



Environmental Protection Agency

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

11/15/2011

Certified Mail

Joseph Bianco
INEOS USA LLC
1900 Fort Amanda Rd.
P.O. Box 628, Lima, OH 45802
Lima, OH 45804

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0302020371
Permit Number: P0103909
Permit Type: Administrative Modification
County: Allen

No	TOXIC REVIEW
No	PSD
Yes	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
Yes	MACT/GACT
Yes	NSPS
No	NESHAPS
Yes	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI 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
309 South Fourth Street, Room 222
Columbus, OH 43215

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. If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northwest District Office. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: U.S. EPA
Ohio EPA-NWDO; Indiana



Response to Comments

Facility ID:	0302020371
Facility Name:	Ineos USA LLC
Facility Description:	Industrial Organic Chemical Production
Facility Address:	1900 Fort Amanda Rd. Lima, OH 45804 Allen County
Permit:	P0103909, Permit-To-Install - Administrative Modification
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the The Lima News on 02/19/2011. The comment period ended on 03/21/2011.	
Hearing date (if held)	N/A
Hearing Public Notice Date (if different from draft public notice)	N/A

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: Separate limits for both control devices

- a. Comment: Delete reference to control devices and include just one set of emission limitations.
- b. Response: Reference to either control device was removed and the worst case potential to emit was applied to the emissions unit. The compliance demonstrations for the pound per day emission limitations were modified to address this change.

2. Topic: OAC rule 3745-21-07(G)

- a. Comment: Delete reference to OAC rule 3745-21-07(G) or add sunset language where appropriate.
- b. Response: Reference to this rule was removed throughout the permit.

3. Topic: 40 CFR Part 63 Subpart NNN

- a. Comment: Clarify that compliance with 40 CFR Part 63 Subpart NNN is achieved through compliance with 40 Part 63 Subpart G
- b. Response: 40 CFR Part 60 Subpart NNN regulations overlap with those of 40 CFR Part 63 Subpart G. 40 CFR Part 63.110(d) addresses this overlap and states that equipment subject to

40 CFR Part 60 Subpart NNN is required to comply only with the provisions of 40 CFR Part 63 Subpart G. Based on this fact, all reference to compliance with Subpart NNN was modified to reflect that compliance is shown through compliance with Subpart G.

4. Topic: 40 CFR Part 63 Subpart YY

- a. Comment: Add cyanide chemical MACT, 40 CFR Part 63 Subpart YY
- b. Response: This rule will be addressed in the Title V operating permit as it was not an applicable rule when this permit was originally issued.



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
INEOS USA LLC**

Facility ID:	0302020371
Permit Number:	P0103909
Permit Type:	Administrative Modification
Issued:	11/15/2011
Effective:	11/15/2011



Division of Air Pollution Control
Permit-to-Install
for
INEOS USA LLC

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Authorization

Facility ID: 0302020371
Facility Description: Industrial Organic Chemical Production
Application Number(s): M0000266
Permit Number: P0103909
Permit Description: Administrative modification of installation permit (PTI #03-09227 initially issued on 11/14/96 and administratively modified on 06/28/01 and 11/20/03) for chemical plant operations involving the recovery and purification of Acrylonitrile. The administrative modification involves the addition of an alternative operating scenario and re-identification of a vent scrubber from a control option to a product recovery device. Chemical processing operations will continue to be controlled by a flare and/or thermal oxidizer.
Permit Type: Administrative Modification
Permit Fee: \$500.00
Issue Date: 11/15/2011
Effective Date: 11/15/2011

This document constitutes issuance to:

INEOS USA LLC
1900 Fort Amanda Rd.
Lima, OH 45804

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

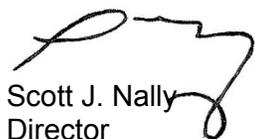
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

The above named entity is hereby granted a Permit-to-Install for the 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 emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0103909
Permit Description: Administrative modification of installation permit (PTI #03-09227 initially issued on 11/14/96 and administratively modified on 06/28/01 and 11/20/03) for chemical plant operations involving the recovery and purification of Acrylonitrile. The administrative modification involves the addition of an alternative operating scenario and re-identification of a vent scrubber from a control option to a product recovery device. Chemical processing operations will continue to be controlled by a flare and/or thermal oxidizer.

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

Emissions Unit ID:	P075
Company Equipment ID:	Acrylonitrile Plant #2 Recovery & Purification Section
Superseded Permit Number:	03-09227
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

- a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.
 - (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, and (ii) operational restrictions.

andcontroldeviceoperatingparameterlimitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northwest District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.

- (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, andreportingrequirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Northwest District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Northwest District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

- (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northwest District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northwest District Office. If no deviations occurred during a calendar quarter, the permitteeshall

submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., 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) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., 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). All

records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.

C. Emissions Unit Terms and Conditions



1. P075, Acrylonitrile Plant #2 Recovery & Purification Section

Operations, Property and/or Equipment Description:

Acrylonitrile Plant No. 2 Recovery and Purification Section

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operations(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. 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 3745-31-03(A)(3)	544.80 lbs of carbon monoxide (CO)/day; 6016.80 lbs of nitrogen oxides (NO _x)/day; 72.00 lbs of sulfur dioxide (SO ₂)/day and 13.23 tons per year (tpy) of SO ₂ [See b)(2)h.]; 3069.60 lbs of volatile organic compounds (VOC)/day; 105.60 lbs of particulate matter less than 10 microns in size (PM ₁₀)/day [See b)(2)i.]. The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-09(DD), 3745-17-07(A), 40 CFR Part 63 Subpart A, 40 CFR Part 63 Subpart F, 40 CFR Part 63 Subpart G, 40 CFR Part 63 Subpart H, 40 CFR Part 60 Subpart NNN, 40 CFR Part 60 Subpart VV, and OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D)	332.44 tons of NO _x per rolling 12-month period; 18.35 tons of CO per rolling 12-month period 38.64 tons of VOC per rolling 12-month



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		period 6.66 tons of PM10 per rolling 12-month period (see b)(2)j.) See b)(2)g.
c.	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
d.	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-21-09(DD)	See b)(2)b.
g.	40 CFR Part 60 Subpart VV	See b)(2)b.
h.	40 CFR Part 60 Subpart NNN	See b)(2)c.
i.	40 CFR Part 63 Subpart F	See b)(2)a.
j.	40 CFR Part 63 Subpart G	See b)(2)a. and b)(2)d.
k.	40 CFR Part 63 Subpart H	See b)(2)a. and b)(2)b.

(2) Additional Terms and Conditions

- a. The permittee shall comply with all applicable standards in 40 CFR Part 63 Subparts A, F, G, and H for this emissions unit.
- b. The permittee shall include the appropriate process equipment and regulated components for emissions unit P075 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and recordkeeping, reporting, and testing) of 40 CFR Part 63 Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).

40 CFR Part 60 Subpart VV regulations overlap with those of 40 CFR Part 63 Subpart H. 40 CFR Part 63.260(b) addresses this overlap and states that equipment subject to 40 CFR Part 60 Subpart VV is required to comply only with the provisions of 40 CFR Part 63 Subpart H.

The requirements of the applicable standards in OAC rule 3745-21-09(DD) are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee pursuant to 40 CFR Part 63 Subpart H.

- c. 40 CFR Part 60 Subpart NNN regulations overlap with those of 40 CFR Part 63 Subpart G. 40 CFR Part 63.110(d) addresses this overlap and states that equipment subject to 40 CFR Part 60 Subpart NNN is required to comply only with the provisions of 40 CFR Part 63 Subpart G.
- d. Pursuant to 40 CFR 63.113(h), the permittee is not required to make a group determination as described in 40 CFR 63.115 because it complies with 40 CFR 63.113(a)(1) and (a)(2).
- e. Emissions from the acrylonitrile plant #2 recovery and purification section shall be controlled by the use of a closed process vent system. The closed vent system stream will be required to meet at least one of the following criteria at all times:
 - i. control closed vent system emissions with a flare; or
 - ii. reduce closed vent system emissions of total organic compounds (TOC) less methane and ethane by 98% or to a concentration less than 20 ppmv on a dry basis corrected to 3% oxygen.
- f. The acrylonitrile flare also controls emissions from emissions units P048, P052, P074, T129, and T084. The operational restrictions, monitoring, recordkeeping and reporting, and testing requirements related to the flare are included with this emissions unit (P075).
- g. Emissions from the flare and/or thermal oxidizer controlling emissions unit P075 shall not exceed the following:
 - i. 332.44 tons of NO_x per rolling 12-month period;
 - ii. 18.35 tons of CO per rolling 12-month period;
 - iii. 38.64 tons of VOC per rolling 12-month period;
 - iv. 6.66 tons of PM₁₀ per rolling 12-month period.

The emission limitations per rolling 12-month period are federally enforceable limitations based on the operational restrictions (a) limiting the amount of hydrogen cyanide (HCN) routed to the flare and the thermal oxidizer for control [see c)(2)g. and c)(3)b.]; and (b) limiting the hours the thermal oxidizer can operate in an idle mode [see c)(3)c.]. The federally enforceable emission limitations are being established for purposes of avoiding "Prevention of Significant Deterioration" (PSD) applicability.
- h. SO₂ emissions are based on the maximum amount of SO₂ used in the process and are the same whether emitted from the flare or the thermal oxidizer.
- i. All emissions of particulate matter are PM₁₀.

c) Operational Restrictions

(1) Process vent operational restrictions:

The closed vent system shall be operated at all times when emissions may be vented to it.

(2) Flare operational restrictions [40 CFR 63.11]:

- a. The flare shall be designed for and operated with no visible emissions as determined by Method 22 of 40 CFR Part 60, Appendix A, except for periods not to exceed a total of five minutes during any 120 consecutive minutes.
- b. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times. If an electric arc ignition system is employed, the arcing shall pulse continually.
- c. The flare shall be steam-assisted.
- d. The net heating value of the gas being combusted in the flare, as determined by the method specified in 40 CFR 63.11(b)(6)(ii) shall be 300 Btu/scf or greater.
- e. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in 40 CFR 63.11(b)(7)(i) except as provided in 40 CFR 63.11(b)(7)(ii) and 40 CFR 63.11(b)(7)(iii).
- f. The permittee shall ensure the flare is operated and maintained in conformance with its design.
- g. The amount of HCN routed to the flare shall not exceed 3,317,218 lbs per rolling 12-month period. The permittee has existing process data to generate the rolling 12-month summation of HCN routed to the flare, therefore it will not be necessary to establish operational restrictions for the first 12 months of operation following issuance of this permit (see section c)(4)).

(3) Thermal oxidizer restrictions:

- a. The permittee shall establish a range of operating parameters that meet the requirements of 40 CFR Part 63 Subpart G, as determined from performance testing.
- b. The amount of HCN routed to the thermal oxidizer shall not exceed 15,298,000 lbs per rolling 12-month period minus the amount of HCN routed to the flare per rolling 12-month period. The permittee has existing process data to generate the rolling 12-month summation of HCN routed to the thermal oxidizer, therefore it will not be necessary to establish operational restrictions for the first 12 months of operation following issuance of this permit (see section c)(4)).
- c. The thermal oxidizer shall not exceed 7,884 hours of operation per rolling 12-month period in an idle mode. An idle mode is defined as periods when the thermal oxidizer is not oxidizing significant amounts of process materials, and is kept online at operational temperatures while fueled by natural gas. The

permittee has existing records to generate the rolling 12-month summation of the hours of operation of the thermal oxidizer in the idle mode, therefore it will not be necessary to establish operational restrictions for the first 12 months of operation following the issuance of this permit.

- (4) The total amount of HCN routed to the flare and thermal oxidizer shall not exceed 15,298,000 lbs per rolling 12-month period.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall keep up-to-date records of the following information:
 - a. flare design (i.e., steam-assisted, air-assisted, or non-assisted); and
 - b. all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during any compliance determinations.
 - (2) Monitoring requirements for this emissions unit:
 - a. Monitoring requirements associated with federally enforceable limitations/restrictions:
 - i. The permittee shall properly install, operate, and maintain equipment to monitor the HCN flowrate (in pounds) routed to the flare. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).
 - ii. The permittee shall properly install, operate, and maintain equipment to monitor the HCN flowrate (in pounds) routed to the thermal oxidizer. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).
 - b. Flare monitoring requirements:
 - i. The flare shall be monitored with a thermocouple or any other equivalent device to detect the presence of a pilot flame. If an electric arc ignition system is employed, the arcing shall be monitored to detect any failure [40 CFR 63.114(a)(2)].
 - ii. The permittee shall perform weekly checks, when the emissions unit is in operation, and when the weather conditions allow, for any visible particulate emissions from the stacks serving this emissions unit, including the flare. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - (a) the location and color of the emissions;
 - (b) whether the emissions are representative of normal operations;

- (c) if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- (d) the total duration of any visible emissions incident; and
- (e) any corrective actions taken to eliminate the visible emissions.

If, during any weekly check, the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

c. Thermal oxidizer monitoring requirements:

- i. The permittee shall operate and monitor the thermal oxidizer in accordance with the requirements of 40 CFR Part 63 Subpart G. The permittee shall operate continuous temperature monitoring and recording devices for the thermal oxidizer. [40 CFR 63.114(a)(1)]

(3) Recordkeeping requirements for this emissions unit:

- a. The permittee shall comply with the recordkeeping requirements contained in 40 CFR Part 63 Subpart G.
- b. The following information shall be recorded for the flare and thermal oxidizer and kept in a readily accessible location:
 - i. detailed schematics, design specifications, and piping and instrumentation diagram;
 - ii. the dates and descriptions of any changes in the design specification;
 - iii. a description of the parameter(s) monitored to ensure that the flare and thermal oxidizer are operated and maintained in conformance with their design, and an explanation of the reason for selecting such parameter(s);
 - iv. periods when the closed vent system, flare, and thermal oxidizer are not operated as designed; and
 - v. dates of start-ups and shutdowns of the closed vent system, flare, and thermal oxidizer.
- c. The permittee shall maintain records that document operating time for the closed vent system, flare and thermal oxidizer, and monitoring equipment. The information shall be maintained in the company's files for a period of five years.
- d. The permittee shall collect and record the following records associated with federally enforceable limitations/restrictions each day:
 - i. the HCN flow rate to the flare, in lbs;

- ii. the rolling 12-month summation of the HCN flow rate to the flare, in lbs;
- iii. the HCN flow rate to the thermal oxidizer, in lbs;
- iv. the rolling 12-month summation of the HCN flow rate to the thermal oxidizer;
- v. the number of hours the thermal oxidizer operated in an idle mode (idle mode is defined in c)(3)c.);
- vi. the rolling 12-month summation of the idle mode operating hours for the thermal oxidizer;
- vii. the natural gas feed to the thermal oxidizer operated in an idle mode, in scf, (idle mode is defined in c)(3)c.);
- viii. the rolling 12-month summation of the natural gas feed to the thermal oxidizer operated in an idle mode, in scf;
- ix. the NO_x, CO, VOC, and PM₁₀ emissions from the flare and thermal oxidizer calculated in accordance with the following:

$$E_i = F_i + TO_i$$

Where:

E_i = Emissions for pollutant i

F_i = Emissions of pollutant i from flare

TO_i = Emissions of pollutant i from thermal oxidizer

for i = NO_x

$$F = (\text{flow rate HCN, in lbs}) \times (\text{HCN heat content}) \times (\text{NO}_x \text{ emission factor})$$

$$= [d)(3)d.i. \times 10,220 \text{ Btu/lb} \times 4.088 \text{ lbs of NO}_x/\text{mmBtu}]$$

$$TO = (\text{flow rate HCN, in lbs}) \times (\text{HCN heat content}) \times (\text{NO}_x \text{ emission factor}) + (\text{operating hours in idle mode}) \times (\text{maximum idle mode lb/hr emissions})$$

$$= [d)(3)d.iii. \times 10,220 \text{ Btu/lb} \times 4.088 \text{ lb of NO}_x/\text{mmBtu}] + [d)(3)d.v. \times (3.26 \text{ lbs of NO}_x/\text{hr})]$$

for i = PM₁₀

$$F = (\text{flow rate HCN, in lbs}) \times (\text{HCN heat content}) \times (\text{PM}_{10} \text{ emission factor})$$

$$= [d)(3)d.i. \times 10,220 \text{ Btu/lb} \times 0.072 \text{ lbs of PM}_{10}/\text{mmBtu}]$$

$$\text{TO} = (\text{flow rate HCN, in lbs}) \times (\text{HCN heat content}) \times (\text{PM}_{10} \text{ emission factor}) + (\text{natural gas feed in idle mode, in scf}) \times (\text{AP-42 emission factor})$$

$$= [d](3)d.iii.x \ 10,220 \ \text{Btu/lb} \times 0.072 \ \text{lb of PM}_{10}/\text{mmBtu}] + [d](3)d.vii.x7.6\text{lbs of PM}_{10}/\text{mmscf}]$$

for i = CO

$$F = (\text{flow rate HCN, in lbs}) \times (\text{HCN heat content}) \times (\text{CO emission factor})$$

$$= [d](3)d.i. \times 10,220 \ \text{Btu/lb} \times 0.37 \ \text{lb of CO/mmBtu}]$$

$$\text{TO} = (\text{flow rate HCN, in lbs}) \times (\text{HCN heat content}) \times (\text{CO emission factor}) + (\text{natural gas feed in idle mode, in scf}) \times (\text{AP-42 emission factor})$$

$$= [d](3)d.iii.x \ 10,220 \ \text{Btu/lb} \times 0.011 \ \text{lb of CO/mmBtu}] + [d](3)d.vii.x84 \ \text{lbs of CO/mmscf}]$$

for i = VOC

$$F = (\text{flow rate HCN, in lbs}) \times (\text{HCN heat content}) \times (\text{VOC emission factor}) + (2\% \times \text{flow rate HCN, in lbs})$$

$$= [d](3)d.i. \times 10,220 \ \text{Btu/lb} \times 0.128 \ \text{lb of VOC/mmBtu}] + [0.02 \ \text{lb of VOC/lbs of HCN flow} \times d](3)d.i.]$$

$$\text{TO} = (\text{flow rate HCN, in lbs}) \times (\text{HCN heat content}) \times (\text{VOC emission factor}) + (\text{operating hours in idle mode}) \times (\text{maximum idle mode lb/hr emissions})$$

$$= [d](3)d.iii.x \ 10,220 \ \text{Btu/lb} \times 0.0036 \ \text{lb of VOC/mmBtu}] + [d](3)d.v. \times (0.78 \ \text{lb of VOC/hr})$$

Emission factors and maximum lb/hr emissions are based on either AP-42 or stack testing performed on 11/11/04 and 11/12/04.

- x. The rolling 12-month summation for NO_x, PM₁₀, CO, and VOC emissions.
- e. Flare recordkeeping requirements:
 - i. The permittee shall comply with the flare recordkeeping requirements contained in 40 CFR Part 60 Subpart A and 40 CFR Part 63 Subpart G.
- f. Thermal oxidizer recordkeeping requirements:
 - i. The permittee shall comply with the recordkeeping requirements contained in 40 CFR Part 63 Subpart G.

- ii. The permittee shall maintain continuous records of the thermal oxidizer firebox temperature in accordance with the 40 CFR Part 63 Subpart G.

e) Reporting Requirements

- (1) The permittee shall submit semiannual reports to the Ohio EPA Northwest District Office to satisfy the semiannual reporting requirements of 40 CFR 63.182(D)(1). The time periods or deadlines specified in 40 CFR 63.182 may be changed by mutual agreement between the permittee and the Ohio EPA in accordance with 40 CFR 63.9(i).
- (2) The permittee shall comply with the reporting requirements contained in 40 CFR Part 63 Subpart G. The time periods of deadlines specified in 40 CFR 63.152 may be changed by mutual agreement between the permittee and the Ohio EPA in accordance with 40 CFR 63.9(i).
- (3) The permittee shall submit quarterly reports that include the following information:
 - a. all exceedances of all monitored parameters;
 - b. a log of the operating time for the closed vent system, flare, and thermal oxidizer;
 - c. all periods of time when the flare and/or thermal oxidizer was not operational; and
 - d. all periods of time when the required monitoring data was not collected.

The permittee shall submit the quarterly reports by January 31, April 30, July 31, and October 31 of each year.
- (4) The permittee shall submit the semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks, including the flare, serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Northwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.
- (5) The permittee shall submit quarterly reports which include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.
- (6) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling 12-month limitations for (a) the amount of HCN that can be routed to the flare; (b) the amount of HCN that can be routed to the thermal oxidizer; and (c) the number of hours the thermal oxidizer can operate in idle mode. These reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.
- (7) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling 12-month emission limitations for NO_x, PM₁₀, CO, and VOC. These reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

- (8) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the daily emission limitations for PM₁₀, NO_x, SO₂, CO, and VOC as specified in section b)(1). These reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

f) Testing Requirements

- (1) Compliance with the emission limitations in section b)(1) of this permit shall be determined in accordance with the following methods:

a. Emission Limitations:

- i. 544.80 lbs of CO/day.
- ii. 6016.80 lbs of NO_x/day.
- iii. 3069.60 lbs of VOC/day.
- iv. 105.60 lbs of particulate matter less than 10 microns in size (PM₁₀)/day.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the monitoring and recordkeeping requirements specified in term d)(3)d.

b. Emission Limitations:

- i. 332.44 tons of NO_x per rolling 12-month period.
- ii. 18.35 tons of CO per rolling 12-month period.
- iii. 38.64 tons of VOC per rolling 12-month period.
- iv. 6.66 tons of PM₁₀ per rolling 12-month period

Applicable Compliance Method

Compliance shall be demonstrated in accordance with the monitoring and recordkeeping requirements specified in term d)(3)d.

c. Emission Limitations:

72.00 lbs of SO₂/day and 13.23 tons of SO₂/year.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the daily limitation based upon documentation of the sulfur contents of the raw material feeds to the process.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hours per year and dividing by 2000 lbs. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual emission limitation shall also be demonstrated.

d. Emission Limitation:

The amount of HCN routed to the flare shall not exceed 3,317,218 lbs per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the monitoring and recordkeeping requirements specified in term d)(3)d.

e. Emission Limitation:

Visible particulate emissions (PE) shall not exceed 20% opacity as a six-minute average except as provided by rule

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation in accordance with OAC rule 3745-17-03(B)(1).

f. Emission Limitation:

The amount of HCN routed to the thermal oxidizer shall not exceed 15,298,000 lbs per rolling 12-month period minus the amount of HCN routed to the flare per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the monitoring and recordkeeping requirements specified in term d)(3)d.

g. Emission Limitation:

The thermal oxidizer shall not exceed 7,884 hours of operation per rolling 12-month period in an idle mode.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the monitoring and recordkeeping requirements specified in term d)(3)d.

(2) The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

- a. The testing requirements of this permit were fulfilled by a stack test performed on 11/12/04.
- b. The emission testing shall be conducted to demonstrate compliance with the mass emission rates for PM₁₀, SO₂, NO_x, CO, and VOC.
- c. The following stack test methods shall be employed to demonstrate compliance with the allowable mass emission rates:



PM₁₀: Methods 201/201A and 202 of 40 CFR Part 51, Appendix M

SO₂: Methods 1–4 and 6 of 40 CFR Part 60, Appendix A

NO_x: Methods 1-4 and 7 of 40 CFR Part 60, Appendix A

CO: Methods 1-4 and 10 of 40 CFR Part 60, Appendix A

VOC: Methods 18, 25, or 25A, as appropriate, of 40 CFR Part 60, Appendix A or ASTM 6348-03

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Northwest District Office.

Not later than 30 days prior to the proposed test dates(s), the permittee shall submit an “Intent to Test” notification to the Northwest District Office. The Intent to Test notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northwest District Office’s refusal to accept the results of the emissions test(s).

Personnel from the Northwest District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person(s) responsible for the tests and submitted to the Northwest District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Northwest District Office.

- (3) The permittee shall comply with the LDAR program testing requirements in accordance with 40 CFR 63.180.

g) Miscellaneous Requirements

- (1) None