

Facility ID: 1483060439 Issuance type: Final State Permit To Operate

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 II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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

Facility ID: 1483060439 Emissions Unit ID: N002 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

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

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. 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.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|---|--|
| N002 - Scrap metal decoating kiln with afterburner (Big Blue burn-off oven) | OAC rule 3745-31-05(A)(3) (PTI 14-05470) | Particulate emissions shall not exceed 0.34 pound per hour and 1.5 tons per year (TPY) Particulate emissions less than 10 microns shall not exceed 0.34 pound per hour and 1.5 TPY Sulfur dioxide emissions shall not exceed 0.05 pound per hour and 0.22 TPY. Organic compound emissions shall not exceed 0.15 pound per hour and 0.66 TPY. Nitrogen oxide emissions shall not exceed 0.37 pound per hour and 1.62 TPY. Carbon monoxide emissions shall not exceed 0.05 pound per hour and 0.22 TPY. Hydrogen chloride emissions shall not exceed 0.31 pound per hour and 1.4 TPY. Hydrogen fluoride emissions shall not exceed 0.02 pound per hour and 0.1 TPY. Dioxan/furan emissions shall not exceed 1.5E-09 TPY. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-17-09(B), and 40 CFR Part 63, Subpart RRR. |
| | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack associated with this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule. |
| | OAC rule 3745-17-09(B) | See term A.2.a. |
| | OAC rule 3745-17-09(C) | See term A.2.b. |
| | 40 CFR Part 63, Subpart RRR | See term A.2.d. and Sections B.1 through B.4. |

2. Additional Terms and Conditions

- (a) Particulate emissions in the exhaust gases shall not exceed 0.10 pound per one hundred pounds of liquid, semi-solid or refuse and salvageable material charged. The incinerator, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors. The hourly and annual emission limitations outlined in Section A.1, except for dioxan/furan are based

upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with these limits.

The dioxan/furan emissions TEQ shall not exceed 5.0 micrograms per Megagram (7.0 E-5 grain/ton) of feed/charge from the decoating kiln.

The permittee is complying with the alternative emission limits in 40 CFR 63.1505(e) since the emissions unit is equipped with an afterburner having a design residence time of at least one second and the afterburner is operated at a temperature of at least 1400 degrees Fahrenheit.

B. Operational Restrictions

1. Pursuant to 40 CFR 63.1506(b), the permittee must provide and maintain easily visible labels, posted at the decoating kiln, that identifies the type of affected emissions unit, the applicable emissions limits and means of compliance including the afterburner operating temperature and design residence time.
2. Pursuant to 40 CFR 63.1506(c), the permittee shall operate and maintain the capture/collection system in accordance with 40 CFR 63.1506(c).
3. Pursuant to 40 CFR 63.1506(d)(1), the permittee must install and operate a device that measures and records or otherwise determines the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The permittee must operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan.
4. Pursuant to 40 CFR 63.1505(e), the permittee must operate the afterburner at a temperature of at least 1400 degrees Fahrenheit at all times based on a 3-hour block average. The permittee must operate the afterburner in accordance with the OM&M plan.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall comply with the general record keeping requirements in 40 CFR 63.1517.
2. On and after the date the initial performance test is completed or required to be complete, whichever date is earlier, the permittee must monitor all control equipment and processes according to the requirements pursuant to 40 CFR 63.1510.
3. Pursuant to 40 CFR 63.1510(b), the permittee must prepare and implement a written operation, maintenance, and monitoring (OM&M) plan. The permittee must submit the plan to the applicable permitting authority for review and approval. The plan must be accompanied by a written certification by the permittee that the OM&M plan satisfies all requirements of this section and is otherwise consistent with the requirements of this subpart. The permittee must comply with all of the provisions of the OM&M plan as submitted to the permitting authority, unless and until the plan is revised in accordance with the following procedures. If the permitting authority determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the permittee must promptly make all necessary revisions and submit the revised plan. If the permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the permittee submits a description of the changes and a revised plan incorporating them to the permitting authority.
4. The permittee must inspect the labels for the decoating kiln at least once per calendar month to confirm that posted labels as required by the operational standard are intact and legible (see term B.1.) and record the results of each inspection.
5. The permittee shall inspect the capture/collection system at least once each calendar year to ensure the system is operating in accordance with the requirements of 40 CFR 63.1510(c) and record the results of each inspection.
6. The permittee must calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the affected source or emissions unit over the same operating cycle or time period used in the performance test. As an alternative to a measurement device, the permittee may use a procedure acceptable to the Hamilton County Department of Environmental Services to determine the total weight of feed/charge or aluminum production to the affected source or emissions unit:
 - a. the accuracy of the weight measurement device or procedure must be +/- 1 percent of the weight being measured. The permittee may apply to the Hamilton County Department of Environmental Services for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the permittee provides assurance through data and information that the affected source will meet the relevant emissions standard; and
 - b. the permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.
7. The permittee shall maintain the afterburner and records pursuant to the following requirements:
 - a. the permittee must calibrate, maintain, and operate a device to continuously monitor and record the operating temperature of the afterburner consistent with the requirements for continuous monitoring systems in subpart A of 40 CFR 63;
 - b. the temperature monitoring device must be installed at the exit of the combustion zone of the afterburner;
 - c. the monitoring system must record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block period, including any period when the average temperature in any 3-hour block period falls below the compliant operating parameter value with a brief explanation of the cause of the excursion and the corrective action taken;
 - d. the recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1512(m);
 - e. the reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator; and

- f. the permittee must conduct an inspection of the afterburner at least once a year and record the results. At a minimum, an inspection must include:
- i. an inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;
 - ii. an inspection for proper adjustment of combustion air;
 - iii. an inspection of internal structures (e.g., baffles) to ensure structural integrity;
 - iv. an inspection of dampers, fans, and blowers for proper operation;
 - v. an inspection for proper sealing;
 - vi. an inspection of motors for proper operation;
 - vii. an inspection of combustion chamber refractory lining and clean and replace lining as necessary;
 - viii. an inspection of afterburner shell for corrosion and/or hot spots;
 - ix. documentation, for the burn cycle that follows the inspection, that the afterburner is operating properly and any necessary adjustments have been made; and
- x. verification that the equipment is maintained in good operating condition.
8. The permit to install for this emissions unit (N002) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Hydrogen Chloride (HCl)

TLV (ug/m3): 2198

Maximum Hourly Emission Rate (lbs/hr): 0.31

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 49.82

MAGLC (ug/m3): 52.33

Physical changes to or in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied with the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the Air Toxic Policy:

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The owner or operator must develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution

control equipment used to comply with the standard. The owner or operator shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan must include:

- a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and
 - b. Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.
2. As required by 40 CFR 63.10(e)(3), the owner or operator must submit semiannual reports within 60 days after the end of each 6-month period. Each report must contain the information specified in 40 CFR 63.10(c). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period. A report must be submitted if any of these conditions occur during a 6-month reporting period:
- a. An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter);
 - b. An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3); or
 - c. An affected source (including an emissions unit in a secondary aluminum processing unit) was not operated according to the requirements of 40 CFR 63 Subpart RRR.

The owner or operator must submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.

E. Testing Requirements

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

a. Emission Limitations:

The particulate emissions from this emissions unit shall not exceed 0.34 pound per hour and 1.5 TPY.

Particulate emissions in the exhaust gases shall not exceed 0.10 pound per one hundred pounds of liquid, semi-solid or refuse and salvageable material charged.

Applicable Compliance Method:

The above emission limitation is based upon a performance test conducted on a similar emissions unit. If needed performance testing for particulate emissions will be conducted using Method 5 of 40 CFR Part 60, Appendix A. Compliance with the annual limit is determined by multiplying the hourly limit by 8760 hours/year then dividing by 2000 pounds/ton.

b. Emission Limitations:

The particulate emissions less than 10 microns from this emissions unit shall not exceed 0.34 pound per hour and 1.5 TPY.

Applicable Compliance Method:

The above emission limitation is based upon a performance test conducted on a similar emissions unit. If needed performance testing for particulate emissions less than 10 microns emissions will be conducted using Method 201 of 40 CFR Part 51, Appendix M. Compliance with the annual limit is determined by multiplying the hourly limit by 8760 hours/year then dividing by 2000 pounds/ton.

c. Emission Limitations:

The sulfur dioxide emissions from this emissions unit shall not exceed 0.05 pound per hour and 0.22 TPY.

Applicable Compliance Method:

The above emission limitation is based upon a performance test conducted on a similar emissions unit. If needed performance testing for sulfur dioxide emissions will be conducted using Method 6 of 40 CFR Part 60, Appendix A. Compliance with the annual limit is determined by multiplying the hourly limit by 8760 hours/year then dividing by 2000 pounds/ton.

d. Emission Limitations:

The organic compound emissions from this emissions unit shall not exceed 0.15 pound per hour and 0.66 TPY.

Applicable Compliance Method:

The above emission limitation is based upon a performance test conducted on a similar emissions unit. If needed performance testing for organic compound emissions will be conducted using Method 25 of 40 CFR Part 60, Appendix A or other approved method. Compliance with the annual limit is determined by multiplying the hourly limit by 8760 hours/year then dividing by 2000 pounds/ton.

e. Emission Limitations:

The nitrogen oxide emissions from this emissions unit shall not exceed 0.37 pound per hour and 1.62 TPY.

Applicable Compliance Method:

The above emission limitation is based upon a performance test conducted on a similar emissions unit. If needed performance testing for nitrogen oxide emissions will be conducted using Method 7 of 40 CFR Part 60, Appendix A. Compliance with the annual limit is determined by multiplying the hourly limit by 8760 hours/year then dividing by 2000 pounds/ton.

f. Emission Limitations:

The carbon monoxide emissions from this emissions unit shall not exceed 0.05 pound per hour and 0.22 TPY.

Applicable Compliance Method:

The above emission limitation is based upon a performance test conducted on a similar emissions unit. If needed performance testing for carbon monoxide emissions will be conducted using Method 10 of 40 CFR Part 60, Appendix A. Compliance with the annual limit is determined by multiplying the hourly limit by 8760 hours/year then dividing by 2000 pounds per ton.

g. Emission Limitations:

The hydrogen chloride emissions from this emissions unit shall not exceed 0.31 pound per hour and 1.4 TPY.

Applicable Compliance Method:

The above emission limitation is based upon a performance test conducted on a similar emissions unit. If needed performance testing for hydrogen chloride emissions will be conducted using Method 26 of 40 CFR Part 60, Appendix A. Compliance with the annual limit is determined by multiplying the hourly limit by 8760 hours/year then dividing by 2000 pounds/ton.

h. Emission Limitations:

The hydrogen fluoride emissions from this emissions unit shall not exceed 0.02 pound per hour and 0.1 TPY.

Applicable Compliance Method:

The above emission limitation is based upon a performance test conducted on a similar emissions unit. Compliance with the annual limit is determined by multiplying the hourly limit by 8760 hours/year then dividing by 2000 pounds/ton.

i. Emission Limitations:

The dioxan/furan emissions TEQ shall not exceed 5.0 micrograms per Megagram (7.0 E-5 grain/ton) of feed/charge from the decoating kiln.

Applicable Compliance Method:

Compliance with the above emission limitation was determined based upon a performance test conducted on April 14, 2005. If needed further testing for dioxan/furan will be conducted using Method 23 of 40 CFR Part 60, Appendix A.

j. Emission Limitations:

The dioxan/furan emissions shall not exceed 1.5E-09 TPY.

Applicable Compliance Method:

Compliance with the above emission limitation was determined by multiplying the hourly emission rate of 0.0000000033 pound/hour by 8760 hours/year then dividing by 2000 pounds/ton.

k. Emissions Limitation

Visible particulate emissions shall not exceed 20 percent opacity as a six-minute average

Applicable Compliance Method

Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996.

F. Miscellaneous Requirements

1. The permittee shall comply with all other applicable provisions in 40 CFR Part 60, Appendix A not noted above.