A. Additional Terms and Conditions

Afterburner Destruction, Scrubber Control, and Packed Tower Control Efficiency

The venturi scrubber and packed tower scrubber (combined) controlling emissions from source P035 shall maintain a minimum control efficiency of 95% for PM, SO_2, and HCl. The afterburner shall maintain a minimum control efficiency of 90% for OC (including HAPs).

B. Operational Restrictions

1. The maximum production rate for this emissions unit shall not exceed 770 pounds carbon per hour.

2. Thermal Incinerator Operational Restriction

The average temperature of the exhaust gases from the afterburner, for any 3-hour block of time, shall not be less than 1695 degrees Fahrenheit.

3. Venturi/Packed Bed Scrubber Operational Restrictions

a. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 16.2 inches of water at all times while the emissions unit is in operation.

b. The scrubber water flow rate shall be continuously maintained at at a value of not less than 60 gallons per minute at all times while the emissions unit is in operation.

4. Wet Scrubber pH Operational Restrictions

The pH of the scrubber liquor shall be maintained within the range of 6.0 to 10.0.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain weekly records of the amount of carbon treated in this emissions unit and the number of hours the emissions unit operates.

2. Thermal Incinerator Temperature Monitoring and Record keeping Requirements

The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired

parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

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

a. All 3-hour blocks of time during which the average temperature of the exhaust gases from the afterburner, when the emissions unit was in operation, was less than 1695 degrees Fahrenheit.

b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

3. Venturi/Packed Bed Scrubber Monitoring and Record keeping Requirements

The permittee shall properly install, operate and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

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

a. The pressure drop across the scrubber, in inches of water, on a continuous basis.

b. The scrubber water flow rate, in gallons per minute, on a continuous basis.

c. A log of the downtime for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

4. Wet Scrubber pH Monitoring and Record keeping Requirements

The permittee shall properly install, operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor while the emissions unit is in operation. The pH monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

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

a. The pH of the scrubber liquor, on a continuous basis.

b. A log of the downtime for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

5. All records required by this permit to install shall be retained on file for a period of not less than five (5) years unless otherwise indicated by the Ohio Environmental Protection Agency. All records shall be made available to the Director, or any representative of the Director, for review during normal business

hours
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D. Reporting Requirements

1. The permittee shall submit annual reports that identify any exceedances of the hourly production rate limitation, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.

2. Thermal Incinerator Temperature Reporting Requirements

The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature of the exhaust gases from the afterburner does not comply with the temperature limitation specified above.

3. Venturi/Packed Bed Scrubber Reporting Requirements

The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. The static pressure drop across the scrubber.

b. The scrubber water flow rate.

4. The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e.,

by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

4. Wet Scrubber pH Reporting Requirements

The permittee shall submit pH deviation (excursion) reports that identify all periods of time during which the scrubber liquor pH did not comply with the pH requirements specified above.

E. Compliance Methods

1. **Emission Limitation**
0.17 lb CO/hr

Applicable Compliance Method
If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 10B.

2. **Emission Limitation**
0.78 lb NOx/hr

Applicable Compliance Method
This limit is the maximum emission rate, based on emission factors from the manufacturer and burner sizes.

Total NOx/hr = NOx from kiln burner + NOx from afterburner
= 0.0784 lb/MMBtu x 5 MMBtu/hr + 0.110 lb/MMBtu x 3.5 MMBtu/hr

3. **Emission Limitation**
0.57 lb SO2/hr and 95% Control Efficiency

Applicable Compliance Method
If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 19.

4. **Emission Limitation**
1.125 lbs HCl/hr and 95% Control Efficiency

Applicable Compliance Method
If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 26.

5. **Emission Limitation**
0.15 lb PM/hr and 95% Control Efficiency

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

6. **Emission Limitation**
Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method
Compliance shall be demonstrated by the method specified in OAC rule 3745-17-03(B)(1).

7. **Emission Limitation**
19.48 lbs OC/hr and 90% DRE

Applicable Compliance Method
Compliance shall be demonstrated by stack testing using Method 25.

8. **Emission Limitation**
Metals limits

Applicable Compliance Method
If required, the permittee shall demonstrate compliance with these emission limitations through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 29.

F. Miscellaneous Requirements

1. Packed Tower Scrubber and Venturi Scrubber Preventative Maintenance and Malfunction Abatement

This facility shall implement and maintain a Preventative Maintenance and Malfunction Abatement Plan (PM & MAP) for the packed tower scrubber and venturi scrubber used to control emissions from the carbon regeneration kiln. These plans shall be in accordance with the manufacturers recommendations and Ohio EPA's Operation and Maintenance (O&M) guidelines for air pollution control equipment.

The packed tower scrubber and venturi scrubber PM & MAP shall include, at minimum, inspection and daily recording of:

a. visible liquid leaks;
b. system gas leaks;
c. pressure drop across scrubber;
d. abrasion, corrosion or buildup on fans, ducts, pipes;
e. water flow; and
f. pressure drop.

These records and other data recorded during inspections of the scrubbers shall be retained in company files for a period of not less than three years and shall be made available to the Director or any authorized representative of the Director for review during normal business hours.

This facility shall submit quarterly reports of any leaks and/or operating parameters found during the daily inspections which are not within normal operating ranges specified by the manufacturer of the scrubber. If no deviations from normal operating parameter ranges are found, a report shall be submitted stating so. All malfunctions shall be reported in accordance with OAC rule 3745-15-06.

This report shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall address the data obtained during previous calendar quarters (October through December, January through March, April through June, and July through September, respectively).

The PM & MAP plan shall be submitted to the Ohio EPA, Central District Office for comments.

2. Visible Emissions

a. There shall be no visible emissions other than steam from the pipe fittings and flanges associated with the kiln, prior to the control equipment.

b. Visible particulate emissions from the kiln stack shall not exceed twenty percent opacity, as a six-minute average, except as provided by rule. Upon discovery of an upset condition, operation of the kiln shall immediately cease until the cause of the upset condition is identified and corrective

measures taken.

c. Visible particulate emissions from the exhaust of the control equipment associated with the material handling component of this source shall not exceed twenty percent opacity, as a three-minute average.

3. Toxic Compounds

Source P035 Air Toxic Compound emissions consist of the following pollutants:

Pollutant	Maximum Hourly Emission Rate (lb/hr)
Acetone	3.534
Amyl Acetate	0.126
Benzene	1.493
n-Butanol	0.126
n-Butyl Acetate	0.131
Chloroform	0.810
Chloromethane	0.280
Cumene	0.280
1,2-Dichloroethylene	0.366
Ethyl Acetate	0.367
Ethylbenzene	0.925
Heptane	0.097
Hexane	0.018
Isobutyl Alcohol	0.126
Isobutylene	0.100
Isopropanol	0.111
Isopropyl Acetate	0.088
Methyl Ethyl Ketone	0.111
Methanol	1.363
Methyl Acetate	0.137
Methylene Chloride	0.576
Methyl Isobutyl Ketone	0.113
Naptha	0.098
Phenol	0.184
n-Propyl Acetate	0.340
Tetrachloroethylene	0.102
Toluene	2.768
1,2,4-Trichlorobenzene	0.261
Trichloroethylene	3.241

Vinyl Acetate	0.119
Xylenes	1.042

Prior to emitting any air toxic compound(s) from emissions unit P035 other than those identified in the aforementioned list, this facility shall conduct a demonstration, in accordance with methods approved by Ohio EPA, of compliance with the Ohio EPA Air Toxics Policy. A request for emissions of new materials shall be submitted to the Ohio EPA, Central District Office along with a copy of the demonstration. If OEPA notifies this facility, in writing that the demonstration is deficient or incomplete, this facility shall submit a complete response and/or corrected demonstration, if necessary, to the CDO and AQM&P with thirty (30) days of receipt of the notification.

In no event, shall emission(s) of a material fail to maintain compliance with the Ohio EPA Air Toxics Policy.

4. Fugitive Organic Compound Emissions

If it is determined that fugitive organic compound emissions exist, then the fugitive emissions shall be quantified in accordance with USEPA Method 204.