



John R. Kasich, Governor  
 Mary Taylor, Lt. Governor  
 Craig W. Butler, Director

9/30/2016

Certified Mail

Mr. Timothy Anglin  
 BASF Corporation  
 120 PINE STREET  
 Elyria, OH 44035

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL

Facility ID: 0247040195  
 Permit Number: P0121632  
 Permit Type: Administrative Modification  
 County: Lorain

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	MAJOR GHG
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 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 (EPA) Weekly Review and the local newspaper, The Chronicle Telegram. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall  
 Permit Review/Development Section  
 Ohio EPA, DAPC  
 50 West Town Street, Suite 700  
 P.O. Box 1049  
 Columbus, Ohio 43216-1049

and Ohio EPA DAPC, Northeast District Office  
 2110 East Aurora Road  
 Twinsburg, OH 44087

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing 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 Ohio EPA DAPC, Northeast District Office at (330)963-1200.

Sincerely,

Michael E. Hopkins, P.E.  
 Assistant Chief, Permitting Section, DAPC

Cc: U.S. EPA Region 5 -Via E-Mail Notification  
 Ohio EPA-NEDO; Canada



## Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

Federally enforceable air pollution control equipment

2. Source Description:

The facility makes inorganic metal catalysts and pigments. The SIC is 2819 Industrial Inorganic Chemicals and the NAIC is 325188.

3. Facility Emissions and Attainment Status:

The facility is currently classified as a Title V source for potential nitrogen oxide(s) NO<sub>x</sub> emissions. The facility is major for HAPs emissions, considering that most emissions units do not have federally enforceable restrictions to use air pollution control equipment. The facility is located in Elyria, in Lorain County, which is in non-attainment with the two shorter term PM<sub>2.5</sub> standards, and the 2008 8-hour O<sub>3</sub> standard.

4. Source Emissions:

This is an agency-initiated PTI administrative modification to correct BAT for Ohio EPA BAT Policy changes, and to add emission limitations and control devices that are legally and practically enforceable.

For emissions unit P092, uncontrolled PM<sub>10</sub> emissions are estimated at 40 tons/yr and uncontrolled NO<sub>x</sub> emissions are estimated at 114 tons/yr. With the use of control equipment, PM<sub>10</sub> emissions are estimated at 2 tons/yr and NO<sub>x</sub> emissions are estimated at 5.7 tons/yr (based on 95% control).

For emissions unit P132, uncontrolled PM<sub>10</sub> emissions are estimated at 3.5 tons/yr. With the use of control equipment, PM<sub>10</sub> emissions are estimated at 2.6 tons/yr.

5. Conclusion:

With the use of federally enforceable control equipment, operating restrictions and emissions limitations, the permittee's PTE for PM<sub>10</sub> emissions and NO<sub>x</sub> emissions will be limited as a result of the use of control equipment that is legally and practically enforceable.

6. Please provide additional notes or comments as necessary:

None



**Permit Strategy Write-Up**  
BASF Corporation  
**Permit Number:** P0121632  
**Facility ID:** 0247040195

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

Pollutant

Tons Per Year

## 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:<http://epa.ohio.gov/actions.aspx> or Hearing Clerk, Ohio EPA, 50 W. Town St., Columbus, Ohio 43215. Ph: 614-644-2129 email:[HClerk@epa.ohio.gov](mailto:HClerk@epa.ohio.gov)

Draft Air Pollution Permit-to-Install Administrative Modification  
BASF Corporation

120 PINE STREET,, Elyria, OH 44035

ID#:P0121632

Date of Action: 9/30/2016

Permit Desc:Agency-initiated administrative modification to correct BAT per SB265 and to add emission limitations and control devices that are legally and practically enforceable..

The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the ID # or: Anthony Becker, Ohio EPA DAPC, Northeast District Office, 2110 East Aurora Road, Twinsburg, OH 44087. Ph: (330)963-1200





**DRAFT**

**Division of Air Pollution Control  
Permit-to-Install  
for  
BASF Corporation**

Facility ID:	0247040195
Permit Number:	P0121632
Permit Type:	Administrative Modification
Issued:	9/30/2016
Effective:	To be entered upon final issuance





**Division of Air Pollution Control**  
**Permit-to-Install**  
for  
BASF Corporation

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**Draft Permit-to-Install**  
BASF Corporation  
**Permit Number:** P0121632  
**Facility ID:** 0247040195

**Effective Date:** To be entered upon final issuance

## Authorization

Facility ID: 0247040195  
Facility Description: Manufacturer of Industrial Inorganic Catalysts  
Application Number(s): M0004173  
Permit Number: P0121632  
Permit Description: Agency-initiated administrative modification to correct BAT per SB265 and to add emission limitations and control devices that are legally and practically enforceable.  
Permit Type: Administrative Modification  
Permit Fee: \$0.00 *DO NOT send payment at this time, subject to change before final issuance*  
Issue Date: 9/30/2016  
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

BASF Corporation  
120 PINE STREET  
Elyria, OH 44035

of a Permit-to-Install 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, Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 44087  
(330)963-1200

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

Craig W. Butler  
Director



**Draft Permit-to-Install**  
BASF Corporation  
**Permit Number:** P0121632  
**Facility ID:** 0247040195

**Effective Date:** To be entered upon final issuance

## Authorization (continued)

Permit Number: P0121632

Permit Description: Agency-initiated administrative modification to correct BAT per SB265 and to add emission limitations and control devices that are legally and practically enforceable.

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

**Emissions Unit ID:**

**P092**

Company Equipment ID: #6 Rotary Calciner (E-97)  
Superseded Permit Number: P0115631  
General Permit Category and Type: Not Applicable

**Emissions Unit ID:**

**P132**

Company Equipment ID: Powder Room-Pneumatic Conveyor Line Nos. 1-3  
Superseded Permit Number: P0115631  
General Permit Category and Type: Not Applicable



**Draft Permit-to-Install**  
BASF Corporation  
**Permit Number:** P0121632  
**Facility ID:** 0247040195  
**Effective Date:** To be entered upon final issuance

## **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) 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, Northeast District Office.

- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, 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, Northeast District Office. The written reports shall be submitted 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, and reporting requirements contained in this permit shall be submitted to the Ohio EPA DAPC, Northeast 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, Northeast 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) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted

local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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

- b) 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.
- c) The permittee shall submit progress reports to the Ohio EPA DAPC, Northeast 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, Northeast 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, Northeast District Office. 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, 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) not exempt from the requirement to obtain a Permit-to-Install.

**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 permittee 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 "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director 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.

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

- 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 operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d) must be obtained before operating the source in a manner that would violate the existing Title V permit requirements.

**13. Construction Compliance Certification**

The applicant shall identify the following dates in the "Air Services" 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 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.



**Draft Permit-to-Install**  
BASF Corporation  
**Permit Number:** P0121632  
**Facility ID:** 0247040195  
**Effective Date:** To be entered upon final issuance

## **B. Facility-Wide Terms and Conditions**



**Draft Permit-to-Install**  
BASF Corporation  
**Permit Number:** P0121632  
**Facility ID:** 0247040195

**Effective Date:** To be entered upon final issuance

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.



**Draft Permit-to-Install**  
BASF Corporation  
**Permit Number:** P0121632  
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**Effective Date:** To be entered upon final issuance

## **C. Emissions Unit Terms and Conditions**

**1. P092, #6 Rotary Calciner (E-97)**

**Operations, Property and/or Equipment Description:**

Rotary Calciner #6 in Building 16, equipped with a dust collector (CTO/SCR collector), dust collector (P092-DC), wet scrubber (Sly) and selective catalytic reduction (SCR) system. Dust collector (CTO/SCR collector) and selective catalytic reduction (SCR) system are in series, used to control particulate emissions and NOx emissions, respectively. Dust collector (P092-DC) is used for screening and packaging. Wet scrubber (Sly) is used for controlling particulate emissions generated from the feed hopper, and product discharge. The SCR system is used when producing NOx generating materials. The Sly scrubber is used when producing non-NOx generating materials.

- 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 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) June 30, 2008	<p>Design Efficiency:            For controlling exhaust gases from the calciner, excluding PM<sub>10</sub> emissions from natural gas combustion, install a wet scrubber (Sly) with a design control efficiency of at least 95% control of PM<sub>10</sub>;            For controlling the exhaust gases from the calciner, excluding PM<sub>10</sub> emissions from natural gas combustion, install a dust collector (CTO/SCR collector) with a design control efficiency of at least 99% control of PM<sub>10</sub>; and</p> <p>For screening and drumming, install a dust collector (P092-DC) with a design control efficiency of at least 99% control of PM<sub>10</sub>.</p> <p>PM<sub>10</sub>: Emissions of particulate matter with an aerodynamic diameter less than or equal to 10 micrometers.            See b)(2)a and b)(2)f.</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3) June 30, 2008	For controlling the exhaust gases from the calciner (when in NO <sub>x</sub> service, that is, whenever processing batches having NO <sub>x</sub> generating materials, excluding NO <sub>x</sub> emissions from natural gas combustion), install a selective catalytic reduction (SCR) system with a design control efficiency of at least 95% control of NO <sub>x</sub> .  See b)(2)a and b)(2)f.
c.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05 (A)(3) do not apply to the emissions of PM <sub>10</sub> and NO <sub>x</sub> from this air contaminant source since the potential to emit is less than 10 tons per year. See b)(2)b.
d.	OAC rule 3745-31-05(F)	See b)(2)c and c)(2).
e.	OAC rule 3745-17-11(B)	The particulate emissions from all process operations combined, excluding particulate emissions from natural gas combustion, shall not exceed 1.83 lbs/hr. See b)(2)d.
f.	OAC rule 3745-17-10(B)	The particulate emissions from the natural gas combustion process shall not exceed 0.020 lb/mmBtu of actual heat input. See b)(2)(e) and c)(1).
g.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

(2) Additional Terms and Conditions

- a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- c. This permit establishes the following legally and practically enforceable emission limitations. The legally and practically enforceable emission limitations are voluntary restrictions established under OAC rule 3745-31-05(F) and are based

on the operational restrictions contained in c)(2) which requires the use of dust collectors, a wet scrubber and SCR system:

- i. The PM<sub>10</sub> emissions from all process operations, excluding PM<sub>10</sub> emissions from natural gas combustion, shall not exceed 0.5 lb/hr.
  - ii. The NO<sub>x</sub> emissions from calciners P009, P010, P080, P092, P102 and P103 shall not exceed 1.86 lbs/hr (200.0 ppmvd) when operating the selective catalytic reduction (SCR) system.
- d. The allowable, hourly particulate emission rate is based on Table I in OAC rule 3745-17-11 when the maximum process weight rate is 600 lbs/hr.
  - e. The calciner is a natural gas-fired unit that indirectly transfers heat to materials in this manufacturing process.
  - f. In order to ensure the source continues to operate as designed; the permittee shall operate this emissions unit in accordance with the company's designed estimates or manufacturer's recommendations and shall follow the company's or manufacturer's recommended maintenance, at the recommended intervals. The permittee shall keep a record of the maintenance on this emissions unit along with company's or manufacturer's recommendations.
  - g. The particulate emissions from this emissions unit, excluding particulate emissions from natural gas combustion, shall be vented to the dust collector (P092-DC) and wet scrubber (Sly) at all times the emissions unit is in operation and when processing batches, having NO<sub>x</sub> generating materials, the exhaust gases from the calciner shall be vented to the dust collector (CTO/SCR collector).
  - h. Whenever processing batches having NO<sub>x</sub> generating materials, the exhaust gases from the calciner shall be vented to the SCR system at all times the emissions unit is in operation.
  - i. Each continuous NO<sub>x</sub> monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. At least 45 days before commencing certification testing of the continuous NO<sub>x</sub> monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NO<sub>x</sub> emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

- j. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.
- c) **Operational Restrictions**
  - (1) The permittee shall burn only natural gas in this emissions unit.
  - (2) The following operational restrictions have been included in this permit for the purpose of establishing the following legally and practically enforceable requirements: [See b)(2)c.]
    - a. For controlling exhaust gases from the calciner, excluding PM<sub>10</sub> emissions from natural gas combustion, design, install and operate capture and control equipment having at least a 100% capture efficiency and at least a 95% control efficiency (wet scrubber (Sly)) for the capture and removal of PM<sub>10</sub> emissions from the calciner.
    - b. For controlling the exhaust gases from the calciner, excluding PM<sub>10</sub> emissions from natural gas combustion, design, install and operate capture and control equipment having at least a 100% capture efficiency and at least a 99% control efficiency (dust collector (CTO/SCR collector)) for the capture and removal of PM<sub>10</sub> emissions from the calciner.
    - c. For screening and drumming operations, design, install and operate capture and control equipment having at least a 100% capture efficiency and at least a 99% control efficiency (dust collector P092-DC) for the capture and removal of PM<sub>10</sub> emissions from screening and drumming operations.
    - d. For controlling the exhaust gases from the calciner, excluding NO<sub>x</sub> emissions from natural gas combustion, design, install and operate capture and control equipment having at least a 100% capture efficiency and at least a 95% control efficiency (SCR system) for the capture and removal of NO<sub>x</sub> emissions from the calciner.
- 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.
  - (2) The permittee shall maintain daily records of the following information for this emissions unit:
    - a. the number and identification of each batch produced, having NO<sub>x</sub> generating materials;
    - b. an operating log when batches, having NO<sub>x</sub> generating materials, are processed in this emissions unit; and

- c. a log of the downtime for each capture (collection) system, SCR system and the associated monitoring equipment for the NO<sub>x</sub> control equipment, when batches, having NO<sub>x</sub> generating materials, are processed in this emissions unit.
- (3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range(s) and/or limit(s) for the wet scrubber (Sly), that shall be maintained in order to demonstrate compliance, whenever the scrubber is employed to control particulate emissions, shall be as follows:
- a. the acceptable range for the pressure drop across the process wet scrubber (Sly) demister shall be between 0.05 – 1.5 inches of water; and
  - b. the acceptable scrubber liquid flow rate of the process wet scrubber (Sly) shall not be less than 2 gallons per minute.
- (4) The permittee shall properly install, operate, and maintain equipment to continuously monitor the following control equipment parameters for the wet scrubber (Sly), during operation of this emission unit, when processing batches, having non-NO<sub>x</sub> generating materials, including periods of startup and shutdown:
- a. the pressure drop across each stage of the scrubber, in inches of H<sub>2</sub>O; and
  - b. the scrubber liquid flow rate to each stage of the scrubber, in gallons/minute.

The permittee shall record the pressure drop across the scrubber and the scrubber flow rate of the scrubber, on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

- (5) Whenever the monitored value of the pressure drop and/or liquid flow rate deviate(s) from the range(s) or limit(s) established in accordance with this permit for wet scrubber (Sly), 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 conducted 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 operation of the control equipment within the acceptable range(s)/limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time 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 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 values of the control equipment parameter(s) immediately after the corrective action(s) was/were implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation 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.

The range(s) or limit(s) on the control equipment parameter(s) (pressure drop and liquid flow rate) are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted control equipment parameter range(s) or limit(s) based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) of the controlled pollutant(s). In addition, approved revisions to the parameter range(s) and limit(s) will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

- (6) 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 each stack (dust collector (P092-DC), wet scrubber (Sly) and dust collector (CTO/SCR collector) serving this emissions unit. 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. identification of the stack(s);
  - b. the color of the emissions;
  - c. whether the emissions are representative of normal operations;
  - d. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - e. the total duration of any visible emissions incident; and
  - f. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (7) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across each dust collector when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the dust collector on a weekly basis. The monitoring equipment shall be installed, calibrated, operated, and

maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

- a. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the dust collector (P092-DC) is between 0.1 – 5 inches of water.
  - b. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the dust collector (CTO/SCR collector) is between 0.1 – 5 inches of water.
- (8) Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit for the dust collector (P092-DC) or dust collector (CTO/SCR collector), 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 conducted 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 operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time 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 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 readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation 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.

This range or limit on the pressure drop across the dust collector is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, 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 a minor permit modification.

- (9) For calciners P009, P010, P080, P092, P102 and P103, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous NO<sub>x</sub> monitoring system meets the requirements of Performance Specifications 2 and 6. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Director (the Ohio EPA Northeast District Office) upon request.
- (10) For calciners P009, P010, P080, P092, P102 and P103 when in NO<sub>x</sub> service using the SCR system, the permittee shall operate and maintain equipment to continuously monitor and record NO<sub>x</sub> emissions from the emissions unit(s) in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous NO<sub>x</sub> monitoring system including, but not limited to:

- a. emissions of NO<sub>x</sub> in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of NO<sub>x</sub> in units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous NO<sub>x</sub> monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO<sub>x</sub> monitoring system;
- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NO<sub>x</sub> monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
  - a. any period of time (start time and date, and end time and date) when this emissions unit was processing a product batch(es) having non-NO<sub>x</sub> generating materials and the process emissions were not vented to the wet scrubber (Sly);
  - b. each period of time (start time and date, and end time and date) when the pressure drop across of the wet scrubber (Sly) or the liquid flow rate of the scrubber was/were outside of the acceptable range(s) or limit(s);
  - c. each incident of deviation described in "a" or "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 emissions unit(s) into compliance and/or the control equipment parameter(s) into compliance with the acceptable range(s) or limit(s), 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).

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (3) The permittee shall submit semiannual written reports that identify:
  - a. all days during which any visible particulate emissions were observed from any stack (dust collector (P092-DC), dust collector (CTO/SCR collector) and wet scrubber (Sly)) serving this emissions unit; and
  - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

- (4) The permittee shall submit quarterly deviation (excursion) reports that identify the following occurrences:
  - a. each period of time (start time and date, and end time and date) when the pressure drop across the dust collector(s) (dust collector (P092-DC), dust collector (CTO/SCR collector) was outside of the acceptable range;

- b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the dust collector(s);
- c. each incident of deviation described in “a” (above) where a prompt investigation was not conducted;
- d. each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
- e. each incident of deviation described in “a” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (5) The permittee shall comply with the following quarterly reporting requirements for the calciners P009, P010, P080, P092, P102 and P103 when in NO<sub>x</sub> service using the SCR system, and the continuous NO<sub>x</sub> monitoring system:

- a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA Northeast District Office, documenting all instances of NO<sub>x</sub> emissions in excess of any applicable limit specified in this permit.

The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance and which calciner(s) was/were operating at the time of each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

- b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
  - i. the facility name and address;
  - ii. the manufacturer and model number of the continuous NO<sub>x</sub> and other associated monitors;
  - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

- iv. the excess emissions report (EER)\*, i.e., a summary of any exceedances during the calendar quarter, as specified above, for calciners P009, P010, P080, P092, P102 and P103 when in NO<sub>x</sub> service using the SCR system;
- v. the total NO<sub>x</sub> emissions for the calendar quarter (tons) from calciners P009, P010, P080, P092, P102 and P103 when in NO<sub>x</sub> service using the SCR system;
- vi. the total operating time (hours) when any calciner P009, P010, P080, P092, P102 and P103 operated when in NO<sub>x</sub> service using the SCR system;
- vii. the total operating time of the continuous NO<sub>x</sub> monitoring system while any calciner P009, P010, P080, P092, P102 and P103 operated when in NO<sub>x</sub> service using the SCR system;
- viii. results and dates of quarterly cylinder gas audits;
- ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO<sub>x</sub> monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction\*\* of the continuous NO<sub>x</sub> monitoring system, emissions unit(s), and/or control equipment;
- xii. the date, time, and duration of any downtime\*\* of the continuous NO<sub>x</sub> monitoring system and/or control equipment while the emissions unit(s) was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

\* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

\*\* each downtime and malfunction event shall be reported regardless of whether there is an exceedance of any applicable limit

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. Emission Limitation:

The particulate emissions from all process operations combined, excluding particulate emissions from natural gas combustion, shall not exceed 1.83 lbs/hr.

The PM<sub>10</sub> emissions from all process operations, excluding PM<sub>10</sub> emissions from natural gas combustion, shall not exceed 0.5 lb/hr.

Applicable Compliance Method:

Compliance is based on the summation of calculated, hourly particulate emission rates from the following equations:

**Raw material feed – wet scrubber (Sly):**

$$E = A*B*(1 - (1.0)(0.95))$$

where:

E = particulate emissions or PM<sub>10</sub> emissions, in lbs/hr;  
A = uncontrolled mass emission rate, 0.12 lb of PE/ton, 0.06 lb of PM<sub>10</sub>/ton (AP-42 section 11.24, Metallic Minerals Processing, Table 11.24-2, August, 1982);  
B = maximum process weight rate, 0.3 ton/hr;  
1.0 = fractional estimated capture efficiency, as provided in application; and  
0.95 = fractional estimated control efficiency, as provided in application.

**Product discharge –wet scrubber (Sly):**

$$E = A*B*(1 - (1.0)(0.95))$$

where:

E = particulate emissions or PM<sub>10</sub> emissions, in lbs/hr;  
A = uncontrolled mass emission rate, 0.12 lb of PE/ton, 0.06 lb of PM<sub>10</sub>/ton (AP-42 section 11.24, Metallic Minerals Processing, Table 11.24-2, August, 1982);  
B = maximum process weight rate, 0.2 ton/hr;  
1.0 = fractional estimated capture efficiency, as provided in application; and  
0.95 = fractional estimated control efficiency, as provided in application.

**Screening and drumming –dust collector (P092-DC):**

$$E = A*B*(1 - (1.0)(0.99))(2)$$

where:

E = particulate emissions or PM<sub>10</sub> emissions, in lbs/hr;  
A = uncontrolled mass emission rate, 0.12 lb of PE/ton, 0.06 lb of PM<sub>10</sub>/ton (AP-42 section 11.24, Metallic Minerals Processing, Table 11.24-2, August, 1982);  
B = maximum process weight rate, 0.2 ton/hr;  
1.0 = fractional estimated capture efficiency, as provided in application; and



0.99 = fractional estimated control efficiency, as provided in application.  
2 = number of transfer points

**Calcining exhaust – wet scrubber (Sly) or dust collector (CTO/SCR collector):**

$$E = A*B*(1 - (1.0)(0.95))$$

where:

E = particulate emissions or PM<sub>10</sub> emissions, in lbs/hr;  
A = uncontrolled mass emission rate, 120 lbs of PE/ton, 30 lbs of PM<sub>10</sub>/ton (AP-42 section 11.25, Fire Clay Processing, Table 11.25-7, January, 1995);  
B = maximum process weight rate, 0.3 ton/hr;  
1.0 = fractional estimated capture efficiency, as provided in application; and  
0.95 = fractional estimated control efficiency for wet scrubber (Sly, worst case) or  
0.99 = fractional estimated control efficiency for dust collector (CTO/SCR collector), as provided in application.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with the following methods:

Methods 1 – 5 of 40 CFR Part 60, Appendix A.

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

b. Emission Limitation:

The particulate emissions from the natural gas combustion process shall not exceed 0.020 lb/mmBtu of actual heat input.

Applicable Compliance Method:

Compliance is based on the following equation:

**Natural gas combustion:**

$$E = A/B$$

where:

E = particulate emission rate, in lb/mmBtu of actual heat input;  
A = emission factor, which is 7.6 lbs PE/PM<sub>10</sub> per million cubic foot of natural gas fuel flow per (AP-42 section 1.4, Natural Gas Combustion, Table 1.4-2, July, 1998); and  
B = heat content of natural gas, which is 1020 Btu/cf.

c. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

d. Testing requirements for continuous NO<sub>x</sub> monitoring systems:

The permittee has one continuous NO<sub>x</sub> monitoring system for monitoring emissions from the exhaust of the SCR system, which is used to control NO<sub>x</sub> emissions from calciners P009, P010, P080, P092, P102 and P103. Not all calciners are currently connected by ductwork to the SCR, but may be connected in the future.

For calciners that are connected to the SCR system (P009, P010, P080, P092, P102 and/or P103), within 3-months after the issuance of the permit, the permittee shall conduct certification tests of the continuous NO<sub>x</sub> monitoring system in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6; and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the Ohio EPA Northeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to Ohio EPA Northeast District Office and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous NO<sub>x</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6; and ORC section 3704.03(I).

Ongoing compliance with the NO<sub>x</sub> emission limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

e. Emission Limitation:

The NO<sub>x</sub> emissions from calciners P009, P010, P080, P092, P102 and P103 shall not exceed 1.86 lbs/hr (200.0 ppmvd) when operating the selective catalytic reduction (SCR) system.

Applicable Compliance Method:

Ongoing compliance with the NO<sub>x</sub> emission limitation contained in this permit, 40 CFR Part 60 and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

f. Design Efficiency:

For controlling exhaust gases from the calciner, excluding PM<sub>10</sub> emissions from natural gas combustion, install a wet scrubber (Sly) with a design control efficiency of at least 95% control of PM<sub>10</sub> was established based on the information provided by the permittee in permit application #A0049036;

For controlling the exhaust gases from the calciner, excluding PM<sub>10</sub> emissions from natural gas combustion, install a dust collector (CTO/SCR collector) with a design control efficiency of at least 99% control of PM<sub>10</sub> was established based on the information provided by the permittee in permit application #A0049036; and

For screening and drumming, install a dust collector (P092-DC) with a design control efficiency of at least 99% control of PM<sub>10</sub> was established based on the information provided by the permittee in permit application #A0049036.

PM<sub>10</sub>: Emissions of particulate matter with an aerodynamic diameter less than or equal to 10 micrometers.

For controlling the NO<sub>x</sub> emissions from exhaust gases from the calciner whenever processing batches having NO<sub>x</sub> generating materials, excluding NO<sub>x</sub> emissions from natural gas combustion, install a selective catalytic reduction (SCR) system with a design control efficiency of at least 95% control of NO<sub>x</sub> was established based on the information provided by the permittee in permit application # A0049036.

g) Miscellaneous Requirements

(1) None.

**2. P132, Powder Room-Pneumatic Conveyor Line Nos. 1-3**

**Operations, Property and/or Equipment Description:**

Equipment for the pneumatic conveyor lines (#1-3) occupy space in Buildings 11 and 27, each line is equipped with a super sack unloading with a capture hood; 50 lbs. bag transfer to drum with a capture hood; raw powder feed pneumatic conveying; and minor material transfer to a vacuum receiver. All captured hood exhaust gases are vented to dust collector (DC-7). Raw powder feed pneumatic conveying is equipped with a dust collector. Minor material transfer to a vacuum receiver is equipped with a dust collector. The bulk bag (super sack) loading station: 50 lbs. bag transfer with a hood; and pneumatic transfer to super sack. All captured bulk bag loading exhaust gases are vented to a dust collector. All dust collectors are used for controlling particulate emissions.

- 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 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) June 30, 2008	<p>Design Efficiency:</p> <p>For the bulk bag (super sack) loading station, install a dust collector with a design control efficiency of at least 99% control of PM<sub>10</sub>.</p> <p>For super sack transfer stations and other material transfer operations (50 lbs bags to drum), install a dust collector with a design control efficiency of at least 99% control of PM<sub>10</sub>.</p> <p>For the minor material transfer stations, install a dust collector with a design control efficiency of at least 99% control of PM<sub>10</sub>.</p> <p>For the vacuum receivers (raw material feed conveying), install a dust collector with a design control efficiency of at least</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		99% control of PM <sub>10</sub> .  PM <sub>10</sub> : Emissions of particulate matter with an aerodynamic diameter less than or equal to 10 micrometers.  See b)(2)a and b)(2)e.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05 (A)(3) do not apply to the emissions of PM <sub>10</sub> from this air contaminant source since the potential to emit is less than 10 tons per year. See b)(2)b.
c.	OAC rule 3745-31-05(F)	See b)(2)c and c)(1).
d.	OAC rule 3745-17-11(B)	The particulate emissions from all process operations, combined, shall not exceed 5.01 lbs/hr. See b)(2)d.
e.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

(2) Additional Terms and Conditions

- a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- c. This permit establishes the following legally and practically enforceable emission limitations. The legally and practically enforceable emission limitations are voluntary restrictions established under OAC rule 3745-31-05(F) and are based on the operational restrictions contained in c)(1) which requires the use of dust collectors:
  - i. The PM<sub>10</sub> emissions from all process operations, combined, shall not exceed 0.6 lb/hr.
- d. The allowable, hourly particulate emission rate is based on Table I in OAC rule 3745-17-11 when the maximum process weight rate is 2700 lbs/hr.
- e. In order to ensure the source continues to operate as designed; the permittee shall operate this emissions unit in accordance with the company's designed

estimates or manufacturer's recommendations and shall follow the company's or manufacturer's recommended maintenance, at the recommended intervals. The permittee shall keep a record of the maintenance on this emissions unit along with company's or manufacturer's recommendations.

- f. The particulate emissions from this emissions unit shall be vented to the dust collector(s) at all times the emissions unit is in operation.

c) **Operational Restrictions**

- (1) The following operational restrictions have been included in this permit for the purpose of establishing the following legally and practically enforceable requirements: [See b)(2)c.]

- a. For the bulk bag (super sack) loading station, design, install and operate capture and control equipment having at least a 95% capture efficiency and at least a 99% control efficiency (dust collector) for the capture and removal of PM<sub>10</sub> emissions from operations of the bulk (super sack) loading station;
- b. For super sack unloading stations, design, install and operate capture and control equipment having at least a 98% capture efficiency and at least a 99% control efficiency (dust collector) for the capture and removal of PM<sub>10</sub> emissions from operations of the super sack unloading stations;
- c. For material transfer operations (50 lbs bags to drum), design, install and operate capture and control equipment having at least a 95% capture efficiency and at least a 99% control efficiency (dust collector) for the capture and removal of PM<sub>10</sub> emissions from operations of the material transfer operations;
- d. For minor material transfer stations, design, install and operate capture and control equipment having at least a 100% capture efficiency and at least a 99% control efficiency (dust collector) for the capture and removal of PM<sub>10</sub> emissions from operations of the minor material transfer operations; and
- e. For the vacuum receivers (raw material feed conveying), install and operate capture and control equipment having at least a 100% capture efficiency and at least a 99% control efficiency (dust collector) for the capture and removal of PM<sub>10</sub> emissions from operations of the vacuum receivers.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) 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 each stack (dust collector (DC-7) and dust collector (bag dump station - super sack)) serving this emissions unit. 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. identification of the stack(s);
  - b. the color of the emissions;
  - c. whether the emissions are representative of normal operations;

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

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across each dust collector when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the dust collector on a weekly basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the dust collector (dust collector (DC-7)) is between 0.1 – 5 inches of water.

In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the dust collector (dust collector (bag dump station)) is between 0.1 – 5 inches of water.

- (3) Whenever the monitored value for the pressure drop deviates from the limit(s) or range(s) established in accordance with this permit for dust collector (DC-7) or dust collector (bag dump station - super sack)), 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 conducted 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 operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time 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 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 readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation 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.

This range or limit on the pressure drop across the dust collector(s) is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, 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 a minor permit modification.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

- a. all days during which any visible particulate emissions were observed from any stack (dust collector (DC-7) and dust collector (bag dump station - super sack)) serving this emissions unit; and
- b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following occurrences:

- a. each period of time (start time and date, and end time and date) when the pressure drop across the dust collector(s) (dust collector (DC-7) and dust collector (bag dump station - super sack)) was outside of the acceptable range;
- b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the dust collector(s);
- c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;

- d. each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
- e. each incident of deviation described in “a” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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. Emission Limitation:

The particulate emissions from all process operations, combined, shall not exceed 5.01 lbs/hr.

The PM<sub>10</sub> emissions from all process operations, combined, shall not exceed 0.6 lb/hr.

Applicable Compliance Method:

Compliance is based on the summation of calculated, hourly emission rates from the following equations for each pollutant:

**Bulk bag (super sack) loading stations (50 lbs bag to dump station) – dust collector (bag dump station - super sack):**

$$E = A*B*(1 - (0.95)(0.99))$$

where:

E = particulate emissions or PM<sub>10</sub> emissions, in lbs/hr;  
A = uncontrolled mass emission rate, 0.12 lb of PE/ton, 0.06 lb of PM<sub>10</sub>/ton (AP-42 section 11.24, Metallic Minerals Processing, Table 11.24-2, August, 1982);  
B = maximum process weight rate, 0.45 tons/hr;  
0.95 = fractional estimated capture efficiency, as provided in application; and  
0.99 = fractional estimated control efficiency, as provided in application.

**(Material transfer to super sack)**

$$E = A*B*(1 - (1.00)(0.99))$$

where:

E = particulate emissions or PM<sub>10</sub> emissions, in lbs/hr;  
A = uncontrolled mass emission rate, 0.12 lb of PE/ton, 0.06 lb of PM<sub>10</sub>/ton (AP-42 section 11.24, Metallic Minerals Processing, Table 11.24-2, August, 1982);  
B = maximum process weight rate, 0.45 tons/hr;  
1.00 = fractional estimated capture efficiency, as provided in application; and  
0.99 = fractional estimated control efficiency, as provided in application.

**Super sack unloading stations – dust collector (DC-7):**

$$E = A*B*C*(1 - (0.98)(0.99))$$

where:

E = particulate emissions or PM<sub>10</sub> emissions, in lbs/hr;  
A = uncontrolled mass emission rate, 0.12 lb of PE/ton, 0.06 lb of PM<sub>10</sub>/ton (AP-42 section 11.24, Metallic Minerals Processing, Table 11.24-2, August, 1982);  
B = maximum process weight rate, 0.338 tons/hr;  
C = number of conveyor lines, 3;  
0.98 = fractional estimated capture efficiency, as provided in application; and  
0.99 = fractional estimated control efficiency, as provided in application.

**Vacuum receivers (raw powder feed conveying) – dust collector (BBL-DF):**

$$E = A*B*C$$

where:

E = particulate emissions or PM<sub>10</sub> emissions, in lbs/hr;  
A = controlled mass emission rate, 0.58 lb of PE/ton, 0.58 lb of PM<sub>10</sub>/ton (AP-42 section 6.1, Carbon Black Manufacture, Table 6.1.4, May, 1983);  
B = maximum process weight rate, 0.05 tons/hr; and  
C = number of conveyor lines, 3.

**Other material transfer operations (50 lbs bags transfer to drum) – dust collector (DC-7):**

$$E = A*B*C*(1 - (0.95)(0.99))$$

where:

E = particulate emissions or PM<sub>10</sub> emissions, in lbs/hr;  
A = uncontrolled mass emission rate, 0.12 lb of PE/ton, 0.06 lb of PM<sub>10</sub>/ton (AP-42 section 11.24, Metallic Minerals Processing, Table 11.24-2, August, 1982);  
B = maximum process weight rate, 0.5 tons/hr;  
C = number of conveyor lines, 3;  
0.95 = fractional estimated capture efficiency, as provided in application; and  
0.99 = fractional estimated control efficiency, as provided in application.

**Minor material transfer stations – dust collector (filter - hepa):**



$$E = A*B*C*(1 - (1.0)(0.99))$$

where:

E = particulate emissions or PM<sub>10</sub> emissions, in lbs/hr;

A = uncontrolled mass emission rate, 0.58 lb of PE/ton, 0.58 lb of PM<sub>10</sub>/ton (AP-42 section 6.1, Carbon Black Manufacture, Table 6.1.4, May, 1983);

B = maximum process weight rate, 0.05 tons/hr;

C = number of conveyor lines, 3;

1.0 = fractional estimated capture efficiency, as provided in application; and

0.99 = fractional estimated control efficiency, as provided in application.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with the following methods:

Methods 1 – 5 of 40 CFR Part 60, Appendix A.

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

b. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

c. Design Efficiencies:

For bulk bag (super sack) loading station, install a dust collector with a design control efficiency of at least 99% control of PM<sub>10</sub>. The design control efficiency was established based on the information provided by the permittee in permit application #A0049036.

For super sack transfer stations and other material transfer operations (50 lbs bags to drum), install a dust collector with a design control efficiency of at least 99% control of PM<sub>10</sub>. The design control efficiency was established based on the information provided by the permittee in permit application #A0049036.

For the minor material transfer stations, install a dust collector with a design control efficiency of at least 99% control of PM<sub>10</sub>. The design control efficiency was established based on the information provided by the permittee in permit application #A0049036.



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BASF Corporation  
**Permit Number:** P0121632  
**Facility ID:** 0247040195

**Effective Date:** To be entered upon final issuance

For the vacuum receivers (raw material feed conveying), install a dust collector with a design control efficiency of at least 99% control of PM<sub>10</sub>. The design control efficiency was established based on the information provided by the permittee in permit application #A0049036.

g) Miscellaneous Requirements

- (1) None.