and
 - b. a description of any corrective actions taken to address the exceedances identified above.
 - (3) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date



the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 378.43 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (*at 70°F*)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{T} = 0.173 \text{ lb VOC/1,000 gal}$$

$$(0.173 \text{ lb VOC/1,000 gal}) \times (\text{total gal of material transferred/month}) = \text{lb of VOC emitted/month}$$

** Materials transferred shall not exceed 26,280,000 gallons, per rolling 12-month period.*

b. Emissions Limitation

VOC emissions shall not exceed 2.27 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 pounds.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1990, based on install date of 215Tk (P012).
(2) This permit supersedes P0128849.

10. J013, J013

Operations, Property and/or Equipment Description:

Drum and Tote Filling Station #13 (100 gallons per minute).

a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

(1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 378.43 pounds per month and 2.27 tons per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

(2) Additional Terms and Conditions

a. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.



- b. The pounds of VOC per hour and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) This emissions unit shall not transfer more than 26,280,000 gallons of material in any rolling 12-month period.
 - (2) All leaks in the liquid lines shall be repaired within five days after identification.
 - (3) The permittee shall not permit liquid to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for the VOC-containing materials loaded at this emissions unit:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute (psia).
 - (2) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions, in pounds, divided by 2,000 pounds per ton).
- e) Reporting Requirements
 - (1) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (2) The permittee shall include in the annual PER, of any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling, 12-month period during which the material transferred (loaded) exceeded 26,280,000 gallons; and
 - b. a description of any corrective actions taken to address the exceedances identified above.
 - (3) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date



the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 378.43 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (*at 70°F*)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 0.173 \text{ lb VOC/1,000 gal}$$

$$(0.173 \text{ lb VOC/1,000 gal}) \times (\text{total gal of material transferred/month}) = \text{lb of VOC emitted/month}$$

** Materials transferred shall not exceed 26,280,000 gallons, per rolling 12-month period.*

b. Emissions Limitation

VOC emissions shall not exceed 2.27 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 pounds.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1991, based on install date of 221Tk (P015).
(2) This permit supersedes P0128849.



11. J014, J014

Operations, Property and/or Equipment Description:

Tote filling station 1.

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).
- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
- a. None.
- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
- a. b)(1)b.
- b) Applicable Emissions Limitations and/or Control Requirements
- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 1,600 pounds per month and 9.6 tons per year (TPY) from emissions unit J014. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions
- a. The VOC emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.



c) Operational Restrictions

- (1) This emissions unit shall not transfer more than 7,000,000 gallons each, in any rolling 12-month period.
- (2) All leaks in liquid lines shall be repaired within five days after identification.
- (3) The permittee shall not permit liquid to be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information for emissions unit J014:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute (psia).
- (2) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions (a summation of the monthly emissions, divided by 2,000 lbs/ton)).

e) Reporting Requirements

- (1) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit
- (3) The permittee shall include in the annual PER, any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling 12-month period during which the material transferred exceeded 7,000,000 gallons each; and
 - b. a description of any corrective actions taken to address the exceedances identified above.



f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 1,600 pounds per month from emissions units J014.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation 1 from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (*at 70°F*)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 1.3708 \text{ lb VOC/1,000 gal}$$

(1.3708 *lb VOC/1,000 gal*) $\times$
(*total gal of each material transferred/month*) = *lb VOC emitted/month*

* *Material transferred shall not exceed 7,000,000 gallons for each emissions unit.*

b. Emissions Limitation

VOC emissions shall not exceed 9.6 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above multiplied by 1 ton/2000 pounds.

g) Miscellaneous Requirements

- (1) Emissions unit J014 was installed in 2000.
(2) This permit supersedes P0128849.

12. J015, J015

Operations, Property and/or Equipment Description:

Drum filling station 1.

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b.

- b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 120.71 pounds per month and 0.72 tons per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions

- a. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.



- b. The pounds of VOC per day and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) This emissions unit shall not transfer more than 21,024,000 gallons of material in any rolling, 12-month period.
 - (2) All leaks in the liquid lines shall be repaired within five days after identification.
 - (3) The permittee shall not permit liquid to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for the VOC-containing materials loaded at this emissions unit:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute (psia).
 - (2) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions, in pounds, divided by 2,000 pounds per ton).
- e) Reporting Requirements
 - (1) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (2) The permittee shall include in the annual PER, of any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling, 12-month period during which the material transferred (unloaded) exceeded 21,024,000 gallons; and
 - b. a description of any corrective actions taken to address the exceedances identified above.
 - (3) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date



the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 120.71 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (*at 70°F*)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 0.0689 \text{ lb VOC/1,000 gal}$$

$$(0.0689 \text{ lb VOC/1,000 gal}) \times (\text{total gal of material transferred/month}) = \text{lb of VOC emitted/month}$$

** Materials transferred shall not exceed 21,024,000 gallons, per rolling 12-month period.*

b. Emissions Limitation

VOC emissions shall not exceed 0.72 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 pounds.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1994 (P016), per PTI application dated 6/2/1994.
(2) This permit supersedes P0128849.

13. J017, J017

Operations, Property and/or Equipment Description:

Drum filling station #17 (100 gallons per minute).

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b.

- b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 1,600 pounds per month and 9.6 tons per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions

- a. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.



- b. The pounds of VOC per month and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) This emissions unit shall not transfer more than 14,000,000 gallons of material in any rolling, 12-month period.
 - (2) All leaks in the liquid lines shall be repaired within five days after identification.
 - (3) The permittee shall not permit liquid to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for the VOC-containing materials loaded at this emissions unit:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute (psia).
 - (2) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions, in pounds, divided by 2,000 pounds per ton).
- e) Reporting Requirements
 - (1) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (2) The permittee shall include in the annual PER, of any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling 12-month period during which the material transferred (unloaded) exceeded 14,000,000 gallons; and
 - b. a description of any corrective actions taken to address the exceedances identified above.
 - (3) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date



the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 1,600 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (*at 70°F*)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 1.3708 \text{ lb VOC/1,000 gal}$$

$$(1.3708 \text{ lb VOC/1,000 gal}) \times (\text{total gal of material transferred/month}) = \text{lb of VOC emitted/month}$$

** Materials transferred shall not exceed 14,000,000 gallons per rolling, 12-month period.*

b. Emissions Limitation

VOC emissions shall not exceed 9.6 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 pounds.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1977.
(2) This permit supersedes P0128849.

14. J018, J018

Operations, Property and/or Equipment Description:

Tote filling station 2.

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b.

- b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 242.83 pounds per month and 1.46 tons per year (TPY) from emissions unit J018. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions

- a. The VOC emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.



c) Operational Restrictions

- (1) This emissions unit shall not transfer more than 21,024,000 gallons, in any rolling 12-month period.
- (2) All leaks in liquid lines shall be repaired within five days after identification.
- (3) The permittee shall not permit liquid to be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information for emissions unit J018:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute (psia).
- (2) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions (a summation of the monthly emissions, divided by 2,000 lbs/ton)).

e) Reporting Requirements

- (1) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit
- (3) The permittee shall include in the annual PER, any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling 12-month period during which the material transferred exceeded 21,024,000 gallons; and



- b. a description of any corrective actions taken to address the exceedances identified above.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 242.83 pounds per month from emissions unit J018.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation 1 from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (*at 70°F*)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 0.1386 \text{ lb VOC}/1,000 \text{ gal}$$

$$(0.1386 \text{ lb VOC}/1,000 \text{ gal}) \times (\text{total gal of each material transferred/month}) = \text{lb VOC emitted/month}$$

** Material transferred shall not exceed 21,024,000 gallons for this emissions unit.*

b. Emissions Limitation

VOC emissions shall not exceed 1.46 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above multiplied by 1 ton/2000 pounds.

g) Miscellaneous Requirements

- (1) Emissions unit J018 was installed in 1990.
(2) This permit supersedes P0128849.

15. J021, J021

Operations, Property and/or Equipment Description:

Bulk Loading Station (150 gallons per minute)

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. None.
 - (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b)(1)b.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 45 pounds per month and 0.272 tons per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions
 - a. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future, the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.



- b. The pounds of VOC per month and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) This emissions unit shall not transfer more than 7,884,000 gallons of material in any rolling, 12-month period.
 - (2) All leaks in the liquid lines shall be repaired within five days after identification.
 - (3) The permittee shall not permit liquid to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for the VOC containing materials loaded at this emissions unit:
 - a. the company identification of each material loaded;
 - b. the number of gallons of each VOC-containing material loaded through the emissions unit;
 - c. the molecular weight of each material; and
 - d. the vapor pressure of each material, in pounds per square inch absolute (psia).
 - (2) The permittee shall maintain annual records of the total VOC emissions, in tons (an annual summation of the monthly VOC emissions, in pounds, divided by 2,000 pounds per ton).
- e) Reporting Requirements
 - (1) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (2) The permittee shall include in the annual PER, any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling, 12-month period during which the material transferred exceeded 7,884,000 gallons; and
 - b. a description of any corrective actions taken to address the exceedances identified above.
 - (3) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date



the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 45 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons ($lb/10^3 \text{ gal}$)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square in absolute (at 70°F)

M = molecular weight of vapors, pounds per pound-mole ($lb/lb - mol$)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 0.0689 \text{ lb VOC}/10^3 \text{ gal}$$

$$(0.0689 \text{ lb VOC}/10^3 \text{ gal}) \times (\text{total gal of material transferred/month}) = \text{lb of VOC emitted/month}$$

**Materials transferred shall not exceed 7,884,000 gallons per rolling, 12-month period.*

b. Emissions Limitation

VOC emissions shall not exceed 0.272 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 lb.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 2020.
(2) This permit supersedes P0128959.

16. P001, Foundry Resin Blending System

Operations, Property and/or Equipment Description:

Foundry Resin Blending (BT-55, BT-56, and BT-57)

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)c.

- b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-01553 issued final 5/28/1986	Volatile organic Compound (VOC) emissions shall not exceed 228.5 pounds per month and 1.371 tons per year (TPY) from this emissions unit.
b.	OAC rule 3745-21-07(M)	See b)(2)a. below.
c.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions

- a. The requirements of OAC rule 3745-21-07(M) do not apply to this emissions unit because there is no control device associated with this emissions unit.

- c) Operational Restrictions

- (1) The above emissions unit shall not blend or mix more than 40,000,000 gallons of material in any rolling, 12-month period.



- (2) The tanks shall be kept covered at all times, except when production, sampling, and inspection procedures require access.
 - (3) The cleaning of the tanks with any organic solvent shall be done with the tank completely covered or enclosed to the extent possible.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall keep the following monthly records for this emissions unit:
 - a. the company identification of each organic compound employed/blended;
 - b. the number of gallons of each organic compound employed/blended;
 - c. the VOC content of each material blended, in pounds per gallon;
 - d. the vapor pressure of the VOC containing material being blended, in pounds per square inch absolute (psia); and
 - e. the monthly VOC emissions from all VOC-containing materials employed/blended in this emissions unit. The monthly VOC emissions shall be calculated using the loading loss emissions estimates from the emissions calculations included with the permit application and detailed in f)(1)a. below, U.S. EPA reference document AP-42, Fifth Edition Compilation of Air Pollution Emissions Factors, Chapter 7, or an equivalent document.
- e) Reporting Requirements
 - (1) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
 - (2) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (3) The permittee shall include in the annual PER, of any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling, 12-month period during which the material mixed/blended exceeded the 40,000,000 gallons each year; and
 - b. a description of any corrective actions taken to address the exceedances identified above.



f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 228.5 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (at 70°F)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin (°F + 460)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 0.0686 \text{ lb VOC/1,000 gal}$$

$$(0.0686 \text{ lb VOC/1,000 gal}) \times (\text{total gal of material transferred/month}) = \text{lb of VOC emitted/month}$$

* Materials transferred shall not exceed 40,000,000 gallons per rolling, 12-month period.

b. Emissions Limitation

VOC emissions shall not exceed 1.371 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 pounds.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1986.
(2) This permit supersedes P0128849.

17. P010, R-301

Operations, Property and/or Equipment Description:

6,500-gallon reactor with caustic scrubber.

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. None.
 - (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b(1)c.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-01786 issued final 6/22/1988	Volatile organic compound (VOC) emissions shall not exceed 3.0 pounds per hour, 15.0 pounds per day, and 3.2 tons per year (TPY). The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-21-07(M)(3)(c)(ii)	See b.)(2)b. below.
c.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions
 - a. The emissions from the emissions units shall be vented to the caustic scrubbers at all times the emissions unit is in operation.
 - b. The requirements of OAC rule 3745-21-07(M)(3)(a) and M(3)(b) do not apply to this emissions unit because the uncontrolled potential to emit for OC emissions is less than 40 pounds per day.



c) Operational Restrictions

- (1) The maximum potential number of batches the reactor can process is two batches per day and 730 batches per year.
- (2) Water flow into the water seal pots shall be maintained when the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emissions limitation(s) contained in this permit, the acceptable range or limit for the pressure drop across the scrubber shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.
- (2) The permittee shall record the scrubber liquid pH once-per-shift while the emissions unit and associated scrubber are in operation. The acceptable pH shall be maintained at or above 11.5 until such time as any required performance testing is conducted and the appropriate range for the pH is established to demonstrate compliance.

Whenever the monitored values for the scrubber pressure drop and liquid pH deviate from the range(s) or minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who performed the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s) or at or above the minimum limit(s) established in this permit, unless the permittee has determined that corrective action is not necessary and documented the reasons for that determination, as well as the date and time that the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop across the scrubber and pH of the scrubber liquid immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.



Investigations and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

These ranges and/or limits for the pressure drop across the scrubber and the pH of the scrubber liquor are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (Cleveland DAQ). The permittee may request revisions to the permitted range or limit for the pressure drop or pH range based upon information obtained during future emissions tests that demonstrate compliance with the allowable limits established in this permit. In addition, the approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall collect and record the following information each day for the emissions unit:
- a. the name and company identification of each VOC-containing material produced;
 - b. the amount, in gallons of each VOC-containing material produced;
 - c. the VOC content of each product produced;
 - d. the vapor pressure of the VOC-containing materials being reacted; and
 - e. the total daily and average hourly VOC emissions rate, in pounds/day and pounds/hour respectively, from all VOC-containing materials produced in each emissions unit, calculated as follows:

$$(0.71 \text{ lb VOC}/1,000 \text{ gal}) \times (\text{total gal component charged/day}) = \text{lb VOC/day}$$
$$(\text{lb VOC/day}) \times (\text{day}/24 \text{ hr}) = \text{lb of VOC emitted/hr}$$

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports to that identify:
- a. each period of time when the pressure drop across the wet scrubber and/or the liquid pH was outside of the appropriate range or exceeded the applicable limit contained in this permit;
 - b. each period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the scrubber;
 - c. the probable cause of each deviation (excursion);
 - d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - e. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October



- 31 (covering July to September), unless an alternative schedule has been established and approved by the appropriate Ohio EPA DO/LAA.
- (2) The permittee shall identify in the annual Permit Evaluation Report (PER) each day in which the emissions unit produced more than two batches each per day or 730 batches per year.
 - (3) The permittee shall identify in the annual PER the following information concerning the operations of the wet scrubber during the 12-month reporting period for this emissions unit:
 - a. each period of time when the pressure drop across the wet scrubber and/or the liquid pH were outside of the appropriate ranges;
 - b. any period of time when the emissions unit was in operation and the process emissions were not vented to the scrubber;
 - c. each incident of deviation described in “a” and “b” above where a prompt investigation was not conducted;
 - d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the pressure drop and/or pH range into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and recordkeeping requirements of this permit.
 - (4) The permittee shall submit an annual PER to Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (5) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emissions Limitation
VOC emissions shall not exceed 3.0 pounds per hour and 15.0 pounds per day.



Applicable Compliance Method

Compliance shall be determined through the recordkeeping requirements located in d)(3).

The VOC emissions factor used to calculate the emissions for this emissions unit was established by the permittee based on the worst-case product produced and assuming 100% of the VOC emissions are emitted. Should more accurate emissions factors be developed in the future, the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland DAQ, and ASK Chemicals.

If required, compliance with the hourly VOC emissions limitation shall be determined through emissions testing conducted in accordance with Method 25 or 25A of 40 CFR Part 60, Appendix A, or any approved alternative testing method.

b. Emissions Limitation

VOC emissions shall not exceed 3.2 TPY.

Applicable Compliance Method

Compliance with the annual limitation shall be demonstrated if compliance with the pound per hour and pound per day limitations are maintained.

g) **Miscellaneous Requirements**

- (1) Modeling to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase above 1.0 ton per year may require the permittee to apply for an obtain a new permit to install.
- (2) P010 was installed in 1988.
- (3) This permit supersedes P0128849.

18. P011, R-302

Operations, Property and/or Equipment Description:

6,500-gallon reactor with caustic scrubber.

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. None.
 - (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b)(1)c.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-01786 issued final 6/22/1988	Volatile organic compound (VOC) emissions shall not exceed 3.0 pounds per hour, 33.93 pounds per day and 6.19 tons per year (TPY). The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-21-07(M)(3)(c)(ii)	See b.)(2)b. below.
c.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions
 - a. The emissions from the emissions units shall be vented to the caustic scrubbers at all times the emissions unit is in operation.
 - b. The requirement of OAC rule 3745-21-07(M)(3)(a) and M(3)(b) do not apply to this emissions unit because the uncontrolled potential to emit for OC emissions is less than 40 pounds per day.

c) Operational Restrictions

- (1) The maximum potential number of batches the reactor can process is two batches per day and 730 batches per year.
- (2) The maximum annual ethanol throughput through P011 shall not exceed 931,845 gallons, based on a rolling, 12-month summation of usage rates.
- (3) Water flow into the water seal pots shall be maintained when the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emissions limitation(s) contained in this permit, the acceptable range or limit for the pressure drop across the scrubber shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.
- (2) The permittee shall record the scrubber liquid pH once-per-shift while the emissions unit and associated scrubber are in operation. The acceptable pH shall be maintained at or above 11.5 until such time as any required performance testing is conducted and the appropriate range for the pH is established to demonstrate compliance.

Whenever the monitored values for the scrubber pressure drop and liquid pH deviate from the range(s) or minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who performed the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s) or at or above the minimum limit(s) established in this permit, unless the permittee has determined that corrective action is not necessary and documented the reasons for that determination, as well as the date and time that the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop across the scrubber and pH of the scrubber liquid immediately after the corrective action was implemented; and



- k. the name(s) of the personnel who performed the work.

Investigations and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

These ranges and/or limits for the pressure drop across the scrubber and the pH of the scrubber liquor are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (Cleveland DAQ). The permittee may request revisions to the permitted range or limit for the pressure drop or pH range based upon information obtained during future emissions tests that demonstrate compliance with the allowable limits established in this permit. In addition, the approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall collect and record the following information each day for the emissions unit:

- a. the name and company identification of each VOC-containing material produced;
- b. the amount, in gallons of each VOC-containing material produced;
- c. the VOC content of each product produced;
- d. the vapor pressure of the VOC-containing materials being reacted; and
- e. the total daily and average hourly VOC emissions rate, in pounds/day and pounds/hour respectively, from all VOC-containing materials produced in each emissions unit, calculated as follows:

$$(2.54 \text{ lb VOC}/1,000 \text{ gal}) \times (\text{total gal component charged}/\text{day}) = \text{lb VOC}/\text{day}$$
$$(\text{lb VOC}/\text{day}) \times (\text{day}/24 \text{ hr}) = \text{lb of VOC emitted}/\text{hr}$$

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. each period of time when the pressure drop across the wet scrubber and/or the liquid pH was outside of the appropriate range or exceeded the applicable limit contained in this permit;
 - b. each period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the scrubber;
 - c. the probable cause of each deviation (excursion);
 - d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - e. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states no deviations (excursions) occurred during the quarter.



The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the appropriate Ohio EPA DO/LAA.

- (2) The permittee shall identify in the annual Permit Evaluation Report (PER) each day in which the emissions unit produced more than two batches each per day or 730 batches per year.
- (3) The permittee shall identify in the annual PER the following information concerning the operations of the wet scrubber during the 12-month reporting period for this emissions unit:
 - a. each period of time when the pressure drop across the wet scrubber and/or the liquid pH were outside of the appropriate ranges;
 - b. any period of time when the emissions unit was in operation and the process emissions were not vented to the scrubber;
 - c. each incident of deviation described in “a” and “b” above where a prompt investigation was not conducted;
 - d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the pressure drop and/or pH range into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and recordkeeping requirements of this permit.
- (4) The permittee shall include in the annual PER, any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling, 12-month period during which the ethanol throughput exceeded 931,845 gallons through P011; and
 - b. a description of any corrective actions taken to address the exceedances identified above.
- (5) The permittee shall submit an annual PER to Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
- (6) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date

the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 3.0 pounds per hour and 33.93 pounds per day.

Applicable Compliance Method

Compliance shall be determined through the recordkeeping requirements located in d)(3).

The VOC emissions factor used to calculate the emissions for this emissions unit was established by the permittee based on the worst-case product produced and assuming 100% of the VOC emissions are emitted. Should more accurate emissions factors be developed in the future, the permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland DAQ, and ASK Chemicals.

If required, compliance with the hourly VOC emissions limitation shall be determined through emissions testing conducted in accordance with Method 25 or 25A of 40 CFR Part 60, Appendix A, or any approved alternative testing method.

b. Emissions Limitation

VOC emissions shall not exceed 6.19 TPY.

Applicable Compliance Method

Compliance with the annual limitation shall be demonstrated if compliance with the pound per hour and pound per day limitations are maintained.

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase above 1.0 ton per year may require the permittee to apply for an obtain a new permit to install.
- (2) P011 was installed in 1988.
- (3) This permit supersedes P0128849.

19. P015, BT-221

Operations, Property and/or Equipment Description:

950-gallon blend tank.

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)c.

- b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-02358 issued final 10/30/1991	Volatile organic compound (VOC) emissions shall not exceed 36.0 pounds per month and 0.22 ton per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-21-07(M)	See b)(2)a. below.
c.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions

- a. The requirements of OAC rule 3745-21-07(M) do not apply to this emissions unit because there is no control device associated with this emissions unit.
- b. The emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the



permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.

- c. The pounds of VOC per hour and tons per year emissions limitations for this emissions unit were established to reflect the potential to emit.
- c) Operational Restrictions
 - (1) This emissions unit shall not blend or mix more than 2,500,000 gallons of material in any rolling, 12-month period.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the company identification of each organic compound employed/blended;
 - b. the number of gallons of each organic compound employed/blended;
 - c. the VOC content of each material blended, in pounds per gallon;
 - d. the vapor pressure of the VOC containing material being blended, in pounds per square inch absolute (psia); and
 - e. the monthly VOC emissions from all VOC-containing materials employed/blended in this emissions unit. The monthly VOC emissions shall be calculated using the loading loss emissions estimates from the emissions calculations included with the permit application and detailed in f)(1)a. below, U.S. EPA reference document AP-42, Fifth Edition Compilation of Air Pollution Emissions Factors, Chapter 7, or an equivalent document.
- e) Reporting Requirements
 - (1) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
 - (2) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.



- (3) The permittee shall include in the annual PER, any record showing a deviation of the allowable production limitation. Such records shall include the following information:
- an identification of each rolling 12-month period during which the material mixed/blended exceeded 2,500,000 gallons; and
 - any corrective actions taken to address the exceedances identified above.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
- Emissions Limitation
VOC emissions shall not exceed 36.0 pounds per month from this emissions unit.
Applicable Compliance Method
The loading loss was established using the worst-case liquid in equation one from
$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$
Where:
 L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)
 S = saturation factor
 P = true vapor pressure of liquid loaded, pounds per square inch absolute (*at 70°F*)
 M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)
 T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)
$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 0.1728 \text{ lb VOC}/1,000 \text{ gal}$$
$$(0.1728 \text{ lb VOC}/1,000 \text{ gal}) \times (\text{total gal of material transferred/month}) = \text{lb of VOC emitted/month}$$

** Materials transferred shall not exceed 2,500,000 gallons per rolling, 12-month period.*
 - Emissions Limitation
VOC emissions shall not exceed 0.22 TPY from this emissions unit.
Applicable Compliance Method
Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in d)(1) above and multiplied by 1 ton/2,000 pounds.
- g) Miscellaneous Requirements
- (1) Modeling to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions units maximum annual emissions



for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase above 1.0 ton per year may require the permittee to apply for an obtain a new permit to install.

- (2) This emissions unit was installed in 1991.
- (3) This permit supersedes P0128849.

20. P022, Methanol Recovery Unit

Operations, Property and/or Equipment Description:

Methanol recovery and purification system.

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. None.
 - (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b)(1)b.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-04505 issued 4/26/2005	Volatile organic compound (VOC) emissions shall not exceed 0.14 pound per hour and 0.62 ton per year (TPY). Formaldehyde emissions shall not exceed 0.065 pound per hour and 0.28 TPY. Methanol emissions shall not exceed 0.078 pound per hour and 0.34 TPY. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions
 - a. The hourly and annual emissions limits were established at the emissions unit's potential to emit; therefore, monitoring, recordkeeping, and reporting are not required to demonstrate compliance with these limits.



- b. The emissions from this emissions unit shall be vented to the wet scrubber at all times the emissions unit is in operation. The wet scrubber must maintain an overall control efficiency of a minimum of 85%.
- c. All VOC emissions from this emissions unit shall be vented to the condenser that shall meet the operational, monitoring, and recordkeeping requirements of this permit, when this emissions unit is in operation.

c) Operational Restrictions

- (1) The wet scrubber shall be operated at all times when this emissions unit is in operation.
- (2) The pressure drop across the scrubber shall be maintained between 2.0 and 7.0 inches of water when this emissions unit is in operation.
- (3) The scrubber liquor pH shall be maintained within the range of 11.5 to 14.0 when this emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly install, operate, and maintain equipment to monitor the pH of the scrubber liquor and the pressure drop across the scrubber while the emissions unit is in operation. The pH monitor and the pressure drop monitor shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

The permittee shall collect and record the following information each day:

- a. the pH of the scrubber liquor, on a once per shift basis;
- b. the pressure drop across the scrubber, on a once per shift basis; and
- c. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

e) Reporting Requirements

- (1) The permittee shall submit written deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify any instance in which this emissions unit was in operation and the permittee did not operate the wet scrubber. The report shall include such records and shall be sent to the Cleveland DAQ within 30 days after the exceedance occurs.
- (2) The permittee shall submit written quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify each day during which the pressure drop across the scrubber did not comply with the pressure drop requirements specified in c)(2) above. The report shall identify the actual pressure drop across the scrubber and include any corrective actions that were taken to bring the unit into compliance.
- (3) The permittee shall submit written quarterly pH deviation (excursion) reports to the Cleveland DAQ that identify each day during which the scrubber liquor pH did not comply with the pH requirements specified in c)(3) above. The report shall identify the actual pH of the scrubber liquor and include any corrective actions that were taken to bring the unit into compliance.



- (4) The permittee shall submit an annual PER to Ohio EPA by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
- (5) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
- a. Emissions Limitation
- VOC emissions shall not exceed 0.14 pound per hour and 0.62 TPY.
- Applicable Compliance Method
- The emissions limit was established at the emissions unit's potential to emit as determined by the following calculations:
- $$\text{Total VOC} = (\text{VOC distillation column}) + (\text{VOC surge tank}) \times (1 - CE)$$
- $$\text{Total VOC} = (0.55 \text{ lb/hr}) + (2.0942 \text{ lb}/1,000 \text{ gal}) \times (189.2 \text{ gal/hr}) \times (1 - 0.85)$$
- Total VOC is the sum of methanol and formaldehyde emissions. Trace amounts of phenol also contribute to the total VOC.
- If required, compliance shall be determined using U.S. EPA Methods 18, 24, or 25A of 40 CFR Part 60, Appendix A.
- The annual emissions limitation was established by multiplying the hourly emissions rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emissions limitations shall be assumed provided compliance is maintained with the pound per hour limitation.
- b. Emissions Limitation
- Formaldehyde emissions shall not exceed 0.065 pound per hour and 0.28 TPY.
- Applicable Compliance Method
- This emissions limit was established at the unit's potential to emit as determined by the following calculations:



$$\text{Total Formaldehyde} = (\text{formaldehyde distillation column}) + (\text{formaldehyde surge tank}) \times (1 - CE)$$

$$\text{Total Formaldehyde} = (0.05 \text{ lb/hr}) + (1.9931 \text{ lb/1,000 gal}) \times (189.2 \text{ gal/hr}) \times (1 - 0.85)$$

If required, compliance shall be determined using U.S. EPA Method 18 of 40 CFR Part 60, Appendix A.

The annual emissions limitation was established by multiplying the hourly emissions rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emissions limitations shall be assumed provided compliance is maintained with the pound per hour limitation.

c. Emissions Limitation

Methanol emissions shall not exceed 0.078 pound per hour and 0.34 TPY.

Applicable Compliance Method

$$\text{Total Methanol} = (\text{methanol distillation column}) + (\text{methanol surge tank}) \times (1 - CE)$$

$$\text{Total Methanol} = (0.05 \text{ lb/hr}) + (1.1011 \text{ lb/1,000 gal}) \times (189.2 \text{ gal/hr}) \times (1 - 0.85)$$

If required, compliance shall be determined using U.S. EPA Method 18 of 40 CFR Part 60, Appendix A.

The annual emissions limitation was established by multiplying the hourly emissions rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emissions limitations shall be assumed provided compliance is maintained with the pound per hour limitation.

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions units maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.
- (2) This emissions unit was installed in 2005, per installation certificate dated 12/16/2005.
- (3) This permit supersedes P0128849.

21. P028, BT-218

Operations, Property and/or Equipment Description:

1,200-gallon blend tank.

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)c.

- b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 15.06 pounds per month and 0.09 ton per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-21-07(M)	See b)(2)a. below.
c.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions

- a. The requirements of OAC rule 3745-21-07(M) do not apply to this emissions unit because there is no control device associated with this emissions unit.
- b. The VOC emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the



permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.

c) Operational Restrictions

- (1) This emissions unit shall not blend more than 1,500,000 gallons of material in any rolling, 12-month period.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the company identification of each organic compound employed/blended;
 - b. the number of gallons of each organic compound employed/blended;
 - c. the VOC content of each material blended, in pounds per gallon;
 - d. the vapor pressure of the VOC containing material being blended in pounds per square inch absolute (psia); and
 - e. the monthly VOC emissions from all VOC containing materials employed/blended in this emissions unit. The monthly VOC emissions shall be calculated by using either: loading loss emissions estimates from the emissions calculations included with the permit application and detailed in f)(1)a. below, U.S. EPA reference document AP-42, Fifth Edition Compilation of Air Pollution Emissions Factors, Chapter 7, or an equivalent document.

e) Reporting Requirements

- (1) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than 12 month for each air contaminant source identified in this permit.
- (3) The permittee shall include in the annual PER, any record showing a deviation of the allowable production limitation. Such records shall include the following information:



- a. an identification of each rolling, 12-month period during which the material blended exceeded 1,500,000 gallons; and
- b. a description of any corrective actions taken to address the exceedances identified above.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions Limitation

VOC emissions shall not exceed 15.06 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (at 70°F)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin (°F + 460)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 0.1204 \text{ lb VOC/1,000 gal}$$

$$(0.1204 \text{ lb VOC/1,000 gal}) \times (\text{total gal of material transferred/month}) = \text{lb of VOC emitted/month}$$

** Materials transferred shall not exceed 1,500,000 gallons per rolling, 12-month period.*

- b. Emissions Limitation

VOC emissions shall not exceed 0.09 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 pounds.

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions units maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per



year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase above 1.0 ton per year may require the permittee to apply for an obtain a new permit to install.

- (2) This emissions unit was installed in 1990.
- (3) This permit supersedes P0128849.

22. P029, BT-87

Operations, Property and/or Equipment Description:

2,305-gallon blend tank.

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).

- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)c.

- b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 20.80 pounds per month and 0.13 ton per year (TPY) from this emissions unit. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-21-07(M)	See b)(2)a. below.
c.	OAC rule 3745-31-05(D)	See Section B.

- (2) Additional Terms and Conditions

- a. The requirements of OAC rule 3745-21-07(M) do not apply to this emissions unit because there is no control device associated with this emissions unit.
- b. The VOC emissions factors used to calculate the VOC emissions were established by the permittee. Should more accurate emissions factors be developed in the future the



permittee shall use them, provided the emissions factors are mutually agreeable between the Ohio EPA, through the Cleveland Division of Air Quality, and ASK Chemicals.

c) Operational Restrictions

- (1) This emissions unit shall not blend more than 1,800,000 gallons of material in any rolling, 12-month period.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the company identification of each organic compound employed/blended;
 - b. the number of gallons of each organic compound employed/blended;
 - c. the VOC content of each material blended, in pounds per gallon;
 - d. the vapor pressure of the VOC containing material being blended in psia; and
 - e. the monthly VOC emissions from all VOC-containing materials employed/blended in this emissions unit. The monthly VOC emissions shall be calculated by using either: loading loss emissions estimates from the emissions calculations included with the permit application and detailed in f)(1)a. below, U.S. EPA reference document AP-42, Fifth Edition Compilation of Air Pollution Emissions Factors, Chapter 7, or an equivalent document.

e) Reporting Requirements

- (1) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than 12 month for each air contaminant source identified in this permit.
- (3) The permittee shall include in the annual PER, any record showing a deviation of the allowable production limitation. Such records shall include the following information:
 - a. an identification of each rolling, 12-month period during which the material blended exceeded 1,800,000 gallons; and



- b. a description of any corrective actions taken to address the exceedances identified above.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation

VOC emissions shall not exceed 20.80 pounds per month from this emissions unit.

Applicable Compliance Method

The loading loss was established using the worst-case liquid in equation one from AP-42, Section 5.2, dated June 2008:

$$L_L = 12.46 \times \frac{S \times P \times M}{T}$$

Where:

L_L = loading loss, pounds per 1,000 gallons (*lb/1,000 gal*)

S = saturation factor

P = true vapor pressure of liquid loaded, pounds per square inch absolute (*at 70°F*)

M = molecular weight of vapors, pounds per pound-mole (*lb/lb – mol*)

T = temperature of bulk liquid loaded, in Rankin ($^{\circ}\text{F} + 460$)

$$L_L = 12.46 \times \frac{S \times P \times M}{530} = 0.1386 \text{ lb VOC/1,000 gal}$$

$$(0.1386 \text{ lb VOC/1,000 gal}) \times (\text{total gal of material transferred/month}) = \text{lb of VOC emitted/month}$$

** Materials transferred shall not exceed 1,800,000 gallons per rolling, 12-month period.*

b. Emissions Limitation

VOC emissions shall not exceed 0.13 TPY from this emissions unit.

Applicable Compliance Method

Compliance with the annual VOC emissions limitation shall be determined through the summation of the total monthly VOC emissions as described in f)(1)a. above, and multiplied by 1 ton/2,000 pounds.

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions units maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by OAC rule 3745-31-01. The permittee is



hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase above 1.0 ton per year may require the permittee to apply for an obtain a new permit to install.

- (2) This emissions unit was installed in 1984.
- (3) This permit supersedes 0128849.



23. Emissions Unit Group - Boilers: B005, B006,

EU ID	Operations, Property and/or Equipment Description
B005	8.0 MMBtu boiler. Burns both natural gas and phenolic resin distillate.
B006	8.0 MMBtu boiler. Burns both natural gas and phenolic resin distillate.

- a) This permit document constitutes a PTI issued in accordance with ORC 3704.03(F) and a PTO issued in accordance with ORC 3704.03(G).
- (1) For the purpose of a PTI document, the EU T&C identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
- a. None.
- (2) For the purposes of a PTO document, the EU T&C identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
- a. b)(1)e.
- b) Applicable Emissions Limitations and/or Control Requirements
- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(F) PTI 13-00636 for B006 issued 5/13/1980 Chapter 31 modification for B005 and B006 13-04681 issued 11/2/2006	Particulate emissions (PE) shall not exceed 2.19 tons per year (TPY) from each unit. See b)(2)a. below.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a six minute average, except as provided by rule.
c.	OAC rule 3745-17-10(C)(1)	PE shall not exceed 0.4 lb PE/MMBtu.
d.	OAC rule 3745-18-06(B)	Exempt. See b)(2)b. below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-31-05(D) FEPTIO to avoid Title V	See Section B.
f.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)c. below.

(2) Additional Terms and Conditions

- a. The potential to emit based on the allowable limit from OAC rule 3745-17-10(C)(1) is greater than ten tons per year for each unit. In order to ensure that the potential to emit for each emissions unit remains below ten tons per year of particulate emissions, the permittee has requested a voluntary emissions limit at the uncontrolled potential to emit.
- b. The emissions units are exempt from the requirements of OAC rule 3745-18-06 because the total rated heat input capacity is less than 10 MMBtu/hr.
- c. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the volatile organic compound (VOC), sulfur dioxide (SO₂), nitrogen oxide (NO_x), carbon monoxide (CO), particulate matter less than 10 microns (PM₁₀), and particulate matter less than 2.5 microns (PM_{2.5}) from this air contaminant source, since the uncontrolled potential to emit for the OC, SO₂, NO_x, CO, and PE are less than ten tons per year for each unit.

c) Operational Restrictions

- (1) The permittee shall only burn natural gas and/or phenolic resin distillate material as fuel in the emissions units.
- (2) The permittee shall operate and maintain the fuel burners in accordance with the manufacturer's recommendation to ensure efficient combustion of the fuel(s).

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the amount of phenolic resin distillate material burned in each emissions unit.
- (2) For each day during which the permittee burns a fuel other than natural gas or phenolic resin distillate material, the permittee shall maintain a record of the type and quantity of fuel burned in the emissions unit.

e) Reporting Requirements

- (1) The permittee shall identify in the PER each day during which a fuel other than natural gas or phenolic resin distillate material is burned in the emissions units.



- (2) The permittee shall submit an annual PER to the Ohio EPA by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (3) All applications, notifications, or reports required in *writing* are to be submitted through Ohio EPA's eBusiness Center: Air Services online web portal. Hardcopy submissions will be accepted on an as-needed basis if the permittee cannot submit the required documents through Air Services. In the event of a hardcopy submission, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submittal of applications, notifications, or reports to Ohio EPA fulfills the requirement to submit information to the director, the appropriate Ohio EPA DO/LAA, and/or any other individual or organization identified as a recipient unless otherwise specified in this permit. Consistent with OAC rule 3745-15-03, the application, notification, or report is considered *submitted* on the date the submittal is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emissions Limitation

PE shall not exceed 0.4 lb/MMBtu for each emissions unit.

Applicable Compliance Method

The pound per hour emissions rate shall be determined by multiplying the emissions factor (0.0075) from Section 1.4 (Natural Gas Combustion) of AP-42, Fifth Edition, Volume 1, Chapter 1 by the MMBtu/hour rating (8.0) of the natural gas-fired boiler.

Since the emissions factor is given in a volume format, it was converted to an energy basis by dividing the given factor by 1,020 MMBtu/106 scf and added to the particulate emissions due to ash content.

The lb PE/hr for ash was determined by multiplying the maximum burn rate of the distillate (2.5 gal/min), 60 minutes/hour, the density of the distillate (8.367 lb/gallon), and the maximum ash content by weight (0.035%). This equation is depicted below:

$$(8.0 \text{ MMBtu/hr}) \times (0.00745 \text{ lb PE/MMBtu}) + (2.5 \text{ gal/min}) \times (60 \text{ min/hr}) \times (8.367 \text{ lb/gal}) \times (0.035\%) = \text{lb PE/hr}$$

If required, compliance with the allowable particulate emissions limit shall be determined through emissions testing in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.
 - b. Emissions Limitation

PE shall not exceed 2.19 TPY for each emissions unit.



Applicable Compliance Method

The annual limitation was developed by multiplying the pound per hour emissions rate by the maximum operating schedule of 8,760 hours per year, and dividing by 2,000 lb/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

c. Emissions Limitation

Visible PE shall not exceed 20% opacity as a six-minute average, except as provided by this rule.

Applicable Compliance Method

If required, compliance shall be determined by visible emissions evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in U.S. EPA Reference Method 9.

g) Miscellaneous Requirements

- (1) Emissions units B005 and B006 were installed in 1978 and modified in November of 2006 to burn distillate.
- (2) This permit supersedes P0128849.