Facility ID: 0448010370 Issuance type: Title V Final Permit

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part III" and before "I. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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Facility ID: 0448010370 Issuance type: Title V Final Permit

**Part II - Specific Facility Terms and Conditions**

a **State and Federally Enforceable Section**

1. 40 CFR Part 63, Subpart OOO

   The permittee is subject to the applicable emission limitation(s) and/or control measures, operational restrictions, monitoring and/or record keeping requirements, reporting requirements, testing requirements and the general and/or other requirements specified in 40 CFR Part 63, Subpart OOO in accordance with 40 CFR Part 63, Subpart OOO (including the Table(s) and Appendix(ices) referenced in Subpart OOO) which are included in the text of Attachment 1 hereto, and are hereby incorporated into this permit as if fully written.

   Ordinarily, these requirements would be incorporated into Part III of this permit; however, incorporating Subpart OOO into Part III of this permit was not practical due to technical incompatibilities and the limitations of the STARS program. In addition, numerous difficulties were encountered in attempting to copy and paste the Subpart's tables and/or equations into STARS format.

2. 40 CFR Part 63, Subpart UU

   The permittee is subject to the applicable emission limitation(s) and/or control measures, operational restrictions, monitoring and/or record keeping requirements, reporting requirements, testing requirements and the general and/or other requirements specified in 40 CFR Part 63, Subpart UU in accordance with 40 CFR Part 63, Subpart UU (including the Table(s) and Appendix(ices) referenced in Subpart UU) which are included in the text of Attachment 2 hereto, and are hereby incorporated into this permit as if fully written.

   Ordinarily, these requirements would be incorporated into Part III of this permit; however, incorporating Subpart UU into Part III of this permit was not practical due to technical incompatibilities and the limitations of the STARS program. In addition, numerous difficulties were encountered in attempting to copy and paste the Subpart's tables and/or equations into STARS format.

3. 40 CFR Part 63, Subpart A

   The permittee is subject to the general requirements specified in 40 CFR Part 63, Subpart A in accordance with 40 CFR Part 63, Subpart A (including the Table(s) and Appendix(ices) referenced in Subpart A) which are included in the text of Attachment 3 hereto, and are hereby incorporated into this permit as if fully written.

   Ordinarily, these requirements would be incorporated into Part III of this permit; however, incorporating Subpart A into Part III of this permit was not practical due to technical incompatibilities and the limitations of the STARS program. In addition, numerous difficulties were encountered in attempting to copy and paste the Subpart's tables and/or equations into STARS format.

4. This facility developed and registered a risk management plan pursuant to section 112(r) of the Act and is required to comply with the requirements of section 112(r) and the regulations adopted thereunder.

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

Facility ID: 0448010370 Issuance type: Title V Final Permit

b **State Only Enforceable Section**

1. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

   P006 - catalyst blender;
   Z007 - blow-off hood;
   Z009 - formaldehyde tank;
   Z010 - fuel oil tank;
   Z011 - PVA tank; and
   Z017 - cooling tower.

Go to Part III for Emissions Unit B001
Go to Part III for Emissions Unit B002

Go to Part III for Emissions Unit P001
Go to Part III for Emissions Unit P002
Go to Part III for Emissions Unit P003
Go to Part III for Emissions Unit P007
Go to Part III for Emissions Unit P008
Go to Part III for Emissions Unit P009
Go to Part III for Emissions Unit P010
Go to Part III for Emissions Unit P011
Go to Part III for Emissions Unit P012

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

**Facility ID: 0448010370 Issuance type: Title V Final Permit**

**Part III - Terms and Conditions for Emissions Units**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: B001 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 4.125 mmBtu/hr boiler, fired with natural gas, no. 2 fuel oil and/or no. 6 fuel oil, with no controls | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-10(C)(1) | 0.40 pound of particulates per million Btu actual heat input |
| | OAC rule 3745-18-06 | exempt, see section A.I.2.a |

2. **Additional Terms and Conditions**

a. Fueling burning equipment which have rated heat input capacities equal to, or less than, 10 mmBtu/hr total rated capacity are exempt from the requirements of this rule.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
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II. **Operational Restrictions**

1. The permittee shall burn only natural gas, no. 2 fuel oil and/or no. 6 fuel oil in this emissions unit.

(Authority for term: OAC rule 3745-77-07(A)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
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III. **Monitoring and/or Record Keeping Requirements**

1. For each day during which the permittee burns a fuel other than natural gas, no. 2 fuel oil and/or no. 6 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

(Authority for term: OAC rule 3745-77-07(C)(1))

2. For each day during which the permittee burns no. 6 fuel oil, the permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack 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. the 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission 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.

(Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, no. 2 fuel oil and/or no. 6 fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

   (Authority for term: OAC rule 3745-77-07(C)(1))

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Toledo Division of Environmental Services (TDOES) by January 31 and July 31 of each year and shall cover the previous 6-month period.

   (Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

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

      Applicable Compliance Method:

      Compliance shall be demonstrated based upon visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

      (Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1))

   b. Emission Limitation:

      0.40 pound of particulate per million Btu actual heat input

      Applicable Compliance Method:

      When burning natural gas, compliance may be demonstrated by dividing the particulate emission factor for natural gas combustion (1.9 lbs/mmcuft) obtained from AP-42, 5th Edition, Table 1.4-2, dated July, 1998, by the heating value of natural gas (1020 mmBtu/mmcuft).

      When burning no. 2 fuel oil, compliance may be demonstrated by dividing the particulate emission factor for no. 2 fuel oil combustion (2 lbs/1000 gal) obtained from AP-42, 5th Edition, Table 1.3-1, dated September, 1998, by the heating value of no. 2 fuel oil (140 mmBtu/1000 gal).

      When burning no. 6 fuel oil, compliance may be demonstrated by dividing the particulate emission factor for no. 6 fuel oil combustion (10 lbs/1000 gal) obtained from AP-42, 5th Edition, Table 1.3-1, dated September, 1998, by the heating value of no. 6 fuel oil (150 mmBtu/1000 gal).

      If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the method(s) and procedures specified in OAC rule 3745-17-03(B)(9).

      (Authority for term: OAC rule 3745-17-03(B)(9) and OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
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VI. **Miscellaneous Requirements**

1. None

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

**Facility ID: 0448010370 Issuance type: Title V Final Permit**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: B001 Issuance type: Title V Final Permit**

**B. State Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
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IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. None

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

**Facility ID: 0448010370 Issuance type: Title V Final Permit**

**Part III - Terms and Conditions for Emissions Units**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: B002 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 4.125 mmBtu/hr boiler, fired with natural gas, no. 2 fuel oil and/or no. 6 fuel oil, with no controls | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-10(C)(1) | 0.40 pound of particulates per million Btu actual heat input |
| | OAC rule 3745-18-06 | exempt, see section A.I.2.a |

2. **Additional Terms and Conditions**

a. Fueling burning equipment which have rated heat input capacities equal to, or less than, 10 mmBtu/hr total rated capacity are exempt from the requirements of this rule.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. The permittee shall burn only natural gas, no. 2 fuel oil and/or no. 6 fuel oil in this emissions unit.

(Authority for term: OAC rule 3745-77-07(A)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. For each day during which the permittee burns a fuel other than natural gas, no. 2 fuel oil and/or no. 6 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

(Authority for term: OAC rule 3745-77-07(C)(1))

2. For each day during which the permittee burns no. 6 fuel oil, the permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack 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. the 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission 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.

(Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, no. 2 fuel oil and/or no. 6 fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

   (Authority for term: OAC rule 3745-77-07(C)(1))

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Toledo Division of Environmental Services (TDOES) by January 31 and July 31 of each year and shall cover the previous 6-month period.

   (Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

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

      Applicable Compliance Method:

      Compliance shall be demonstrated based upon visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

      (Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1))

   b. Emission Limitation:

      0.40 pound of particulate per million Btu actual heat input

      Applicable Compliance Method:

      When burning natural gas, compliance may be demonstrated by dividing the particulate emission factor for natural gas combustion (1.9 lbs/mmcuft) obtained from AP-42, 5th Edition, Table 1.4-2, dated July, 1998, by the heating value of natural gas (1020 mmBtu/mmcuft).

      When burning no. 2 fuel oil, compliance may be demonstrated by dividing the particulate emission factor for no. 2 fuel oil combustion (2 lbs/1000 gal) obtained from AP-42, 5th Edition, Table 1.3-1, dated September, 1998, by the heating value of no. 2 fuel oil (140 mmBtu/1000 gal).

      When burning no. 6 fuel oil, compliance may be demonstrated by dividing the particulate emission factor for no. 6 fuel oil combustion (10 lbs/1000 gal) obtained from AP-42, 5th Edition, Table 1.3-1, dated September, 1998, by the heating value of no. 6 fuel oil (150 mmBtu/1000 gal).

      If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the method(s) and procedures specified in OAC rule 3745-17-03(B)(9).

      (Authority for term: OAC rule 3745-17-03(B)(9) and OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. None

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**Facility ID: 0448010370 Issuance type: Title V Final Permit**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: B002 Issuance type: Title V Final Permit**

**B. State Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. None

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

**Facility ID: 0448010370 Issuance type: Title V Final Permit**

**Part III - Terms and Conditions for Emissions Units**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P001 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control |
|---|---|---|

| | | Measures |
|---|---|---|
| Resin dryer "A" with wet scrubber | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | 5.14 lbs/hr of particulate emissions |
| | OAC rule 3745-21-07(G)(2) | See section A.I.2.a below. |
| | 40 CFR Part 63, Subpart OOO | exempt, existing continuous process vent |
| | | See Attachment 1. |

2. **Additional Terms and Conditions**

a. This emissions unit is exempted from the requirements of OAC rule 3745-21-07(G)(2) by OAC rule 3745-21-07(G)(9)(c)(iii). The only volatile liquid organic material that shall be utilized in this emissions unit is formaldehyde, which is not a photochemically reactive material as that term is defined by OAC rule 3745-21-01(C)(5)(a).

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information at the beginning of each shift for each day the emissions unit is in operation:

a. visually confirm that the stack emissions are being properly controlled; and

b. visually confirm that the scrubber pump is running and that the flow rate from the drain lines is adequate.

(Authority for term: OAC rule 3745-77-07(C)(1))

2. The permittee shall collect and record the following information at every system start-up:

a. visually inspect the scrubber chamber and the orifices to ensure that they are free from blockage;

b. conduct a water flow test for the orifices, and visually confirm that they are free from blockage;

c. install the water nozzles into the orifices, and again conduct a visually confirmed water flow test;

d. visually inspect the demister bundles to ensure that they are not overloaded or ready to be changed;

e. conduct a start up test of the scrubber unit, and visually confirm that the scrubber pump is running and that the flow rate from the drain lines is adequate; and

f. visually confirm that the stack emissions are being properly controlled.

(Authority for term: OAC rule 3745-77-07(C)(1))

3. The permittee shall collect and record the following information each calendar year for the drying operation (for the purpose of determining the total annual emissions from this emissions unit):

a. the company identification for each feed stock employed;

b. the number of pounds of each feed stock employed;

c. the number of pounds of all feed stocks employed; and

d. the annual particulate emission rate, i.e., the particulate emission factor determined during the most recent emissions test which demonstrated compliance with the emission limitation, in pounds of particulate per pound of feed stock, multiplied by the annual summation of the feed stocks employed, in pounds of feed stock per year.

Note: The feed stock information must be for the feed stock as employed, including any steam added at the emissions unit.

(Authority for term: OAC rule 3745-77-07(C)(1))

4. 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 stack 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. the 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. The permittee shall submit semiannual written reports that (a) identify each day during which the scrubber inspection form(s) indicates a problem with scrubber operation, (b) the cause(s) of the problem and (c) the corrective action which has been or will be taken to prevent similar problems in the future. These reports shall be submitted to the Toledo Division of Environmental Services (TDOES) by January 31 and July 31 of each year and shall cover the previous 6-month period.

   (Authority for term: OAC rule 3745-77-07(C)(1))

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the TDOES by January 31 and July 31 of each year and shall cover the previous 6-month period.

   (Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
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V. **Testing Requirements**

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

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

      Applicable Compliance Method:

      Compliance shall be demonstrated based upon visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

      (Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1))

   b. Emission Limitation:

      5.14 lbs/hr of particulate emissions

      Applicable Compliance Method:

      If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10).

      (Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. None

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**Facility ID: 0448010370 Issuance type: Title V Final Permit**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P001 Issuance type: Title V Final Permit**

**B. State Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Resin dryer "A" with wet scrubber | | |

2. **Additional Terms and Conditions**

   1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
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II. **Operational Restrictions**

1. The average hourly feed stock rate for this emissions unit shall not exceed by more than 10% the feed rate determined during the most recent emission test which demonstrated compliance with the allowable mass emission rate for particulates. Operation of this emissions unit at a feed rate greater than the compliant level is not necessarily indicative of an emission violation, but rather serves as a trigger level for additional testing and/or further investigation to establish compliance with the emission limitations. The permittee may increase the average feed rate by demonstrating compliance during an emission test, performed in accordance with the procedures and method(s) as detailed in OAC rule 3745-17-03(B)(10), at a higher average hourly feed stock rate.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information each day for the drying operation:

   a. the number of pounds of all feed stocks employed;

   b. the total number of hours the emissions unit was in operation; and

   c. the average hourly feed stock rate, (a)/(b), in pounds per hour average.

   [Note: The feed stock information must be for the feed stocks as employed, including any steam added at the emissions unit.]

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. If for any reason the average hourly feed stock rate exceeds by more than 10% the feed rate determined during the most recent emission test which demonstrated compliance with the allowable mass emission rate for particulates, the following information shall be reported within 5 business days after the exceedance:

   a. the date of the exceedance;

   b. the time interval over which the exceedance occurred;

   c. the value of the exceedance;

   d. the cause(s) of the exceedance;

   e. the corrective action which has been or will be taken to prevent similar exceedances in the future; and

   f. a copy of data and/or information which shows the exceedance.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

   1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
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VI. **Miscellaneous Requirements**

   1. None

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**Facility ID: 0448010370 Issuance type: Title V Final Permit**

**Part III - Terms and Conditions for Emissions Units**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P002 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Resin dryer "B" with wet scrubber | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | 5.14 lbs/hr of particulate emissions |
| | OAC rule 3745-21-07(G)(2) | See section A.I.2.a below. |
| | 40 CFR Part 63, Subpart OOO | exempt, existing continuous process vent<br><br>See Attachment 1. |

2. **Additional Terms and Conditions**

a. This emissions unit is exempted from the requirements of OAC rule 3745-21-07(G)(2) by OAC rule 3745-21-07(G)(9)(c)(iii). The only volatile liquid organic material that shall be utilized in this emissions unit is formaldehyde, which is not a photochemically reactive material as that term is defined by OAC rule 3745-21-01(C)(5)(a).

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information at the beginning of each shift for each day the emissions unit is in operation:

a. visually confirm that the stack emissions are being properly controlled; and

b. visually confirm that the scrubber pump is running and that the flow rate from the drain lines is adequate.

(Authority for term: OAC rule 3745-77-07(C)(1))

2. The permittee shall collect and record the following information at every system start-up:

a. visually inspect the scrubber chamber and the orifices to ensure that they are free from blockage;

b. conduct a water flow test for the orifices, and visually confirm that they are free from blockage;

c. install the water nozzles into the orifices, and again conduct a visually confirmed water flow test;

d. visually inspect the demister bundles to ensure that they are not overloaded or ready to be changed;

e. conduct a start up test of the scrubber unit, and visually confirm that the scrubber pump is running and that the flow rate from the drain lines is adequate; and

f. visually confirm that the stack emissions are being properly controlled.

(Authority for term: OAC rule 3745-77-07(C)(1))

3. The permittee shall collect and record the following information each calendar year for the drying operation (for the purpose of determining the total annual emissions from this emissions unit):

a. the company identification for each feed stock employed;

b. the number of pounds of each feed stock employed;

c. the number of pounds of all feed stocks employed; and

d. the annual particulate emission rate, i.e., the particulate emission factor determined during the most recent emissions test which demonstrated compliance with the emission limitation, in pounds of particulate per pound of feed stock, multiplied by the annual summation of the feed stocks employed, in pounds of feed stock per year.

Note: The feed stock information must be for the feed stock as employed, including any steam added at the emissions unit.

(Authority for term: OAC rule 3745-77-07(C)(1))

4. 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 stack 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. the 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. The permittee shall submit semiannual written reports that (a) identify each day during which the scrubber inspection form(s) indicates a problem with scrubber operation, (b) the cause(s) of the problem and (c) the corrective action which has been or will be taken to prevent similar problems in the future. These reports shall be submitted to the Toledo Division of Environmental Services (TDOES) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(Authority for term: OAC rule 3745-77-07(C)(1))

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the TDOES by January 31 and July 31 of each year and shall cover the previous 6-month period.

(Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

Compliance shall be demonstrated based upon visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

(Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1))

b. Emission Limitation:

5.14 lbs/hr of particulate emissions

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10).

(Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
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VI. **Miscellaneous Requirements**

1. None

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**Facility ID: 0448010370 Issuance type: Title V Final Permit**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P002 Issuance type: Title V Final Permit**

**B. State Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Resin dryer "B" with wet scrubber | | |

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
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II. **Operational Restrictions**

1. The average hourly feed stock rate for this emissions unit shall not exceed by more than 10% the feed rate determined during the most recent emission test which demonstrated compliance with the allowable mass emission rate for particulates. Operation of this emissions unit at a feed rate greater than the compliant level is not necessarily indicative of an emission violation, but rather serves as a trigger level for additional testing and/or further investigation to establish compliance with the emission limitations. The permittee may increase the average feed rate by demonstrating compliance during an emission test, performed in accordance with the procedures and method(s) as detailed in OAC rule 3745-17-03(B)(10), at a higher average hourly feed stock rate.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information each day for the drying operation:

a. the number of pounds of all feed stocks employed;

b. the total number of hours the emissions unit was in operation; and

c. the average hourly feed stock rate, (a)/(b), in pounds per hour average.

[Note: The feed stock information must be for the feed stocks as employed, including any steam added at the emissions unit.]

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. If for any reason the average hourly feed stock rate exceeds by more than 10% the feed rate determined during the most recent emission test which demonstrated compliance with the allowable mass emission rate for particulates, the following information shall be reported within 5 business days after the exceedance:

a. the date of the exceedance;

b. the time interval over which the exceedance occurred;

c. the value of the exceedance;

d. the cause(s) of the exceedance;

e. the corrective action which has been or will be taken to prevent similar exceedances in the future; and

f. a copy of data and/or information which shows the exceedance.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. None

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

**Facility ID: 0448010370 Issuance type: Title V Final Permit**

**Part III - Terms and Conditions for Emissions Units**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P003 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Resin dryer "C" with wet scrubber | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | 4.63 lbs/hr of particulate emissions |
| | OAC rule 3745-21-07(G)(2) | See section A.I.2.a below. |
| | 40 CFR Part 63, Subpart OOO | exempt, existing continuous process vent<br><br>See Attachment 1. |

2. **Additional Terms and Conditions**

a. This emissions unit is exempted from the requirements of OAC rule 3745-21-07(G)(2) by OAC rule 3745-21-07(G)(9)(c)(iii). The only volatile liquid organic material that shall be utilized in this emissions unit is formaldehyde, which is not a photochemically reactive material as that term is defined by OAC rule 3745-21-01(C)(5)(a).

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information at the beginning of each shift for each day the

emissions unit is in operation:

a. visually confirm that the stack emissions are being properly controlled; and

b. visually confirm that the scrubber pump is running and that the flow rate from the drain lines is adequate.

(Authority for term: OAC rule 3745-77-07(C)(1))

2. The permittee shall collect and record the following information at every system start-up:

a. visually inspect the scrubber chamber and the orifices to ensure that they are free from blockage;

b. conduct a water flow test for the orifices, and visually confirm that they are free from blockage;

c. install the water nozzles into the orifices, and again conduct a visually confirmed water flow test;

d. visually inspect the demister bundles to ensure that they are not overloaded or ready to be changed;

e. conduct a start up test of the scrubber unit, and visually confirm that the scrubber pump is running and that the flow rate from the drain lines is adequate; and

f. visually confirm that the stack emissions are being properly controlled.

(Authority for term: OAC rule 3745-77-07(C)(1))

3. The permittee shall collect and record the following information each calendar year for the drying operation (for the purpose of determining the total annual emissions from this emissions unit):

a. the company identification for each feed stock employed;

b. the number of pounds of each feed stock employed;

c. the number of pounds of all feed stocks employed; and

d. the annual particulate emission rate, i.e., the particulate emission factor determined during the most recent emissions test which demonstrated compliance with the emission limitation, in pounds of particulate per pound of feed stock, multiplied by the annual summation of the feed stocks employed, in pounds of feed stock per year.

Note: The feed stock information must be for the feed stock as employed, including any steam added at the emissions unit.

(Authority for term: OAC rule 3745-77-07(C)(1))

4. 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 stack 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. the 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. The permittee shall submit semiannual written reports that (a) identify each day during which the scrubber inspection form(s) indicates a problem with scrubber operation, (b) the cause(s) of the problem and (c) the corrective action which has been or will be taken to prevent similar problems in the future. These reports shall be submitted to the Toledo Division of Environmental Services (TDOES) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(Authority for term: OAC rule 3745-77-07(C)(1))

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the TDOES by January 31 and July 31 of each year and shall cover the previous 6-month period.

(Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

Compliance shall be demonstrated based upon visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

(Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1))

b. Emission Limitation:

4.63 lbs/hr of particulate emissions

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10).

(Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. None

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**Facility ID: 0448010370 Issuance type: Title V Final Permit**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P003 Issuance type: Title V Final Permit**

**B. State Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Resin dryer "C" with wet scrubber | | |

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. The average hourly feed stock rate for this emissions unit shall not exceed by more than 10% the feed rate determined during the most recent emission test which demonstrated compliance with the allowable mass emission rate for particulates. Operation of this emissions unit at a feed rate greater than the compliant level is not necessarily indicative of an emission violation, but rather serves as a trigger level for additional testing and/or further investigation to establish compliance with the emission limitations. The permittee may increase the average feed rate by demonstrating compliance during an emission test, performed in accordance with the procedures and method(s) as detailed in OAC rule 3745-17-03(B)(10), at a higher average hourly feed stock rate.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information each day for the drying operation:

a. the number of pounds of all feed stocks employed;

b. the total number of hours the emissions unit was in operation; and

c. the average hourly feed stock rate, (a)/(b), in pounds per hour average.

[Note: The feed stock information must be for the feed stocks as employed, including any steam added at the emissions unit.]

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. If for any reason the average hourly feed stock rate exceeds by more than 10% the feed rate determined during the most recent emission test which demonstrated compliance with the allowable mass emission rate for particulates, the following information shall be reported within 5 business days after the exceedance:

a. the date of the exceedance;

b. the time interval over which the exceedance occurred;

c. the value of the exceedance;

d. the cause(s) of the exceedance;

e. the corrective action which has been or will be taken to prevent similar exceedances in the future; and

f. a copy of data and/or information which shows the exceedance.

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. None

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**Facility ID: 0448010370 Issuance type: Title V Final Permit**

**Part III - Terms and Conditions for Emissions Units**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P007 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| amino/phenolic resin processing unit, general provisions | OAC rule 3745-21-07(G)(2) | See section A.I.2.a. |
| | 40 CFR Part 63, Subpart A | See section A.I.2.b. |

| | | |
|---|---|---|
| | 40 CFR Part 63, Subpart OOO | See section A.I.2.c. |
| reactor batch process vent controlled by a condenser with spray wash system | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | 1.8 lbs/hr of particulate emissions |
| | 40 CFR Part 63, Subpart OOO | See section A.I.2.d. |
| heat exchange systems | 40 CFR Part 63, Subpart OOO | See section A.I.2.e. |
| equipment leaks, controlled by equipment design and operating and maintenance programs | 40 CFR Part 63, Subpart OOO | See section A.I.2.f. |
| storage vessels | 40 CFR Part 63, Subpart OOO | See section A.I.2.g. |

2. **Additional Terms and Conditions**

a. This emissions unit is exempted from the requirements of OAC rule 3745-21-07(G)(2) by OAC rule 3745-21-07(G)(9)(c)(iii). The only volatile liquid organic material that shall be utilized in this emissions unit is formaldehyde, which is not a photochemically reactive material as that term is defined by OAC rule 3745-21-01(C)(5)(a).

b. i. 40 CFR Part 63, Subpart A [see Attachment 3] provides applicability provisions, definitions, and other general provisions that are applicable to emissions units affected by 40 CFR Part 63.

ii. Table 1 of 40 CFR Part 63, Subpart OOO [see Attachment 1] specifies the provisions of 40 CFR Part 63, Subpart A that apply and those provisions that do not apply.

(Authority for term: 40 CFR 63.1400(j))

c. The provisions of 40 CFR Part 63, Subpart OOO [see Attachment 1] apply to processes that produce amino/phenolic resins and that are located at a plant site that is a major source. This emissions unit is utilized to produce amino/phenolic resins at the BTLSR Toledo plant site, which is a major source of the hazardous air pollutant (HAP) formaldehyde. This emissions unit is therefore subject to the provisions of 40 CFR Part 63, Subpart OOO [see Attachment 1].

(Authority for term: 40 CFR 63.1400(a))

d. Except as otherwise provided in 40 CFR 63.1406 [see Attachment 1], the permittee shall control organic HAP emissions from the reactor batch process vent by complying with either of the following:

i. reduce organic HAP emissions for the batch cycle by 83 weight percent using a condenser coil; or

ii. reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 pound of organic HAP per 1,000 pounds of product or less for solvent-based resin production, or to 0.0057 pound of organic HAP per 1,000 pounds of product or less for non-solvent-based resin production.

(Authority for term: 40 CFR 63.1406(a)(2))

e. There are no applicable requirements for existing heat exchangers (cooling coils) with a minimum cooling water pressure more than 35 kilopascals greater than the maximum process side pressure.

(Authority for term: 40 CFR 63.1409(a)(1))

f. Except as otherwise provided in 40 CFR Part 63, Subpart OOO [see Attachment 1], the permittee shall establish a leak detection and repair program which complies with the requirements of 40 CFR Part 63, Subpart UU [see Attachment 2]. These requirements are described in 40 CFR 63.1029 [see Attachment 2] and 63.1410 [see Attachment 1]. These requirements apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors and instrumentation systems in organic HAP service.

(Authority for term: 40 CFR 63.1410)

g. There are no applicable requirements for existing storage vessels with a capacity of less than 50,000 gallons. The existing storage vessels include the following:

formaldehyde tank (Z009) - 14,600 gallons;
fuel oil tank (Z010) - 10,000 gallons;
PVA tank (Z011) - 14,600 gallons;
"A" system resin spray dryer (P001) tanks - 2 tanks at 1,500 gallons each;
"B" system resin spray dryer (P002) tanks - 2 tanks at 1,000 gallons each;
"C" system resin spray dryer (P003) tanks - 2 tanks at 5,000 gallons each;
MUS tanks - 2 tanks at 4,000 gallons each; and
Wet blend tank - 1,000 gallons.

(Authority for term: 40 CFR 63.1404(a))

Go to the top of this document

Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. At all times that this emissions unit is in operation, the permittee shall operate the reactor cooling coil heat exchange system with a minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.

   (Authority for term: OAC rule 3745-77-07(A)(1))

2. The permittee shall establish parameter monitoring levels for the reactor batch process vent condenser based on a design evaluation or performance test, in compliance with the requirements of 40 CFR 63.1413 [see Attachment 1] for small control devices. In compliance with Table 4 of 40 CFR Part 63, Subpart OOO [see Attachment 1], these parameter monitoring levels will include the maximum temperature of the gases exiting the condenser established to assure compliance with the emission reduction specified in Section A.I.2.d above.

   (Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1413(a)(1)(ii))

3. Except as otherwise provided in 40 CFR Part 63 Subpart OOO [see Attachment 1], the permittee shall operate each control device such that the daily average of monitored parameters, established as specified in the paragraphs above, remains below the maximum level, as appropriate.

   (Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1413(a)(4)(i))

4. The permittee shall comply with the requirements of 40 CFR Part 63, Subpart UU [see Attachment 2] from all equipment, as defined under 40 CFR 63.1402 [see Attachment 1], that contains or contacts 5 weight-percent HAP or greater and operates 300 hours per year or more. For this emissions unit, all equipment that contacts the formalin solution will be considered to be in heavy liquid service.

   (Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1410)

5. The permittee shall identify equipment subject to the equipment leak standards, in compliance with the requirements of 40 CFR 63.1022 [see Attachment 2].

   (Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1022)

6. Except as otherwise provided in 40 CFR 63.1024 [see Attachment 2], the permittee shall repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected. A first attempt at repair, as defined in 40 CFR 63.1024(a) [see Attachment 2], shall be made no later than 5 days after the leak is detected.

   (Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1024(a))

7. The permittee shall operate the condenser water wash system whenever this emissions unit is loading solid feed stock.

   (Authority for term: OAC rule 3745-77-07(A)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall operate and maintain equipment to monitor the pressure differential between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure differential on a daily basis.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1415)

2. The permittee shall operate and maintain a low pressure alarm system which will indicate by visible and audible means that the pressure differential between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side has dropped below the required 35 psia minimum. If the pressure differential drops below 35 psia, the permittee shall record the beginning and ending times of the deviation, and the actions taken to alleviate the deviation.

   (Authority for term: OAC rule 3745-77-07(C)(1))

3. Except as otherwise provided in 40 CFR 63.1413 [see Attachment 1], the permittee shall establish parameter monitoring levels by design evaluation, or during the performance test of, the reactor batch process vent condenser.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1413(a)(1)(ii))

4. Except as otherwise provided in 40 CFR 63.1415 [see Attachment 1], the permittee shall maintain and operate a reactor batch process vent condenser exit temperature monitoring device equipped with a continuous recorder. This monitoring equipment shall be in operation at all times when the emissions unit is in operation.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1415(a), (a)(1), (b)(3))

5. Except as otherwise provided in 40 CFR 63.1416 [see Attachment 1], the permittee shall maintain records of the daily average reactor batch process vent condenser exit temperature.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(c))

6. Except as otherwise provided in 40 CFR 63.1416(b) [see Attachment 1], the permittee shall maintain records of the occurrence and duration of each start-up, shutdown, or malfunction during which excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur, records reflecting whether the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed and documentation of actions taken that are not consistent with the plan.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(b))

7. As provided in 40 CFR 63.1416(d) [see Attachment 1], where applicable the permittee shall maintain records of operation when monitors are not operating, operation of bypass lines, inspections and operation of the seal or closure mechanisms, and records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(d))

8. The permittee shall comply with the requirements of 40 CFR 63.1029 [see Attachment 2]. Pumps, valves, connectors, agitators, pressure relief devices, and instrumentation systems in heavy liquid service shall be monitored.

   i. If evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method, the equipment shall be repaired. Repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

   ii. Within 5 days of a the detection of a potential leak, the equipment shall be monitored by instrument reading using Method 21 of 40 CFR Part 60, Appendix A, as specified in 40 CFR 63.1023 [see Attachment 2]. If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, or 2,000 parts per million or greater for all other pumps, or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected and shall be repaired pursuant to 40 CFR 63.1024 [see Attachment 2], as applicable.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1029)

9. For each leak detected, the information specified below shall be recorded and maintained:

   i. the date of first attempt to repair the leak;

   ii. the date of successful repair of the leak;

   iii. the maximum instrument reading measured by Method 21 of 40 CFR Part 60, Appendix A at the time the leak is successfully repaired or determined to be nonrepairable;

   iv. except as otherwise provided in 40 CFR 63.1024(f)(iv) [see Attachment 2], the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak; and

   v. the dates of process unit or affected facility shutdowns that occur while the equipment is unrepaired.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1024(f))

10. The permittee shall prepare and implement a pump quality assurance program in compliance with 40 CFR 63.1035 [see Attachment 2]. If greater than 10 percent (or three pumps) leak, on a 6-month rolling average, the permittee shall comply with the QIP requirements. Additional record keeping requirements apply while the QIP is in effect.

    (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1035)

11. The permittee shall maintain daily records that document any time periods when the condenser water wash system was not in service when the emissions unit was loading solid feed stock.

    (Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. The permittee shall submit quarterly reports indicating any exceedances (deviations) of the pressure differential requirements (between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side), and when applicable, the information required under section A.III.2 above.

   (Authority for term: OAC rule 3745-77-07(C)(1))

2. Except as otherwise provided in 40 CFR 63.1417 [see Attachment 1], the permittee shall submit semiannual reports indicating any exceedances of the maximum allowable daily average reactor batch process vent condenser exit temperature, and when applicable, the information required under 40 CFR 63.1416(d)(3)(ii) [see Attachment 1].

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1417(f))

3. The permittee shall report the information specified in paragraphs (b)(1) through (b)(8) of 40 CFR 63.1039 [see Attachment 2], as applicable, including:

a. where any delay of repair is utilized pursuant to 40 CFR 63.1024(d) [see Attachment 2], that delay of repair has occurred and the number of instances of delay of repair;

b. if applicable, the initiation of a monthly monitoring program for valves pursuant to 40 CFR 63.1025(b)(3)(i) [see Attachment 2]; and

c. if applicable, the initiation of a quality improvement program for pumps pursuant to 40 CFR 63.1035 [see Attachment 2].

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1039)

4. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any daily record showing that the condenser water wash system was not in service when the emissions unit was loading solid feed stock. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days after the event occurs.

(Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

Compliance shall be demonstrated based upon visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1))

b. Emission Limitation:

1.8 lbs/hr of particulate emissions

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission testing performed in accordance with the procedures specified in Methods 1 through 5 of 40 CFR Part 60, Appendix A.

(Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1))

c. Emission Limitation:

i. reduce organic HAP emissions for the batch cycle by 83 weight percent using a condenser coil; or

ii. reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 pound of organic HAP per 1,000 pounds of product or less for solvent-based resin production, or to 0.0057 pound of organic HAP per 1,000 pounds of product or less for non-solvent-based resin production.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with the procedures specified in 40 CFR 63.1414 [see Attachment 1].

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1414)

2. The permittee shall conduct a design evaluation for the reactor batch process vent condenser in compliance with the requirements of 40 CFR 63.1413 [see Attachment 1] for a small control device. In compliance with 40 CFR 63.1413(a)(3) the design evaluation shall consider the composition and organic HAP concentration of the vent stream, vent stream flow rate, relative humidity, and temperature and shall establish the operating parameters of the control device, design outlet organic HAP compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet. The temperature of the gas stream exiting the condenser shall be measured and used to establish the outlet organic HAP concentration. The permittee may elect as an alternate to conduct a performance test for a small control device and such a performance test shall follow the procedures specified in 40 CFR 63.1413, as appropriate. The parameter monitoring levels for the reactor batch process vent condenser shall be set based on this design evaluation or performance test.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1413)

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. Except as otherwise provided in 40 CFR 63.1416(b) [see Attachment 1], the permittee shall develop and implement a start-up, shutdown, and malfunction plan as specified in 40 CFR 63.6(e)(3) [see Attachment 3 and Table 1 in Attachment 1]. As specified in 40 CFR 63.1416(b)(1) [see Attachment 1], this plan shall require the permittee to maintain records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment, or control devices, or recovery devices, or continuous monitoring systems, or control technologies used to comply with Subpart OOO during which excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur. The requirements of 40 CFR 63.1400(k)(1) through (4) [see Attachment 1], shall be met during periods of start-up, shutdown, malfunction, or non-operation.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(b))

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

**Facility ID: 0448010370 Issuance type: Title V Final Permit**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P007 Issuance type: Title V Final Permit**

**B. State Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

2. **Additional Terms and Conditions**

   1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. None

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

**Facility ID: 0448010370 Issuance type: Title V Final Permit**

**Part III - Terms and Conditions for Emissions Units**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P008 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| amino/phenolic resin processing unit, general provisions | OAC rule 3745-21-07(G)(2) | See section A.I.2.a. |
| | 40 CFR Part 63, Subpart A | See section A.I.2.b. |
| | 40 CFR Part 63, Subpart OOO | See section A.I.2.c. |
| reactor batch process vent controlled by a condenser with spray wash system | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | 1.8 lbs/hr of particulate emissions |
| | 40 CFR Part 63, Subpart OOO | See section A.I.2.d. |
| heat exchange systems | 40 CFR Part 63, Subpart OOO | See section A.I.2.e. |
| equipment leaks, controlled by equipment design and operating and maintenance programs | 40 CFR Part 63, Subpart OOO | See section A.I.2.f. |
| storage vessels | 40 CFR Part 63, Subpart OOO | See section A.I.2.g. |

2. **Additional Terms and Conditions**

a. This emissions unit is exempted from the requirements of OAC rule 3745-21-07(G)(2) by OAC rule 3745-21-07(G)(9)(c)(iii). The only volatile liquid organic material that shall be utilized in this emissions unit is formaldehyde, which is not a photochemically reactive material as that term is defined by OAC rule 3745-21-01(C)(5)(a).

b. i. 40 CFR Part 63, Subpart A [see Attachment 3] provides applicability provisions, definitions, and other general provisions that are applicable to emissions units affected by 40 CFR Part 63.

ii. Table 1 of 40 CFR Part 63, Subpart OOO [see Attachment 1] specifies the provisions of 40 CFR Part 63, Subpart A that apply and those provisions that do not apply.

(Authority for term: 40 CFR 63.1400(j))

c. The provisions of 40 CFR Part 63, Subpart OOO [see Attachment 1] apply to processes that produce amino/phenolic resins and that are located at a plant site that is a major source. This emissions unit is utilized to produce amino/phenolic resins at the BTLSR Toledo plant site, which is a major source of the hazardous air pollutant (HAP) formaldehyde. This emissions unit is therefore subject to the provisions of 40 CFR Part 63, Subpart OOO [see Attachment 1].

(Authority for term: 40 CFR 63.1400(a))

d. Except as otherwise provided in 40 CFR 63.1406 [see Attachment 1], the permittee shall control organic HAP emissions from the reactor batch process vent by complying with either of the following:

i. reduce organic HAP emissions for the batch cycle by 83 weight percent using a condenser coil; or

ii. reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 pound of organic HAP per 1,000 pounds of product or less for solvent-based resin production, or to 0.0057 pound of organic HAP per 1,000 pounds of product or less for non-solvent-based resin production.

(Authority for term: 40 CFR 63.1406(a)(2))

e. There are no applicable requirements for existing heat exchangers (cooling coils) with a minimum cooling water pressure more than 35 kilopascals greater than the maximum process side pressure.

(Authority for term: 40 CFR 63.1409(a)(1))

f. Except as otherwise provided in 40 CFR Part 63, Subpart OOO [see Attachment 1], the permittee shall establish a leak detection and repair program which complies with the requirements of 40 CFR Part 63, Subpart UU [see Attachment 2]. These requirements are described in 40 CFR 63.1029 [see Attachment 2] and 63.1410 [see Attachment 1]. These requirements apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors and instrumentation systems in organic HAP service.

(Authority for term: 40 CFR 63.1410)

g. There are no applicable requirements for existing storage vessels with a capacity of less than 50,000 gallons. The existing storage vessels include the following:

formaldehyde tank (Z009) - 14,600 gallons;
fuel oil tank (Z010) - 10,000 gallons;
PVA tank (Z011) - 14,600 gallons;
"A" system resin spray dryer (P001) tanks - 2 tanks at 1,500 gallons each;
"B" system resin spray dryer (P002) tanks - 2 tanks at 1,000 gallons each;
"C" system resin spray dryer (P003) tanks - 2 tanks at 5,000 gallons each;
MUS tanks - 2 tanks at 4,000 gallons each; and
Wet blend tank - 1,000 gallons.

(Authority for term: 40 CFR 63.1404(a))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. At all times that this emissions unit is in operation, the permittee shall operate the reactor cooling coil heat exchange system with a minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.

(Authority for term: OAC rule 3745-77-07(A)(1))

2. The permittee shall establish parameter monitoring levels for the reactor batch process vent condenser based on a design evaluation or performance test, in compliance with the requirements of 40 CFR 63.1413 [see Attachment 1] for small control devices. In compliance with Table 4 of 40 CFR Part 63, Subpart OOO [see Attachment 1], these parameter monitoring levels will include the maximum temperature of the gases exiting the condenser established to assure compliance with the emission reduction specified in Section A.I.2.d above.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1413(a)(1)(ii))

3. Except as otherwise provided in 40 CFR Part 63 Subpart OOO [see Attachment 1], the permittee shall operate each control device such that the daily average of monitored parameters, established as specified in the paragraphs above, remains below the maximum level, as appropriate.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1413(a)(4)(i))

4. The permittee shall comply with the requirements of 40 CFR Part 63, Subpart UU [see Attachment 2] from all equipment, as defined under 40 CFR 63.1402 [see Attachment 1], that contains or contacts 5 weight-percent HAP or greater and operates 300 hours per year or more. For this emissions unit, all equipment that contacts the formalin solution will be considered to be in heavy liquid service.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1410)

5. The permittee shall identify equipment subject to the equipment leak standards, in compliance with the requirements of 40 CFR 63.1022 [see Attachment 2].

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1022)

6. Except as otherwise provided in 40 CFR 63.1024 [see Attachment 2], the permittee shall repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected. A first attempt at repair, as defined in 40 CFR 63.1024(a) [see Attachment 2], shall be made no later than 5 days after the leak is detected.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1024(a))

7. The permittee shall operate the condenser water wash system whenever this emissions unit is loading solid feed stock.

(Authority for term: OAC rule 3745-77-07(A)(1))

Go to the top of this document

Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall operate and maintain equipment to monitor the pressure differential between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure differential on a daily basis.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1415)

2. The permittee shall operate and maintain a low pressure alarm system which will indicate by visible and audible means that the pressure differential between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side has dropped below the required 35 psia minimum. If the pressure differential drops below 35 psia, the permittee shall record the beginning and ending times of the deviation, and the actions taken to alleviate the deviation.

   (Authority for term: OAC rule 3745-77-07(C)(1))

3. Except as otherwise provided in 40 CFR 63.1413 [see Attachment 1], the permittee shall establish parameter monitoring levels by design evaluation, or during the performance test of, the reactor batch process vent condenser.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1413(a)(1)(ii))

4. Except as otherwise provided in 40 CFR 63.1415 [see Attachment 1], the permittee shall maintain and operate a reactor batch process vent condenser exit temperature monitoring device equipped with a continuous recorder. This monitoring equipment shall be in operation at all times when the emissions unit is in operation.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1415(a), (a)(1), (b)(3))

5. Except as otherwise provided in 40 CFR 63.1416 [see Attachment 1], the permittee shall maintain records of the daily average reactor batch process vent condenser exit temperature.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(c))

6. Except as otherwise provided in 40 CFR 63.1416(b) [see Attachment 1], the permittee shall maintain records of the occurrence and duration of each start-up, shutdown, or malfunction during which excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur, records reflecting whether the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed and documentation of actions taken that are not consistent with the plan.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(b))

7. As provided in 40 CFR 63.1416(d) [see Attachment 1], where applicable the permittee shall maintain records of operation when monitors are not operating, operation of bypass lines, inspections and operation of the seal or closure mechanisms, and records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(d))

8. The permittee shall comply with the requirements of 40 CFR 63.1029 [see Attachment 2]. Pumps, valves, connectors, agitators, pressure relief devices, and instrumentation systems in heavy liquid service shall be monitored.

   i. If evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method, the equipment shall be repaired. Repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

   ii. Within 5 days of a the detection of a potential leak, the equipment shall be monitored by instrument reading using Method 21 of 40 CFR Part 60, Appendix A, as specified in 40 CFR 63.1023 [see Attachment 2]. If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, or 2,000 parts per million or greater for all other pumps, or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected and shall be repaired pursuant to 40 CFR 63.1024 [see Attachment 2], as applicable.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1029)

9. For each leak detected, the information specified below shall be recorded and maintained:

   i. the date of first attempt to repair the leak;

   ii. the date of successful repair of the leak;

   iii. the maximum instrument reading measured by Method 21 of 40 CFR Part 60, Appendix A at the time the leak is successfully repaired or determined to be nonrepairable;

   iv. except as otherwise provided in 40 CFR 63.1024(f)(iv) [see Attachment 2], the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak; and

   v. the dates of process unit or affected facility shutdowns that occur while the equipment is unrepaired.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1024(f))

10. The permittee shall prepare and implement a pump quality assurance program in compliance with 40 CFR 63.1035 [see Attachment 2]. If greater than 10 percent (or three pumps) leak, on a 6-month rolling average, the permittee shall comply with the QIP requirements. Additional record keeping requirements apply while the QIP is in effect.

    (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1035)

11. The permittee shall maintain daily records that document any time periods when the condenser water wash system was not in service when the emissions unit was loading solid feed stock.

    (Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. The permittee shall submit quarterly reports indicating any exceedances (deviations) of the pressure differential requirements (between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side), and when applicable, the information required under section A.III.2 above.

   (Authority for term: OAC rule 3745-77-07(C)(1))

2. Except as otherwise provided in 40 CFR 63.1417 [see Attachment 1], the permittee shall submit semiannual reports indicating any exceedances of the maximum allowable daily average reactor batch process vent condenser exit temperature, and when applicable, the information required under 40 CFR 63.1416(d)(3)(ii) [see Attachment 1].

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1417(f))

3. The permittee shall report the information specified in paragraphs (b)(1) through (b)(8) of 40 CFR 63.1039 [see Attachment 2], as applicable, including:

   a. where any delay of repair is utilized pursuant to 40 CFR 63.1024(d) [see Attachment 2], that delay of repair has occurred and the number of instances of delay of repair;

   b. if applicable, the initiation of a monthly monitoring program for valves pursuant to 40 CFR 63.1025(b)(3)(i) [see Attachment 2]; and

   c. if applicable, the initiation of a quality improvement program for pumps pursuant to 40 CFR 63.1035 [see Attachment 2].

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1039)

4. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any daily record showing that the condenser water wash system was not in service when the emissions unit was loading solid feed stock. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days after the event occurs.

   (Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 shall be determined in accordance with the following methods:

   a. Emission Limitation:

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

      Applicable Compliance Method:

      Compliance shall be demonstrated based upon visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

      (Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1))

   b. Emission Limitation:

      1.8 lbs/hr of particulate emissions

      Applicable Compliance Method:

      Compliance shall be demonstrated based upon emission testing performed in accordance with the procedures specified in Methods 1 through 5 of 40 CFR Part 60, Appendix A.

      (Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1))

c. Emission Limitation:

i. reduce organic HAP emissions for the batch cycle by 83 weight percent using a condenser coil; or

ii. reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 pound of organic HAP per 1,000 pounds of product or less for solvent-based resin production, or to 0.0057 pound of organic HAP per 1,000 pounds of product or less for non-solvent-based resin production.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with the procedures specified in 40 CFR 63.1414 [see Attachment 1].

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1414)

2. The permittee shall conduct a design evaluation for the reactor batch process vent condenser in compliance with the requirements of 40 CFR 63.1413 [see Attachment 1] for a small control device. In compliance with 40 CFR 63.1413(a)(3) the design evaluation shall consider the composition and organic HAP concentration of the vent stream, vent stream flow rate, relative humidity, and temperature and shall establish the operating parameters of the control device, design outlet organic HAP compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet. The temperature of the gas stream exiting the condenser shall be measured and used to establish the outlet organic HAP concentration. The permittee may elect as an alternate to conduct a performance test for a small control device and such a performance test shall follow the procedures specified in 40 CFR 63.1413, as appropriate. The parameter monitoring levels for the reactor batch process vent condenser shall be set based on this design evaluation or performance test.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1413)

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. Except as otherwise provided in 40 CFR 63.1416(b) [see Attachment 1], the permittee shall develop and implement a start-up, shutdown, and malfunction plan as specified in 40 CFR 63.6(e)(3) [see Attachment 3 and Table 1 in Attachment 1]. As specified in 40 CFR 63.1416(b)(1) [see Attachment 1], this plan shall require the permittee to maintain records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment, or control devices, or recovery devices, or continuous monitoring systems, or control technologies used to comply with Subpart OOO during which excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur. The requirements of 40 CFR 63.1400(k)(1) through (4) [see Attachment 1], shall be met during periods of start-up, shutdown, malfunction, or non-operation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(b))

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

**Facility ID: 0448010370 Issuance type: Title V Final Permit**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P008 Issuance type: Title V Final Permit**

**B. State Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

2. **Additional Terms and Conditions**

1. None

Go to the top of this document

Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. None

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

**Facility ID: 0448010370 Issuance type: Title V Final Permit**

**Part III - Terms and Conditions for Emissions Units**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P009 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| amino/phenolic resin processing unit, general provisions | OAC rule 3745-21-07(G)(2) | See section A.I.2.a. |
| | 40 CFR Part 63, Subpart A | See section A.I.2.b. |
| | 40 CFR Part 63, Subpart OOO | See section A.I.2.c. |
| reactor batch process vent controlled by a condenser with spray wash system | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | 1.8 lbs/hr of particulate emissions |
| | 40 CFR Part 63, Subpart OOO | See section A.I.2.d. |
| heat exchange systems | 40 CFR Part 63, Subpart OOO | See section A.I.2.e. |
| equipment leaks, controlled by equipment design and operating and maintenance | 40 CFR Part 63, Subpart OOO | See section A.I.2.f. |

| | | |
|---|---|---|
| programs | | |
| storage vessels | 40 CFR Part 63, Subpart OOO | See section A.I.2.g. |

2. **Additional Terms and Conditions**

a. This emissions unit is exempted from the requirements of OAC rule 3745-21-07(G)(2) by OAC rule 3745-21-07(G)(9)(c)(iii). The only volatile liquid organic material that shall be utilized in this emissions unit is formaldehyde, which is not a photochemically reactive material as that term is defined by OAC rule 3745-21-01(C)(5)(a).

b. i. 40 CFR Part 63, Subpart A [see Attachment 3] provides applicability provisions, definitions, and other general provisions that are applicable to emissions units affected by 40 CFR Part 63.

ii. Table 1 of 40 CFR Part 63, Subpart OOO [see Attachment 1] specifies the provisions of 40 CFR Part 63, Subpart A that apply and those provisions that do not apply.

(Authority for term: 40 CFR 63.1400(j))

c. The provisions of 40 CFR Part 63, Subpart OOO [see Attachment 1] apply to processes that produce amino/phenolic resins and that are located at a plant site that is a major source. This emissions unit is utilized to produce amino/phenolic resins at the BTLSR Toledo plant site, which is a major source of the hazardous air pollutant (HAP) formaldehyde. This emissions unit is therefore subject to the provisions of 40 CFR Part 63, Subpart OOO [see Attachment 1].

(Authority for term: 40 CFR 63.1400(a))

d. Except as otherwise provided in 40 CFR 63.1406 [see Attachment 1], the permittee shall control organic HAP emissions from the reactor batch process vent by complying with either of the following:

i. reduce organic HAP emissions for the batch cycle by 83 weight percent using a condenser coil; or

ii. reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 pound of organic HAP per 1,000 pounds of product or less for solvent-based resin production, or to 0.0057 pound of organic HAP per 1,000 pounds of product or less for non-solvent-based resin production.

(Authority for term: 40 CFR 63.1406(a)(2))

e. There are no applicable requirements for existing heat exchangers (cooling coils) with a minimum cooling water pressure more than 35 kilopascals greater than the maximum process side pressure.

(Authority for term: 40 CFR 63.1409(a)(1))

f. Except as otherwise provided in 40 CFR Part 63, Subpart OOO [see Attachment 1], the permittee shall establish a leak detection and repair program which complies with the requirements of 40 CFR Part 63, Subpart UU [see Attachment 2]. These requirements are described in 40 CFR 63.1029 [see Attachment 2] and 63.1410 [see Attachment 1]. These requirements apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors and instrumentation systems in organic HAP service.

(Authority for term: 40 CFR 63.1410)

g. There are no applicable requirements for existing storage vessels with a capacity of less than 50,000 gallons. The existing storage vessels include the following:

formaldehyde tank (Z009) - 14,600 gallons;
fuel oil tank (Z010) - 10,000 gallons;
PVA tank (Z011) - 14,600 gallons;
"A" system resin spray dryer (P001) tanks - 2 tanks at 1,500 gallons each;
"B" system resin spray dryer (P002) tanks - 2 tanks at 1,000 gallons each;
"C" system resin spray dryer (P003) tanks - 2 tanks at 5,000 gallons each;
MUS tanks - 2 tanks at 4,000 gallons each; and
Wet blend tank - 1,000 gallons.

(Authority for term: 40 CFR 63.1404(a))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. At all times that this emissions unit is in operation, the permittee shall operate the reactor cooling coil heat exchange system with a minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.

(Authority for term: OAC rule 3745-77-07(A)(1))

2. The permittee shall establish parameter monitoring levels for the reactor batch process vent condenser based on a design evaluation or performance test, in compliance with the requirements of 40 CFR 63.1413 [see Attachment 1] for small control devices. In compliance with Table 4 of 40 CFR Part 63, Subpart OOO [see

Attachment 1], these parameter monitoring levels will include the maximum temperature of the gases exiting the condenser established to assure compliance with the emission reduction specified in Section A.I.2.d above.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1413(a)(1)(ii))

3. Except as otherwise provided in 40 CFR Part 63 Subpart OOO [see Attachment 1], the permittee shall operate each control device such that the daily average of monitored parameters, established as specified in the paragraphs above, remains below the maximum level, as appropriate.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1413(a)(4)(i))

4. The permittee shall comply with the requirements of 40 CFR Part 63, Subpart UU [see Attachment 2] from all equipment, as defined under 40 CFR 63.1402 [see Attachment 1], that contains or contacts 5 weight-percent HAP or greater and operates 300 hours per year or more. For this emissions unit, all equipment that contacts the formalin solution will be considered to be in heavy liquid service.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1410)

5. The permittee shall identify equipment subject to the equipment leak standards, in compliance with the requirements of 40 CFR 63.1022 [see Attachment 2].

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1022)

6. Except as otherwise provided in 40 CFR 63.1024 [see Attachment 2], the permittee shall repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected. A first attempt at repair, as defined in 40 CFR 63.1024(a) [see Attachment 2], shall be made no later than 5 days after the leak is detected.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1024(a))

7. The permittee shall operate the condenser water wash system whenever this emissions unit is loading solid feed stock.

(Authority for term: OAC rule 3745-77-07(A)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall operate and maintain equipment to monitor the pressure differential between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure differential on a daily basis.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1415)

2. The permittee shall operate and maintain a low pressure alarm system which will indicate by visible and audible means that the pressure differential between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side has dropped below the required 35 psia minimum. If the pressure differential drops below 35 psia, the permittee shall record the beginning and ending times of the deviation, and the actions taken to alleviate the deviation.

(Authority for term: OAC rule 3745-77-07(C)(1))

3. Except as otherwise provided in 40 CFR 63.1413 [see Attachment 1], the permittee shall establish parameter monitoring levels by design evaluation, or during the performance test of, the reactor batch process vent condenser.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1413(a)(1)(ii))

4. Except as otherwise provided in 40 CFR 63.1415 [see Attachment 1], the permittee shall maintain and operate a reactor batch process vent condenser exit temperature monitoring device equipped with a continuous recorder. This monitoring equipment shall be in operation at all times when the emissions unit is in operation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1415(a), (a)(1), (b)(3))

5. Except as otherwise provided in 40 CFR 63.1416 [see Attachment 1], the permittee shall maintain records of the daily average reactor batch process vent condenser exit temperature.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(c))

6. Except as otherwise provided in 40 CFR 63.1416(b) [see Attachment 1], the permittee shall maintain records of the occurrence and duration of each start-up, shutdown, or malfunction during which excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur, records reflecting whether the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed and documentation of actions taken that are not consistent with the plan.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(b))

7. As provided in 40 CFR 63.1416(d) [see Attachment 1], where applicable the permittee shall maintain records of operation when monitors are not operating, operation of bypass lines, inspections and operation of the seal or closure mechanisms, and records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(d))

8. The permittee shall comply with the requirements of 40 CFR 63.1029 [see Attachment 2]. Pumps, valves, connectors, agitators, pressure relief devices, and instrumentation systems in heavy liquid service shall be monitored.

i. If evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method, the equipment shall be repaired. Repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

ii. Within 5 days of a the detection of a potential leak, the equipment shall be monitored by instrument reading using Method 21 of 40 CFR Part 60, Appendix A, as specified in 40 CFR 63.1023 [see Attachment 2]. If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, or 2,000 parts per million or greater for all other pumps, or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected and shall be repaired pursuant to 40 CFR 63.1024 [see Attachment 2], as applicable.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1029)

9. For each leak detected, the information specified below shall be recorded and maintained:

i. the date of first attempt to repair the leak;

ii. the date of successful repair of the leak;

iii. the maximum instrument reading measured by Method 21 of 40 CFR Part 60, Appendix A at the time the leak is successfully repaired or determined to be nonrepairable;

iv. except as otherwise provided in 40 CFR 63.1024(f)(iv) [see Attachment 2], the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak; and

v. the dates of process unit or affected facility shutdowns that occur while the equipment is unrepaired.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1024(f))

10. The permittee shall prepare and implement a pump quality assurance program in compliance with 40 CFR 63.1035 [see Attachment 2]. If greater than 10 percent (or three pumps) leak, on a 6-month rolling average, the permittee shall comply with the QIP requirements. Additional record keeping requirements apply while the QIP is in effect.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1035)

11. The permittee shall maintain daily records that document any time periods when the condenser water wash system was not in service when the emissions unit was loading solid feed stock.

(Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. The permittee shall submit quarterly reports indicating any exceedances (deviations) of the pressure differential requirements (between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side), and when applicable, the information required under section A.III.2 above.

(Authority for term: OAC rule 3745-77-07(C)(1))

2. Except as otherwise provided in 40 CFR 63.1417 [see Attachment 1], the permittee shall submit semiannual reports indicating any exceedances of the maximum allowable daily average reactor batch process vent condenser exit temperature, and when applicable, the information required under 40 CFR 63.1416(d)(3)(ii) [see Attachment 1].

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1417(f))

3. The permittee shall report the information specified in paragraphs (b)(1) through (b)(8) of 40 CFR 63.1039 [see Attachment 2], as applicable, including:

a. where any delay of repair is utilized pursuant to 40 CFR 63.1024(d) [see Attachment 2], that delay of repair has occurred and the number of instances of delay of repair;

b. if applicable, the initiation of a monthly monitoring program for valves pursuant to 40 CFR 63.1025(b)(3)(i) [see Attachment 2]; and

c. if applicable, the initiation of a quality improvement program for pumps pursuant to 40 CFR 63.1035 [see Attachment 2].

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1039)

4. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any daily record showing that the condenser water wash system was not in service when the emissions unit was loading solid feed stock. The notification shall include a copy of such record and shall be sent to the TDOES

within 30 days after the event occurs.

(Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

Compliance shall be demonstrated based upon visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1))

b. Emission Limitation:

1.8 lbs/hr of particulate emissions

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission testing performed in accordance with the procedures specified in Methods 1 through 5 of 40 CFR Part 60, Appendix A.

(Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1))

c. Emission Limitation:

i. reduce organic HAP emissions for the batch cycle by 83 weight percent using a condenser coil; or

ii. reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 pound of organic HAP per 1,000 pounds of product or less for solvent-based resin production, or to 0.0057 pound of organic HAP per 1,000 pounds of product or less for non-solvent-based resin production.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with the procedures specified in 40 CFR 63.1414 [see Attachment 1].

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1414)

2. The permittee shall conduct a design evaluation for the reactor batch process vent condenser in compliance with the requirements of 40 CFR 63.1413 [see Attachment 1] for a small control device. In compliance with 40 CFR 63.1413(a)(3) the design evaluation shall consider the composition and organic HAP concentration of the vent stream, vent stream flow rate, relative humidity, and temperature and shall establish the operating parameters of the control device, design outlet organic HAP compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet. The temperature of the gas stream exiting the condenser shall be measured and used to establish the outlet organic HAP concentration. The permittee may elect as an alternate to conduct a performance test for a small control device and such a performance test shall follow the procedures specified in 40 CFR 63.1413, as appropriate. The parameter monitoring levels for the reactor batch process vent condenser shall be set based on this design evaluation or performance test.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1413)

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. Except as otherwise provided in 40 CFR 63.1416(b) [see Attachment 1], the permittee shall develop and implement a start-up, shutdown, and malfunction plan as specified in 40 CFR 63.6(e)(3) [see Attachment 3 and Table 1 in Attachment 1]. As specified in 40 CFR 63.1416(b)(1) [see Attachment 1], this plan shall require the permittee to maintain records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment, or control devices, or recovery devices, or continuous monitoring systems, or control technologies used to comply with Subpart OOO during which excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur. The requirements of 40 CFR 63.1400(k)(1) through (4) [see Attachment 1], shall be met during periods of start-up, shutdown, malfunction, or non-operation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(b))

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**Facility ID: 0448010370 Issuance type: Title V Final Permit**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P009 Issuance type: Title V Final Permit**

**B. State Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
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II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
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III. **Monitoring and/or Record Keeping Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
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VI. **Miscellaneous Requirements**

1. None

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**Facility ID: 0448010370 Issuance type: Title V Final Permit**

**Part III - Terms and Conditions for Emissions Units**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P010 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| amino/phenolic resin processing unit, general provisions | OAC rule 3745-21-07(G)(2) | See section A.I.2.a. |
| | 40 CFR Part 63, Subpart A | See section A.I.2.b. |
| | 40 CFR Part 63, Subpart OOO | See section A.I.2.c. |
| reactor batch process vent controlled by a condenser with spray wash system | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | 1.8 lbs/hr of particulate emissions |
| | 40 CFR Part 63, Subpart OOO | See section A.I.2.d. |
| heat exchange systems | 40 CFR Part 63, Subpart OOO | See section A.I.2.e. |
| equipment leaks, controlled by equipment design and operating and maintenance programs | 40 CFR Part 63, Subpart OOO | See section A.I.2.f. |
| storage vessels | 40 CFR Part 63, Subpart OOO | See section A.I.2.g. |

2. **Additional Terms and Conditions**

a. This emissions unit is exempted from the requirements of OAC rule 3745-21-07(G)(2) by OAC rule 3745-21-07(G)(9)(c)(iii). The only volatile liquid organic material that shall be utilized in this emissions unit is formaldehyde, which is not a photochemically reactive material as that term is defined by OAC rule 3745-21-01(C)(5)(a).

b. i. 40 CFR Part 63, Subpart A [see Attachment 3] provides applicability provisions, definitions, and other general provisions that are applicable to emissions units affected by 40 CFR Part 63.

ii. Table 1 of 40 CFR Part 63, Subpart OOO [see Attachment 1] specifies the provisions of 40 CFR Part 63, Subpart A that apply and those provisions that do not apply.

(Authority for term: 40 CFR 63.1400(j))

c. The provisions of 40 CFR Part 63, Subpart OOO [see Attachment 1] apply to processes that produce amino/phenolic resins and that are located at a plant site that is a major source. This emissions unit is utilized to produce amino/phenolic resins at the BTLSR Toledo plant site, which is a major source of the hazardous air pollutant (HAP) formaldehyde. This emissions unit is therefore subject to the provisions of 40 CFR Part 63, Subpart OOO [see Attachment 1].

(Authority for term: 40 CFR 63.1400(a))

d. Except as otherwise provided in 40 CFR 63.1406 [see Attachment 1], the permittee shall control organic HAP emissions from the reactor batch process vent by complying with either of the following:

i. reduce organic HAP emissions for the batch cycle by 83 weight percent using a condenser coil; or

ii. reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 pound of organic HAP per 1,000 pounds of product or less for solvent-based resin production, or to 0.0057 pound of organic HAP per 1,000 pounds of product or less for non-solvent-based resin production.

(Authority for term: 40 CFR 63.1406(a)(2))

e. There are no applicable requirements for existing heat exchangers (cooling coils) with a minimum cooling water pressure more than 35 kilopascals greater than the maximum process side pressure.

(Authority for term: 40 CFR 63.1409(a)(1))

f. Except as otherwise provided in 40 CFR Part 63, Subpart OOO [see Attachment 1], the permittee shall establish a leak detection and repair program which complies with the requirements of 40 CFR Part 63, Subpart UU [see Attachment 2]. These requirements are described in 40 CFR 63.1029 [see

Attachment 2] and 63.1410 [see Attachment 1]. These requirements apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors and instrumentation systems in organic HAP service.

(Authority for term: 40 CFR 63.1410)

g. There are no applicable requirements for existing storage vessels with a capacity of less than 50,000 gallons. The existing storage vessels include the following:

formaldehyde tank (Z009) - 14,600 gallons;
fuel oil tank (Z010) - 10,000 gallons;
PVA tank (Z011) - 14,600 gallons;
"A" system resin spray dryer (P001) tanks - 2 tanks at 1,500 gallons each;
"B" system resin spray dryer (P002) tanks - 2 tanks at 1,000 gallons each;
"C" system resin spray dryer (P003) tanks - 2 tanks at 5,000 gallons each;
MUS tanks - 2 tanks at 4,000 gallons each; and
Wet blend tank - 1,000 gallons.

(Authority for term: 40 CFR 63.1404(a))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. At all times that this emissions unit is in operation, the permittee shall operate the reactor cooling coil heat exchange system with a minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.

(Authority for term: OAC rule 3745-77-07(A)(1))

2. The permittee shall establish parameter monitoring levels for the reactor batch process vent condenser based on a design evaluation or performance test, in compliance with the requirements of 40 CFR 63.1413 [see Attachment 1] for small control devices. In compliance with Table 4 of 40 CFR Part 63, Subpart OOO [see Attachment 1], these parameter monitoring levels will include the maximum temperature of the gases exiting the condenser established to assure compliance with the emission reduction specified in Section A.I.2.d above.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1413(a)(1)(ii))

3. Except as otherwise provided in 40 CFR Part 63 Subpart OOO [see Attachment 1], the permittee shall operate each control device such that the daily average of monitored parameters, established as specified in the paragraphs above, remains below the maximum level, as appropriate.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1413(a)(4)(i))

4. The permittee shall comply with the requirements of 40 CFR Part 63, Subpart UU [see Attachment 2] from all equipment, as defined under 40 CFR 63.1402 [see Attachment 1], that contains or contacts 5 weight-percent HAP or greater and operates 300 hours per year or more. For this emissions unit, all equipment that contacts the formalin solution will be considered to be in heavy liquid service.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1410)

5. The permittee shall identify equipment subject to the equipment leak standards, in compliance with the requirements of 40 CFR 63.1022 [see Attachment 2].

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1022)

6. Except as otherwise provided in 40 CFR 63.1024 [see Attachment 2], the permittee shall repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected. A first attempt at repair, as defined in 40 CFR 63.1024(a) [see Attachment 2], shall be made no later than 5 days after the leak is detected.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1024(a))

7. The permittee shall operate the condenser water wash system whenever this emissions unit is loading solid feed stock.

(Authority for term: OAC rule 3745-77-07(A)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall operate and maintain equipment to monitor the pressure differential between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure differential on a daily basis.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1415)

2. The permittee shall operate and maintain a low pressure alarm system which will indicate by visible and

audible means that the pressure differential between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side has dropped below the required 35 psia minimum. If the pressure differential drops below 35 psia, the permittee shall record the beginning and ending times of the deviation, and the actions taken to alleviate the deviation.

(Authority for term: OAC rule 3745-77-07(C)(1))

3. Except as otherwise provided in 40 CFR 63.1413 [see Attachment 1], the permittee shall establish parameter monitoring levels by design evaluation, or during the performance test of, the reactor batch process vent condenser.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1413(a)(1)(ii))

4. Except as otherwise provided in 40 CFR 63.1415 [see Attachment 1], the permittee shall maintain and operate a reactor batch process vent condenser exit temperature monitoring device equipped with a continuous recorder. This monitoring equipment shall be in operation at all times when the emissions unit is in operation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1415(a), (a)(1), (b)(3))

5. Except as otherwise provided in 40 CFR 63.1416 [see Attachment 1], the permittee shall maintain records of the daily average reactor batch process vent condenser exit temperature.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(c))

6. Except as otherwise provided in 40 CFR 63.1416(b) [see Attachment 1], the permittee shall maintain records of the occurrence and duration of each start-up, shutdown, or malfunction during which excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur, records reflecting whether the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed and documentation of actions taken that are not consistent with the plan.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(b))

7. As provided in 40 CFR 63.1416(d) [see Attachment 1], where applicable the permittee shall maintain records of operation when monitors are not operating, operation of bypass lines, inspections and operation of the seal or closure mechanisms, and records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(d))

8. The permittee shall comply with the requirements of 40 CFR 63.1029 [see Attachment 2]. Pumps, valves, connectors, agitators, pressure relief devices, and instrumentation systems in heavy liquid service shall be monitored.

i. If evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method, the equipment shall be repaired. Repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

ii. Within 5 days of a the detection of a potential leak, the equipment shall be monitored by instrument reading using Method 21 of 40 CFR Part 60, Appendix A, as specified in 40 CFR 63.1023 [see Attachment 2]. If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, or 2,000 parts per million or greater for all other pumps, or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected and shall be repaired pursuant to 40 CFR 63.1024 [see Attachment 2], as applicable.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1029)

9. For each leak detected, the information specified below shall be recorded and maintained:

i. the date of first attempt to repair the leak;

ii. the date of successful repair of the leak;

iii. the maximum instrument reading measured by Method 21 of 40 CFR Part 60, Appendix A at the time the leak is successfully repaired or determined to be nonrepairable;

iv. except as otherwise provided in 40 CFR 63.1024(f)(iv) [see Attachment 2], the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak; and

v. the dates of process unit or affected facility shutdowns that occur while the equipment is unrepaired.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1024(f))

10. The permittee shall prepare and implement a pump quality assurance program in compliance with 40 CFR 63.1035 [see Attachment 2]. If greater than 10 percent (or three pumps) leak, on a 6-month rolling average, the permittee shall comply with the QIP requirements. Additional record keeping requirements apply while the QIP is in effect.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1035)

11. The permittee shall maintain daily records that document any time periods when the condenser water wash system was not in service when the emissions unit was loading solid feed stock.

(Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. The permittee shall submit quarterly reports indicating any exceedances (deviations) of the pressure differential requirements (between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side), and when applicable, the information required under section A.III.2 above.

   (Authority for term: OAC rule 3745-77-07(C)(1))

2. Except as otherwise provided in 40 CFR 63.1417 [see Attachment 1], the permittee shall submit semiannual reports indicating any exceedances of the maximum allowable daily average reactor batch process vent condenser exit temperature, and when applicable, the information required under 40 CFR 63.1416(d)(3)(ii) [see Attachment 1].

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1417(f))

3. The permittee shall report the information specified in paragraphs (b)(1) through (b)(8) of 40 CFR 63.1039 [see Attachment 2], as applicable, including:

   a. where any delay of repair is utilized pursuant to 40 CFR 63.1024(d) [see Attachment 2], that delay of repair has occurred and the number of instances of delay of repair;

   b. if applicable, the initiation of a monthly monitoring program for valves pursuant to 40 CFR 63.1025(b)(3)(i) [see Attachment 2]; and

   c. if applicable, the initiation of a quality improvement program for pumps pursuant to 40 CFR 63.1035 [see Attachment 2].

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1039)

4. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any daily record showing that the condenser water wash system was not in service when the emissions unit was loading solid feed stock. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days after the event occurs.

   (Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 shall be determined in accordance with the following methods:

   a. Emission Limitation:

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

      Applicable Compliance Method:

      Compliance shall be demonstrated based upon visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

      (Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1))

   b. Emission Limitation:

      1.8 lbs/hr of particulate emissions

      Applicable Compliance Method:

      Compliance shall be demonstrated based upon emission testing performed in accordance with the procedures specified in Methods 1 through 5 of 40 CFR Part 60, Appendix A.

      (Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1))

   c. Emission Limitation:

      i. reduce organic HAP emissions for the batch cycle by 83 weight percent using a condenser coil; or

      ii. reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 pound of organic HAP per 1,000 pounds of product or less for solvent-based resin production, or to 0.0057 pound of organic HAP per 1,000 pounds of product or less for non-solvent-based resin production.

      Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with the procedures specified in 40 CFR 63.1414 [see Attachment 1].

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1414)

2. The permittee shall conduct a design evaluation for the reactor batch process vent condenser in compliance with the requirements of 40 CFR 63.1413 [see Attachment 1] for a small control device. In compliance with 40 CFR 63.1413(a)(3) the design evaluation shall consider the composition and organic HAP concentration of the vent stream, vent stream flow rate, relative humidity, and temperature and shall establish the operating parameters of the control device, design outlet organic HAP compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet. The temperature of the gas stream exiting the condenser shall be measured and used to establish the outlet organic HAP concentration. The permittee may elect as an alternate to conduct a performance test for a small control device and such a performance test shall follow the procedures specified in 40 CFR 63.1413, as appropriate. The parameter monitoring levels for the reactor batch process vent condenser shall be set based on this design evaluation or performance test.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1413)

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. Except as otherwise provided in 40 CFR 63.1416(b) [see Attachment 1], the permittee shall develop and implement a start-up, shutdown, and malfunction plan as specified in 40 CFR 63.6(e)(3) [see Attachment 3 and Table 1 in Attachment 1]. As specified in 40 CFR 63.1416(b)(1) [see Attachment 1], this plan shall require the permittee to maintain records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment, or control devices, or recovery devices, or continuous monitoring systems, or control technologies used to comply with Subpart OOO during which excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur. The requirements of 40 CFR 63.1400(k)(1) through (4) [see Attachment 1], shall be met during periods of start-up, shutdown, malfunction, or non-operation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(b))

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**Facility ID: 0448010370 Issuance type: Title V Final Permit**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P010 Issuance type: Title V Final Permit**

**B. State Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. None

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**Facility ID: 0448010370 Issuance type: Title V Final Permit**

**Part III - Terms and Conditions for Emissions Units**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P011 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| amino/phenolic resin processing unit, general provisions | OAC rule 3745-21-07(G)(2) | See section A.I.2.a. |
| | 40 CFR Part 63, Subpart A | See section A.I.2.b. |
| | 40 CFR Part 63, Subpart OOO | See section A.I.2.c. |
| reactor batch process vent controlled by a condenser with spray wash system | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | 1.8 lbs/hr of particulate emissions |
| | 40 CFR Part 63, Subpart OOO | See section A.I.2.d. |
| heat exchange systems | 40 CFR Part 63, Subpart OOO | See section A.I.2.e. |
| equipment leaks, controlled by equipment design and operating and maintenance programs | 40 CFR Part 63, Subpart OOO | See section A.I.2.f. |
| storage vessels | 40 CFR Part 63, Subpart OOO | See section A.I.2.g. |

2. **Additional Terms and Conditions**

a. This emissions unit is exempted from the requirements of OAC rule 3745-21-07(G)(2) by OAC rule 3745-21-07(G)(9)(c)(iii). The only volatile liquid organic material that shall be utilized in this emissions unit is formaldehyde, which is not a photochemically reactive material as that term is defined by OAC rule 3745-21-01(C)(5)(a).

b. i. 40 CFR Part 63, Subpart A [see Attachment 3] provides applicability provisions, definitions, and other general provisions that are applicable to emissions units affected by 40 CFR Part 63.

ii. Table 1 of 40 CFR Part 63, Subpart OOO [see Attachment 1] specifies the provisions of 40 CFR Part 63, Subpart A that apply and those provisions that do not apply.

(Authority for term: 40 CFR 63.1400(j))

c. The provisions of 40 CFR Part 63, Subpart OOO [see Attachment 1] apply to processes that produce amino/phenolic resins and that are located at a plant site that is a major source. This emissions unit is utilized to produce amino/phenolic resins at the BTLSR Toledo plant site, which is a major source of the hazardous air pollutant (HAP) formaldehyde. This emissions unit is therefore subject to the provisions of 40 CFR Part 63, Subpart OOO [see Attachment 1].

(Authority for term: 40 CFR 63.1400(a))

d. Except as otherwise provided in 40 CFR 63.1406 [see Attachment 1], the permittee shall control organic HAP emissions from the reactor batch process vent by complying with either of the following:

i. reduce organic HAP emissions for the batch cycle by 83 weight percent using a condenser coil; or

ii. reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 pound of organic HAP per 1,000 pounds of product or less for solvent-based resin production, or to 0.0057 pound of organic HAP per 1,000 pounds of product or less for non-solvent-based resin production.

(Authority for term: 40 CFR 63.1406(a)(2))

e. There are no applicable requirements for existing heat exchangers (cooling coils) with a minimum cooling water pressure more than 35 kilopascals greater than the maximum process side pressure.

(Authority for term: 40 CFR 63.1409(a)(1))

f. Except as otherwise provided in 40 CFR Part 63, Subpart OOO [see Attachment 1], the permittee shall establish a leak detection and repair program which complies with the requirements of 40 CFR Part 63, Subpart UU [see Attachment 2]. These requirements are described in 40 CFR 63.1029 [see Attachment 2] and 63.1410 [see Attachment 1]. These requirements apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors and instrumentation systems in organic HAP service.

(Authority for term: 40 CFR 63.1410)

g. There are no applicable requirements for existing storage vessels with a capacity of less than 50,000 gallons. The existing storage vessels include the following:

formaldehyde tank (Z009) - 14,600 gallons;
fuel oil tank (Z010) - 10,000 gallons;
PVA tank (Z011) - 14,600 gallons;
"A" system resin spray dryer (P001) tanks - 2 tanks at 1,500 gallons each;
"B" system resin spray dryer (P002) tanks - 2 tanks at 1,000 gallons each;
"C" system resin spray dryer (P003) tanks - 2 tanks at 5,000 gallons each;
MUS tanks - 2 tanks at 4,000 gallons each; and
Wet blend tank - 1,000 gallons.

(Authority for term: 40 CFR 63.1404(a))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. At all times that this emissions unit is in operation, the permittee shall operate the reactor cooling coil heat exchange system with a minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.

(Authority for term: OAC rule 3745-77-07(A)(1))

2. The permittee shall establish parameter monitoring levels for the reactor batch process vent condenser based on a design evaluation or performance test, in compliance with the requirements of 40 CFR 63.1413 [see Attachment 1] for small control devices. In compliance with Table 4 of 40 CFR Part 63, Subpart OOO [see Attachment 1], these parameter monitoring levels will include the maximum temperature of the gases exiting the condenser established to assure compliance with the emission reduction specified in Section A.I.2.d above.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1413(a)(1)(ii))

3. Except as otherwise provided in 40 CFR Part 63 Subpart OOO [see Attachment 1], the permittee shall operate each control device such that the daily average of monitored parameters, established as specified in the paragraphs above, remains below the maximum level, as appropriate.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1413(a)(4)(i))

4. The permittee shall comply with the requirements of 40 CFR Part 63, Subpart UU [see Attachment 2] from all

equipment, as defined under 40 CFR 63.1402 [see Attachment 1], that contains or contacts 5 weight-percent HAP or greater and operates 300 hours per year or more. For this emissions unit, all equipment that contacts the formalin solution will be considered to be in heavy liquid service.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1410)

5. The permittee shall identify equipment subject to the equipment leak standards, in compliance with the requirements of 40 CFR 63.1022 [see Attachment 2].

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1022)

6. Except as otherwise provided in 40 CFR 63.1024 [see Attachment 2], the permittee shall repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected. A first attempt at repair, as defined in 40 CFR 63.1024(a) [see Attachment 2], shall be made no later than 5 days after the leak is detected.

(Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1024(a))

7. The permittee shall operate the condenser water wash system whenever this emissions unit is loading solid feed stock.

(Authority for term: OAC rule 3745-77-07(A)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall operate and maintain equipment to monitor the pressure differential between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure differential on a daily basis.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1415)

2. The permittee shall operate and maintain a low pressure alarm system which will indicate by visible and audible means that the pressure differential between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side has dropped below the required 35 psia minimum. If the pressure differential drops below 35 psia, the permittee shall record the beginning and ending times of the deviation, and the actions taken to alleviate the deviation.

(Authority for term: OAC rule 3745-77-07(C)(1))

3. Except as otherwise provided in 40 CFR 63.1413 [see Attachment 1], the permittee shall establish parameter monitoring levels by design evaluation, or during the performance test of, the reactor batch process vent condenser.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1413(a)(1)(ii))

4. Except as otherwise provided in 40 CFR 63.1415 [see Attachment 1], the permittee shall maintain and operate a reactor batch process vent condenser exit temperature monitoring device equipped with a continuous recorder. This monitoring equipment shall be in operation at all times when the emissions unit is in operation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1415(a), (a)(1), (b)(3))

5. Except as otherwise provided in 40 CFR 63.1416 [see Attachment 1], the permittee shall maintain records of the daily average reactor batch process vent condenser exit temperature.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(c))

6. Except as otherwise provided in 40 CFR 63.1416(b) [see Attachment 1], the permittee shall maintain records of the occurrence and duration of each start-up, shutdown, or malfunction during which excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur, records reflecting whether the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed and documentation of actions taken that are not consistent with the plan.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(b))

7. As provided in 40 CFR 63.1416(d) [see Attachment 1], where applicable the permittee shall maintain records of operation when monitors are not operating, operation of bypass lines, inspections and operation of the seal or closure mechanisms, and records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(d))

8. The permittee shall comply with the requirements of 40 CFR 63.1029 [see Attachment 2]. Pumps, valves, connectors, agitators, pressure relief devices, and instrumentation systems in heavy liquid service shall be monitored.

i. If evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method, the equipment shall be repaired. Repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

ii. Within 5 days of a the detection of a potential leak, the equipment shall be monitored by instrument reading using Method 21 of 40 CFR Part 60, Appendix A, as specified in 40 CFR 63.1023 [see Attachment 2]. If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, or 2,000 parts per million or greater for all other pumps, or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected and shall be repaired pursuant to 40 CFR 63.1024 [see Attachment 2], as applicable.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1029)

9. For each leak detected, the information specified below shall be recorded and maintained:

i. the date of first attempt to repair the leak;

ii. the date of successful repair of the leak;

iii. the maximum instrument reading measured by Method 21 of 40 CFR Part 60, Appendix A at the time the leak is successfully repaired or determined to be nonrepairable;

iv. except as otherwise provided in 40 CFR 63.1024(f)(iv) [see Attachment 2], the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak; and

v. the dates of process unit or affected facility shutdowns that occur while the equipment is unrepaired.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1024(f))

10. The permittee shall prepare and implement a pump quality assurance program in compliance with 40 CFR 63.1035 [see Attachment 2]. If greater than 10 percent (or three pumps) leak, on a 6-month rolling average, the permittee shall comply with the QIP requirements. Additional record keeping requirements apply while the QIP is in effect.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1035)

11. The permittee shall maintain daily records that document any time periods when the condenser water wash system was not in service when the emissions unit was loading solid feed stock.

(Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. The permittee shall submit quarterly reports indicating any exceedances (deviations) of the pressure differential requirements (between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side), and when applicable, the information required under section A.III.2 above.

(Authority for term: OAC rule 3745-77-07(C)(1))

2. Except as otherwise provided in 40 CFR 63.1417 [see Attachment 1], the permittee shall submit semiannual reports indicating any exceedances of the maximum allowable daily average reactor batch process vent condenser exit temperature, and when applicable, the information required under 40 CFR 63.1416(d)(3)(ii) [see Attachment 1].

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1417(f))

3. The permittee shall report the information specified in paragraphs (b)(1) through (b)(8) of 40 CFR 63.1039 [see Attachment 2], as applicable, including:

a. where any delay of repair is utilized pursuant to 40 CFR 63.1024(d) [see Attachment 2], that delay of repair has occurred and the number of instances of delay of repair;

b. if applicable, the initiation of a monthly monitoring program for valves pursuant to 40 CFR 63.1025(b)(3)(i) [see Attachment 2]; and

c. if applicable, the initiation of a quality improvement program for pumps pursuant to 40 CFR 63.1035 [see Attachment 2].

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1039)

4. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any daily record showing that the condenser water wash system was not in service when the emissions unit was loading solid feed stock. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days after the event occurs.

(Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

Compliance shall be demonstrated based upon visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1))

b. Emission Limitation:

1.8 lbs/hr of particulate emissions

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission testing performed in accordance with the procedures specified in Methods 1 through 5 of 40 CFR Part 60, Appendix A.

(Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1))

c. Emission Limitation:

i. reduce organic HAP emissions for the batch cycle by 83 weight percent using a condenser coil; or

ii. reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 pound of organic HAP per 1,000 pounds of product or less for solvent-based resin production, or to 0.0057 pound of organic HAP per 1,000 pounds of product or less for non-solvent-based resin production.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with the procedures specified in 40 CFR 63.1414 [see Attachment 1].

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1414)

2. The permittee shall conduct a design evaluation for the reactor batch process vent condenser in compliance with the requirements of 40 CFR 63.1413 [see Attachment 1] for a small control device. In compliance with 40 CFR 63.1413(a)(3) the design evaluation shall consider the composition and organic HAP concentration of the vent stream, vent stream flow rate, relative humidity, and temperature and shall establish the operating parameters of the control device, design outlet organic HAP compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet. The temperature of the gas stream exiting the condenser shall be measured and used to establish the outlet organic HAP concentration. The permittee may elect as an alternate to conduct a performance test for a small control device and such a performance test shall follow the procedures specified in 40 CFR 63.1413, as appropriate. The parameter monitoring levels for the reactor batch process vent condenser shall be set based on this design evaluation or performance test.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1413)

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. Except as otherwise provided in 40 CFR 63.1416(b) [see Attachment 1], the permittee shall develop and implement a start-up, shutdown, and malfunction plan as specified in 40 CFR 63.6(e)(3) [see Attachment 3 and Table 1 in Attachment 1]. As specified in 40 CFR 63.1416(b)(1) [see Attachment 1], this plan shall require the permittee to maintain records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment, or control devices, or recovery devices, or continuous monitoring systems, or control technologies used to comply with Subpart OOO during which excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur. The requirements of 40 CFR 63.1400(k)(1) through (4) [see Attachment 1], shall be met during periods of start-up, shutdown, malfunction, or non-operation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(b))

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

**Facility ID: 0448010370 Issuance type: Title V Final Permit**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P011 Issuance type: Title V Final Permit**

**B. State Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. None

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

**Facility ID: 0448010370 Issuance type: Title V Final Permit**

**Part III - Terms and Conditions for Emissions Units**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P012 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall

not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| amino/phenolic resin processing unit, general provisions | OAC rule 3745-21-07(G)(2) | See section A.I.2.a. |
| | 40 CFR Part 63, Subpart A | See section A.I.2.b. |
| | 40 CFR Part 63, Subpart OOO | See section A.I.2.c. |
| reactor batch process vent controlled by a condenser with spray wash system | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | 1.8 lbs/hr of particulate emissions |
| | 40 CFR Part 63, Subpart OOO | See section A.I.2.d. |
| heat exchange systems | 40 CFR Part 63, Subpart OOO | See section A.I.2.e. |
| equipment leaks, controlled by equipment design and operating and maintenance programs | 40 CFR Part 63, Subpart OOO | See section A.I.2.f. |
| storage vessels | 40 CFR Part 63, Subpart OOO | See section A.I.2.g. |

2. **Additional Terms and Conditions**

a. This emissions unit is exempted from the requirements of OAC rule 3745-21-07(G)(2) by OAC rule 3745-21-07(G)(9)(c)(iii). The only volatile liquid organic material that shall be utilized in this emissions unit is formaldehyde, which is not a photochemically reactive material as that term is defined by OAC rule 3745-21-01(C)(5)(a).

b. i. 40 CFR Part 63, Subpart A [see Attachment 3] provides applicability provisions, definitions, and other general provisions that are applicable to emissions units affected by 40 CFR Part 63.

ii. Table 1 of 40 CFR Part 63, Subpart OOO [see Attachment 1] specifies the provisions of 40 CFR Part 63, Subpart A that apply and those provisions that do not apply.

(Authority for term: 40 CFR 63.1400(j))

c. The provisions of 40 CFR Part 63, Subpart OOO [see Attachment 1] apply to processes that produce amino/phenolic resins and that are located at a plant site that is a major source. This emissions unit is utilized to produce amino/phenolic resins at the BTLSR Toledo plant site, which is a major source of the hazardous air pollutant (HAP) formaldehyde. This emissions unit is therefore subject to the provisions of 40 CFR Part 63, Subpart OOO [see Attachment 1].

(Authority for term: 40 CFR 63.1400(a))

d. Except as otherwise provided in 40 CFR 63.1406 [see Attachment 1], the permittee shall control organic HAP emissions from the reactor batch process vent by complying with either of the following:

i. reduce organic HAP emissions for the batch cycle by 83 weight percent using a condenser coil; or

ii. reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 pound of organic HAP per 1,000 pounds of product or less for solvent-based resin production, or to 0.0057 pound of organic HAP per 1,000 pounds of product or less for non-solvent-based resin production.

(Authority for term: 40 CFR 63.1406(a)(2))

e. There are no applicable requirements for existing heat exchangers (cooling coils) with a minimum cooling water pressure more than 35 kilopascals greater than the maximum process side pressure.

(Authority for term: 40 CFR 63.1409(a)(1))

f. Except as otherwise provided in 40 CFR Part 63, Subpart OOO [see Attachment 1], the permittee shall establish a leak detection and repair program which complies with the requirements of 40 CFR Part 63, Subpart UU [see Attachment 2]. These requirements are described in 40 CFR 63.1029 [see Attachment 2] and 63.1410 [see Attachment 1]. These requirements apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors and instrumentation systems in organic HAP service.

(Authority for term: 40 CFR 63.1410)

g. There are no applicable requirements for existing storage vessels with a capacity of less than 50,000 gallons. The existing storage vessels include the following:

formaldehyde tank (Z009) - 14,600 gallons;
fuel oil tank (Z010) - 10,000 gallons;
PVA tank (Z011) - 14,600 gallons;

"A" system resin spray dryer (P001) tanks - 2 tanks at 1,500 gallons each;
"B" system resin spray dryer (P002) tanks - 2 tanks at 1,000 gallons each;
"C" system resin spray dryer (P003) tanks - 2 tanks at 5,000 gallons each;
MUS tanks - 2 tanks at 4,000 gallons each; and
Wet blend tank - 1,000 gallons.

(Authority for term: 40 CFR 63.1404(a))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. At all times that this emissions unit is in operation, the permittee shall operate the reactor cooling coil heat exchange system with a minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.

   (Authority for term: OAC rule 3745-77-07(A)(1))

2. The permittee shall establish parameter monitoring levels for the reactor batch process vent condenser based on a design evaluation or performance test, in compliance with the requirements of 40 CFR 63.1413 [see Attachment 1] for small control devices. In compliance with Table 4 of 40 CFR Part 63, Subpart OOO [see Attachment 1], these parameter monitoring levels will include the maximum temperature of the gases exiting the condenser established to assure compliance with the emission reduction specified in Section A.I.2.d above.

   (Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1413(a)(1)(ii))

3. Except as otherwise provided in 40 CFR Part 63 Subpart OOO [see Attachment 1], the permittee shall operate each control device such that the daily average of monitored parameters, established as specified in the paragraphs above, remains below the maximum level, as appropriate.

   (Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1413(a)(4)(i))

4. The permittee shall comply with the requirements of 40 CFR Part 63, Subpart UU [see Attachment 2] from all equipment, as defined under 40 CFR 63.1402 [see Attachment 1], that contains or contacts 5 weight-percent HAP or greater and operates 300 hours per year or more. For this emissions unit, all equipment that contacts the formalin solution will be considered to be in heavy liquid service.

   (Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1410)

5. The permittee shall identify equipment subject to the equipment leak standards, in compliance with the requirements of 40 CFR 63.1022 [see Attachment 2].

   (Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1022)

6. Except as otherwise provided in 40 CFR 63.1024 [see Attachment 2], the permittee shall repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected. A first attempt at repair, as defined in 40 CFR 63.1024(a) [see Attachment 2], shall be made no later than 5 days after the leak is detected.

   (Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.1024(a))

7. The permittee shall operate the condenser water wash system whenever this emissions unit is loading solid feed stock.

   (Authority for term: OAC rule 3745-77-07(A)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall operate and maintain equipment to monitor the pressure differential between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure differential on a daily basis.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1415)

2. The permittee shall operate and maintain a low pressure alarm system which will indicate by visible and audible means that the pressure differential between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side has dropped below the required 35 psia minimum. If the pressure differential drops below 35 psia, the permittee shall record the beginning and ending times of the deviation, and the actions taken to alleviate the deviation.

   (Authority for term: OAC rule 3745-77-07(C)(1))

3. Except as otherwise provided in 40 CFR 63.1413 [see Attachment 1], the permittee shall establish parameter monitoring levels by design evaluation, or during the performance test of, the reactor batch process vent condenser.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1413(a)(1)(ii))

4. Except as otherwise provided in 40 CFR 63.1415 [see Attachment 1], the permittee shall maintain and operate a reactor batch process vent condenser exit temperature monitoring device equipped with a continuous recorder. This monitoring equipment shall be in operation at all times when the emissions unit is in operation.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1415(a), (a)(1), (b)(3))

5. Except as otherwise provided in 40 CFR 63.1416 [see Attachment 1], the permittee shall maintain records of the daily average reactor batch process vent condenser exit temperature.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(c))

6. Except as otherwise provided in 40 CFR 63.1416(b) [see Attachment 1], the permittee shall maintain records of the occurrence and duration of each start-up, shutdown, or malfunction during which excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur, records reflecting whether the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed and documentation of actions taken that are not consistent with the plan.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(b))

7. As provided in 40 CFR 63.1416(d) [see Attachment 1], where applicable the permittee shall maintain records of operation when monitors are not operating, operation of bypass lines, inspections and operation of the seal or closure mechanisms, and records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(d))

8. The permittee shall comply with the requirements of 40 CFR 63.1029 [see Attachment 2]. Pumps, valves, connectors, agitators, pressure relief devices, and instrumentation systems in heavy liquid service shall be monitored.

   i. If evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method, the equipment shall be repaired. Repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

   ii. Within 5 days of a the detection of a potential leak, the equipment shall be monitored by instrument reading using Method 21 of 40 CFR Part 60, Appendix A, as specified in 40 CFR 63.1023 [see Attachment 2]. If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, or 2,000 parts per million or greater for all other pumps, or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected and shall be repaired pursuant to 40 CFR 63.1024 [see Attachment 2], as applicable.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1029)

9. For each leak detected, the information specified below shall be recorded and maintained:

   i. the date of first attempt to repair the leak;

   ii. the date of successful repair of the leak;

   iii. the maximum instrument reading measured by Method 21 of 40 CFR Part 60, Appendix A at the time the leak is successfully repaired or determined to be nonrepairable;

   iv. except as otherwise provided in 40 CFR 63.1024(f)(iv) [see Attachment 2], the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak; and

   v. the dates of process unit or affected facility shutdowns that occur while the equipment is unrepaired.

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1024(f))

10. The permittee shall prepare and implement a pump quality assurance program in compliance with 40 CFR 63.1035 [see Attachment 2]. If greater than 10 percent (or three pumps) leak, on a 6-month rolling average, the permittee shall comply with the QIP requirements. Additional record keeping requirements apply while the QIP is in effect.

    (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1035)

11. The permittee shall maintain daily records that document any time periods when the condenser water wash system was not in service when the emissions unit was loading solid feed stock.

    (Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. The permittee shall submit quarterly reports indicating any exceedances (deviations) of the pressure differential requirements (between the reactor cooling coil heat exchange system on the cooling water side and the pressure on the process side), and when applicable, the information required under section A.III.2 above.

   (Authority for term: OAC rule 3745-77-07(C)(1))

2. Except as otherwise provided in 40 CFR 63.1417 [see Attachment 1], the permittee shall submit semiannual reports indicating any exceedances of the maximum allowable daily average reactor batch process vent condenser exit temperature, and when applicable, the information required under 40 CFR 63.1416(d)(3)(ii) [see Attachment 1].

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1417(f))

3. The permittee shall report the information specified in paragraphs (b)(1) through (b)(8) of 40 CFR 63.1039 [see Attachment 2], as applicable, including:

   a. where any delay of repair is utilized pursuant to 40 CFR 63.1024(d) [see Attachment 2], that delay of repair has occurred and the number of instances of delay of repair;

   b. if applicable, the initiation of a monthly monitoring program for valves pursuant to 40 CFR 63.1025(b)(3)(i) [see Attachment 2]; and

   c. if applicable, the initiation of a quality improvement program for pumps pursuant to 40 CFR 63.1035 [see Attachment 2].

   (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1039)

4. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any daily record showing that the condenser water wash system was not in service when the emissions unit was loading solid feed stock. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days after the event occurs.

   (Authority for term: OAC rule 3745-77-07(C)(1))

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 shall be determined in accordance with the following methods:

   a. Emission Limitation:

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

      Applicable Compliance Method:

      Compliance shall be demonstrated based upon visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

      (Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1))

   b. Emission Limitation:

      1.8 lbs/hr of particulate emissions

      Applicable Compliance Method:

      Compliance shall be demonstrated based upon emission testing performed in accordance with the procedures specified in Methods 1 through 5 of 40 CFR Part 60, Appendix A.

      (Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1))

   c. Emission Limitation:

      i. reduce organic HAP emissions for the batch cycle by 83 weight percent using a condenser coil; or

      ii. reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 pound of organic HAP per 1,000 pounds of product or less for solvent-based resin production, or to 0.0057 pound of organic HAP per 1,000 pounds of product or less for non-solvent-based resin production.

      Applicable Compliance Method:

      If required, compliance shall be demonstrated based upon emission testing performed in accordance with the procedures specified in 40 CFR 63.1414 [see Attachment 1].

      (Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1414)

2. The permittee shall conduct a design evaluation for the reactor batch process vent condenser in compliance with the requirements of 40 CFR 63.1413 [see Attachment 1] for a small control device. In compliance with 40 CFR 63.1413(a)(3) the design evaluation shall consider the composition and organic HAP concentration of the vent stream, vent stream flow rate, relative humidity, and temperature and shall establish the operating parameters of the control device, design outlet organic HAP compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet. The temperature of the gas stream exiting the condenser shall be measured and used to establish the outlet organic HAP concentration. The permittee

may elect as an alternate to conduct a performance test for a small control device and such a performance test shall follow the procedures specified in 40 CFR 63.1413, as appropriate. The parameter monitoring levels for the reactor batch process vent condenser shall be set based on this design evaluation or performance test.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1413)

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. Except as otherwise provided in 40 CFR 63.1416(b) [see Attachment 1], the permittee shall develop and implement a start-up, shutdown, and malfunction plan as specified in 40 CFR 63.6(e)(3) [see Attachment 3 and Table 1 in Attachment 1]. As specified in 40 CFR 63.1416(b)(1) [see Attachment 1], this plan shall require the permittee to maintain records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment, or control devices, or recovery devices, or continuous monitoring systems, or control technologies used to comply with Subpart OOO during which excess emissions (as defined in 40 CFR 63.1400(k)(4)) occur. The requirements of 40 CFR 63.1400(k)(1) through (4) [see Attachment 1], shall be met during periods of start-up, shutdown, malfunction, or non-operation.

(Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.1416(b))

***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION***

**Facility ID: 0448010370 Issuance type: Title V Final Permit**

Go to the top of this document

**Facility ID: 0448010370 Emissions Unit ID: P012 Issuance type: Title V Final Permit**

**B. State Enforceable Section**

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.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

2. **Additional Terms and Conditions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

II. **Operational Restrictions**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

III. **Monitoring and/or Record Keeping Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

IV. **Reporting Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

V. **Testing Requirements**

1. None

Go to the top of this document
Go to the top of Part III for this Emissions Unit
***THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.***

VI. **Miscellaneous Requirements**

1. None