John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

11/18/2013

Certified Mail

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

JERE ELLISON
ISP CHEMICALS INC
1979 ATLAS
COLUMBUS, OH 43228

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0125040931
Permit Number: P0115818
Permit Type: Administrative Modification
County: Franklin

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of $70.00, made payable to “Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General’s Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-CDO

FINAL

Division of Air Pollution Control
Permit-to-Install and Operate
for
ISP CHEMICALS INC

Facility ID:	0125040931
Permit Number:	P0115818
Permit Type:	Administrative Modification
Issued:	11/18/2013
Effective:	11/18/2013
Expiration:	12/10/2018

Division of Air Pollution Control
Permit-to-Install and Operate
for
ISP CHEMICALS INC

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Authorization

Facility ID:	0125040931
Application Number(s):	M0002479
Permit Number:	P0115818
Permit Description:	Administrative Modification to add requirements that were inadvertently left out of the permit.
Permit Type:	Administrative Modification
Permit Fee:	$0.00
Issue Date:	11/18/2013
Effective Date:	11/18/2013
Expiration Date:	12/10/2018

Permit Evaluation Report (PER) Annual Date: Oct 1 - Sept 30, Due Nov 15

This document constitutes issuance to:

ISP CHEMICALS INC
1979 ATLAS
Columbus, OH 43228

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

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

Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049
(614)728-3778

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

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0115818
Permit Description: Administrative Modification to add requirements that were inadvertently left out of the permit.

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

Group Name: ISP Emissions Group

Emissions Unit ID:	**P001**
Company Equipment ID:	EQUIPMENT 62-1101 (R-1)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P003**
Company Equipment ID:	EQUIPMENT 62-1103 (R-3)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P004**
Company Equipment ID:	EQUIPMENT 62-1104 (R-4)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P006**
Company Equipment ID:	EQUIPMENT 62-1106 (R-6)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P007**
Company Equipment ID:	EQUIPMENT 62-1107 (R-7)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P009**
Company Equipment ID:	EQUIPMENT 62-2102 (S-2)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P015**
Company Equipment ID:	THIN-FILM LUWA EVAPORATOR 62-3601 (L-1)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P016**
Company Equipment ID:	EQUIPMENT 62-1108 (R-8)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P020**
Company Equipment ID:	EQUIPMENT 62-1105 (R-5)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P021**
Company Equipment ID:	EQUIPMENT 62-1109 (R-9)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P022**
Company Equipment ID:	EQUIPMENT 62-1112 (R-12)

Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P024**
Company Equipment ID:	EQUIPMENT 73-4101 (D-1)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P028**
Company Equipment ID:	EQUIPMENT 74-4111 (D-11)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P030**
Company Equipment ID:	EQUIPMENT 74-4113 (D-13)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P031**
Company Equipment ID:	EQUIPMENT 74-4114 (D-14)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P034**
Company Equipment ID:	EQUIPMENT 62-1405 (C-5)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P035**
Company Equipment ID:	EQUIPMENT 62-1401 (C-1)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P037**
Company Equipment ID:	EQUIPMENT 62-1102 (R-2)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P038**
Company Equipment ID:	EQUIPMENT 63-9609 (CRYO UNIT)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P039**
Company Equipment ID:	EQUIPMENT 62-1110 (R-10)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P040**
Company Equipment ID:	EQUIPMENT 62-1111 (R-11)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P041**
Company Equipment ID:	EQUIPMENT 62-1402 (C-2)
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**P043**
Company Equipment ID:	C-3 HF-800 Heinkel Centrifuge
Superseded Permit Number:	P0113989
General Permit Category andType:	Not Applicable

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:

- 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.

- 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 (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 by up to 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 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 [DO/LAA] 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 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 shutdown 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 beingpermanently shut down without first applying for and obtaining a permit pursuantto 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, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the

change in ownership or operator. Any transferee of this permit must 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 permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

   a) For the purpose of a permit-to-install document, the facility-wide terms and conditions 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 permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

      (1) None.

2. The Ohio EPA has determined that this facility is subject to the requirements of 40 CFR Part 63 Subpart VVVVVV, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Manufacturing Area Sources. Although Ohio EPA has determined that this Generally Available Control Technology NESHAP (GACT) applies, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised, that all requirements associated with this rule are in effect and shall be enforced by U.S. EPA. For more information on the area source rules, please refer to the following U.S. EPA website: http://www.epa.gov/ttn/atw/area/arearules.html.

C. Emissions Unit Terms and Conditions

1. Emissions Unit Group -ISP Emissions Group: P001, P003, P004, P006, P007, P009, P015, P016, P020, P021, P022, P024, P028, P030, P031, P034, P035, P037, P038, P039, P040, P041, P043

EU ID	Operations, Property and/or Equipment Description
P001	4000 gallon reactor (R1101)
P003	500 gallon reactor (R1103)
P004	500 gallon reactor (R1104)
P006	200 gallon reactor (R1106A)
P007	100 gallon reactor (R1107)
P009	500 gallon still (STILL 62-2102 AND RECEIVERS 62-2602-01, 62-2602-02, 62-2602-03, AND 62-2602-04)
P015	500 gallon evaporator (E3601)
P016	1000 gallon reactor (R1108) Modified
P020	4000 gallon reactor (R1105B)
P021	4000 gallon reactor (R1109)
P022	4000 gallon reactor (R1112)
P024	rotary vacuum dryer (D1001)
P028	rotary vacuum dryer (D1011)
P030	rotary vacuum dryer (D1013
P031	vacuum tray dryer (D1014)
P034	top unloading centrifuge (C3405)
P035	bottom unloading centrifuge (C3411)
P037	2000 gallon reactor for synthetic organic chemicals (reactor system R-2)
P038	500 gallon low temperature refridgeration system (super chiller) (originally permited as P024)
P039	4000 gallon reactor for synthetic organic chemicals (reactor system R-10)
P040	3000 gallon reactor for synthetic organic chemicals (reactor system R-11) Modified
P041	bottom unloading centrifuge (C-2)
P043	C-3 Horizontal Centrifuge

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

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)	See b)(2)a. and b)(2)b.

(2) Additional Terms and Conditions

a. VOC emissions shall not exceed 38.3 tons per year combined from emissions units P001, P003, P004, P006, P007, P009, P015, P016, P020, P021, P022, P024, P028, P030, P031, P034, P035, P037, P038, P039, P040, P041, P042, P043, P044, P045 and P046.

b. This emission limitation is directly associated with the computer program which incorporates the approved Synthetic Organic Chemical Manufacturers Association's methodology for determining potential to emit (PTE) for batch chemical operations.

The 38.3 tons of VOC per year emission limitation includes fugitive VOC emissions for all affected emissions units.

c. <u>Potential to Emit</u>

The facility's PTE is less than the threshold values for both criteria and hazardous air pollutants which would trigger the requirements of OAC Chapter 3745-77.

The facility's PTE was determined, in part, through the use of a computer program which incorporates the approved Synthetic Organic Chemical Manufacturers Association's methodology for determining PTE for batch chemical operations. The emissions from other emissions units at the facility, which are not directly associated with the batch chemical operations, were also incorporated into the facility's PTE. This approach for determining the facility's PTE was performed in accordance with U.S. EPA's August 29, 1996 guidance memorandum entitled "Clarification of Methodology for Calculating Potential to Emit for Batch Chemical Production Operations."

The methodology employed through the computer program enables the permittee to calculate and document the emissions (criteria and hazardous air pollutants) generated by each emissions unit directly associated with each batch chemical operation. The emissions generated by each emissions unit are determined on an average batch hourly basis. The emissions from each individual emissions unit are then combined to determine the total emissions

associated with the batch operation for each product. The "worst-case" PTE for this facility is established by calculations of the individual emissions for each emissions unit and for each product that the permittee currently produces or knows they will produce. The results of this analysis included with the permit application addressed the emissions generated for each batch produced in the following emissions units: P001, P003, P004, P006, P007, P009, P015, P016, P020, P021, P022, P024, P028, P030, P031, P034, P035, P037, P038, P039, P040, P041, P042, P043, P044, P045 and P046. If new products are to be added or if products are eliminated, PTE shall be recalculated.

d. Emissions units P001, P003, P004, P006 and P007 shall operate with the use of an emergency vent catch tank.

e. Emissions unit P016 shall operate with the use of an emergency containment system.

f. Emissions units P001, P003, P007, P020, P021, P022, and P039 shall operate with the use of a scrubber and condenser system at all times when an acid gas is being evolved, as indicated by the batch packet for the product.

g. Emissions units P020, P021, P022, P037, P039 and P040 shall operate with the use of an emergency containment system and a leak detection and repair plan. The emissions units shall also maintain a preventative maintenance and malfunction and abatement plan (PMMAP).

c) Operational Restrictions

(1) The temperature of the exhaust gases from the condenser and receiver vents serving emissions units P020, P021, P022, P037, P039, and P040 shall not exceed 40 degrees Celsius, on a batch average basis.

(2) The temperature of the exhaust gases from the vacuum pumps serving emissions units P024, P028, P030 and P031 shall not exceed 40 degrees Celsius, on a batch average basis.

(3) The cooling media supply temperature shall not exceed 40 degrees Celsius, on a batch average basis, when producing water-based products and shall not exceed -10 degress Celsius, on a batch average basis, when producing solvent-based products.

(4) The percentage of caustic in the scrubber liquor in the scrubber serving emissions units P001, P003, P007, P020, P021, P022 and P039 shall be maintained as described in the individual batch packets developed for the specific reaction occurring in these emissions units. The permittee shall ensure that the scrubber operation follows the batch packet instructions for these emissions units.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain documentation of the products, raw materials, equipment utilization rates, and individual emissions unit emission rates for each product and their relationship to one another used in establishing the facility's PTE. The permittee shall

also maintain compliance demonstration documentation (SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model) for all of the chemicals regulated by OAC rule 3745-114.

(2) If the permittee desires to produce a product which was not included in the engineering analysis submitted with the permit application, then a revised engineering analysis shall be performed to evaluate the effect of the new product against the facility-wide emissions limit established in this permit. If the new product does not affect the "worst-case" PTE calculation by increasing the calculated PTE to a level above the facility-wide emissions limit, then the permittee may produce the new product at this facility. The permittee shall maintain documentation of any revised engineering analysis which allows for the introduction of a new product without increasing the facility PTE to a level above the facility-wide emissions limit. The permittee shall also maintain documentation which confirms that the chemical substances emitted as a result of producing the new product or use of any new or modified raw materials will not exceed the maximum acceptable ground level concentration defined by the Ohio EPA "Toxic Air Contaminant Statute"based upon modeling using SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model.

(3) If a revised engineering analysis for a new product does affect the "worst-case" PTE calculation by increasing the calculated PTE to a level above the facility-wide emissions limit, then the permittee may not produce the new product at this facility without obtaining the appropriate permit(s) from the Ohio EPA. In addition, any change to the emissions units that would otherwise be considered a "modification" as defined in OAC rule 3745-31-01 would require prior notification to and approval from the Ohio EPA, including the possible issuance of modifications to this permit and/or operating permits.

(4) The permittee shall maintain instrumentation to continuously monitor and record the exhaust gas temperature of each condenser and receiver vent employed during the operation of emissions units P020, P021, P022, P037, P039 and P040. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitors and recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

(5) The permittee shall maintain instrumentation to continuously monitor and record the exhaust gas temperature of each vacuum pump employed during the operation of emissions units P024, P028, P030 and P031. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitors and recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

(6) The permittee shall operate and maintain equipment to continuously monitor the supply temperature of the cooling media used in the production of water-based (i.e., water in the formulation) and solvent-based products. The monitoring devices shall be capable of accurately measuring the desired parameter. The temperature monitors shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

(7) The permittee shall maintain the individual batch packet information for each reaction which occurs in emissions units P001, P003, P007, P020, P021, P022 and P039. If an acid gas is evolved by the chemistry, the batch packet instructions shall identify the quantity of sodium hydroxide (NaOH) and water necessary to neutralize acid gas produced in normal and upset conditions.

(8) The permittee shall maintain a database of all component identification and monitoring data required pursuant to the approved leak detection and repair plans for emissions units P020, P021, P022, P037, P039 and P040.

(9) The permittee shall maintain operation and maintenance records to demonstrate that the "Preventative Maintenance and Malfunction Abatement Plan" approved for emissions units P020, P021, P022, P037, P039 and P040 and the pollution control equipment associated with these emissions units is fully implemented.

(10) The permittee shall maintain the following information for each batch produced:

a. the identification of the product being produced;

b. whether the product is water-based or solvent-based;

c. the total batch emissions, in pounds;

d. the exhaust gas temperature of each condenser and receiver vent serving emissions units P020, P021, P022, P037, P039 and P040 when these emissions units are in operation;

e. the exhaust gas temperature of each vacuum pump serving emissions units P024, P028, P030 and P031 when these emissions units are in operation; and

f. the supply temperature of the cooling media used in the production of each water-based and solvent-based product.

e) Reporting Requirements

(1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA, Central District Office 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 twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

(2) The permittee shall notify the Ohio EPA, Central District Office, in writing, of any new product that can be produced at this facility for which the revised engineering analysis demonstrates that the original calculated facility PTE will not be increased to a level above the facility-wide emissions limit. The notification shall include a copy of the revised engineering analysis (hardcopy or electronic format) and shall be sent to the Ohio EPA, Central District Office at least 7 days prior to producing the new product at this facility.

(3) The permittee shall submit annual leak detection and repair reports which contain the following data for each type of component identified:

a. the components identified and monitored during each monitoring period;

b. the leaking equipment identified during each monitoring period;

c. the leaking equipment that were not repaired within 15 calendar days of discovery and the reason for each delay; and

d. the dates of process unit shutdowns that occurred during each monitoring period.

The annual reports shall be submitted as an attachment to the PER.

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. <u>Emissions Limitation</u>

VOC emissions shall not exceed 38.3 tons per year combined from emissions units P001, P003, P004, P006, P007, P009, P015, P016, P020, P021, P022, P024, P028, P030, P031, P034, P035, P037, P038, P039, P040, P041, P042, P043, P044, P045 and P046.

<u>Applicable Compliance Method</u>

Compliance with this emission limitation has been demonstrated by the engineering analysis submitted with the permit application. Future compliance shall be determined based upon any revised engineering analysis established pursuant to the requirements of this permit and the records required pursuant to the Monitoring and Recordkeeping Requirements. The 38.3 tons of VOC per year emissions limitation represents the facility's potential to emit based on the approved guidance from the Synthetic Organic Chemical Manufacturers Association.

g) Miscellaneous Requirements

(1) None.