SYNTHETIC MINOR OPERATING PERMIT

PERMITTEE: GROOMS ALUMINUM PROCESSING

FACILITY NAME: GROOMS ALUMINUM PROCESSING

LOCATION: ASHVILLE, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE
410-0041-X003	25-ton Aluminum Melting Rotary Furnace with Baghouse

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§ 22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§ 22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

Alabama Department of Environmental Management

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.

4. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

5. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

6. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection**.**

7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

13. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter.

    a. The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    b. A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    c. A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    d. A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

    All test reports must be submitted to the Air Division within 60 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

14. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

15. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions

shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    a. by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    b. by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    c. by paving;

    d. by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. Precautions shall be taken by the permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.

18. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

19. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

20. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

21. In accordance with ADEM Admin. Code. r. 335-3-4-.01(1), any source of particulate emissions shall not discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity shall be determined by 40 CFR Part 60, Appendix A, Method 9.

22. The secondary aluminum processing unit is subject to 40 CFR 63 Subpart RRR "National Emission Standards for Hazardous air Pollutants for Secondary Aluminum Production."

23. At no time shall emissions from the furnace exceed:

    a. 2.1×10^{-4} grains of dioxins & furans expressed as toxic equivalents (D/F TEQ) per ton of charge/feed per furnace

    b. 3.50 pounds of hydrochloric acid (HCl) per hour

    c. 6.00 pounds of total particulate matter (PM) per hour

24. Aluminum scrap feed rate shall be limited to 37,110 tons per year.

25. The furnace shall meet the operating requirements of 40 CFR 63.1506:

    a. A capture/collection system or fume hood that vents captured emissions to the baghouse shall be installed according to ACGIH guidelines and operated according to the OM&M plan.

    b. The total reactive chlorine flux injection rate (TRFIR) as defined in 40 CFR 63.1503 shall not exceed the rate established during the most recent performance test.

    c. The weight of charge/feed during each operating cycle or time period used in the performance test shall not exceed more than 10% higher than the rate established during the most recent performance test, to show compliance with the SMOP limits of Provisos 23(b)-(d).

    d. A weight measurement system shall be operated in accordance with the OM&M plan to determine the weight of charge/feed and flux added during each operating cycle or time period used in the performance test.

    e. An easily visible label shall be posted identifying the furnace, the operating parameter ranges, and other requirements incorporated into the OM&M plan per 40 CFR 63.1506(b).

26. The baghouse shall meet the operating requirements of 40 CFR 63.1506:

    a. A bag leak detection system shall be operated concurrently with the baghouse and in accordance with the manufacturer's operating instructions. Corrective actions must be initiated within one hour of a system alarm according to the procedures within the OM&M plan. System alarms may not account for more than 5 percent of the operating time during a 6-month block reporting period, per 40 CFR 63.1506(m)(1).

    b. In accordance with the OM&M plan, the 3-hour block average inlet temperature for the baghouse shall be maintained at or below the average temperature established during the performance test, plus 25 ºF.

    c. Free-flowing lime shall be maintained in the hopper to the lime injection system, and the lime feedrate shall be maintained at or above the level established during the performance test.

27. The furnace shall meet the monitoring requirements of 40 CFR 63.1510:

    a. The capture/collection system or fume hood that vents captured emissions to the baghouse shall be inspected at least once each calendar year according to the methods and requirements of 40 CFR 63.1510(d). Inspection includes volumetric flow rate measurements or verification of a permanent total enclosure using EPA Method 204.

    b. The weight measurement system shall be maintained and calibrated ±1 percent error according to the schedule specified by the manufacturer (or, if no calibration schedule is specified, at least once every 6 months).

    c. The total reactive chlorine flux injection rate shall be calculated and recorded for each operating cycle or time period used in the performance test.

28. The baghouse shall meet the monitoring requirements of 40 CFR 63.1510:

    a. The bag leak detection system shall be installed according to the specifications of 40 CFR 63.1510(f)(1), calibrated according the manufacturer's instructions, and equipped with a device to continuously record the output signal from the sensor.

    b. A device to continuously monitor and record the temperature of the inlet baghouse gasses shall be installed according to 40 CFR 63.1510(h). It must record the temperature in 15-minute block averages and calculate the average temperature for each 3-hour block period and must include a range from 0 to 1.5 times the average temperature established during the performance test.

    c. The lime injection system shall be verified to be free-flowing by inspecting the feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the owner or operator must increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The owner or operator may return to inspections at least once every 8 hour period if corrective action results in no further blockages of lime during the 3-day period.

    d. The lime injection system feed setting shall be checked at least once per day.

    e. The lime injection system rate in pounds per hour shall be verified, at least once per month, to be no less than 90 percent of the lime injection rate established during the most recent performance test. If determined to be below 90 percent of the established rate, either the feeder must be repaired or the feed setting shall be adjusted to restore the rate to normal operation within 45 days according to 40 CFR 63.1510(i)(4).

29. The operation, maintenance, and monitoring plan (OM&M), or revisions thereto, shall be submitted to the Department within 90 days after the initial performance test or any subsequent performance test, if successful, and shall contain the following, as applicable:

    a. Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, for each furnace and the baghouse.

b. A monitoring schedule for the secondary aluminum processing unit.

c. Procedures for the proper operation and maintenance of each furnace and the baghouse.

d. Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including calibration and certification of accuracy of each monitoring device, semiannually, according to the manufacturer's instructions.

e. Procedures for monitoring process and control device parameters, including lime injection rates, charge and flux feed rates, and baghouse differential pressure.

f. Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the range established per 40 CFR 63.1510(b)(6).

g. A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

h. Documentation of the work practice and pollution prevention measures used to achieve compliance with the applicable emission limits.

30. Performance tests to show compliance with the emission limits of Proviso 23 shall be conducted as follows:

a. The initial performance test shall be conducted within 180 days of commencing operation

b. Periodic performance tests shall be conducted every 5 years following the initial test.

c. Each performance must consist of three separate runs. Pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, where the length of the process operating cycle is not known in advance, and where isokinetic sampling must be conducted based on the procedures in Method 5 in appendix A to part 60, use the procedure specified in 40 CFR 63.1511(b)(3) to ensure that sampling is conducted over the entire process operating cycle.

d. Performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions (considering the extent of feed/charge contamination, reactive flux addition rate and feed/charge rate).

e. The following methods in 40 CFR Part 60, Appendix A shall be used:

i. Method 5 for PM

ii. Method 23 for D/F

iii. Method 26A for Cl_2 and HCl.

f. The following operating parameters shall be established:

i. Baghouse inlet gas temperature, per 40 CFR 63.1512(n)

ii. Total reactive chorine flux injection rate, per 40 CFR 63.1512(o)

iii. Lime injection feed rate, per 40 CFR 63.1512(p)

iv. Charge/feed rate

g. The results of any performance test shall be submitted within 60 days of the test.

31. Visible emissions observations shall be performed as follows on both the baghouse stack and the furnace building roof vent:

a. An observation shall be performed at least once per day when one or both furnaces are operating.

b. If at any time emissions in excess of 10% instantaneous opacity are noted, an additional observation shall be performed.

c. Each observation shall be at least 6 minutes in length.

d. Each observation shall be conducted by a certified observer in accordance with 40 CFR Part 60, Appendix A, Method 9.

e. If excess visible emissions are noted, the permittee shall take appropriate actions as necessary to eliminate the observed emissions.

32. The following records shall be kept in a form suitable for inspection for at least five (5) years:

a. Records shall be kept documenting the total operating hours for the furnace during each six-month period, each bag leak alarm, the type of alarm, the time corrective action was initiated and completed, and a brief description of the cause and corrective action.

b. Records shall be kept documenting the 15-minute block average inlet temperatures for each lime-injected fabric filter, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken.

c. Records shall be kept documenting the inspections verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken.

d. Records shall be kept documenting the daily inspections of the lime feeder setting and monthly verifications of lime flow rate, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken.

e. Records shall be kept documenting the total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous,

liquid, or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.

f. Records shall be kept documenting the feed/charge and solid flux weights for each operating cycle or time period used in the performance test.

g. Records shall be kept documenting the monthly inspections for proper unit labeling for each furnace subject to labeling requirements.

h. Records shall be kept documenting the annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as applicable.

i. A copy of the OM&M plan shall be kept.

j. For any failure to meet an applicable standard, the following records shall be kept:

   i. Records of the emission unit ID, monitor ID, pollutant or parameter monitored, beginning date and time of the event, end date and time of the event, cause of the deviation or exceedance and corrective action taken.

   ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

k. Records of each visible emissions observation shall be kept documenting the time, duration, conditions, reading, observer, and corrective actions taken.

33. An excess emissions/summary report must be submitted according to the requirements of 40 CFR 63.10(e)(3) within 60 days of the end of each semiannual calendar reporting period.

a. The following must be included if any occurred during that reporting period. When no deviations of parameters have occurred, the report must state that no excess emissions occurred during the reporting period:

   i. The corrective action for the bag leak detection system was not initiated within one hour.

   ii. An excursion of a compliant process or operating parameter or range (e.g. lime injection rate, flux injection rate) occurred.

   iii. An affected source was not operated according to 40 CFR 63 Subpart RRR.

b. Each report must include the applicable certifications of 40 CFR 63.1516(b)(2).

c. Each report must include summaries of malfunctions in accordance with 40 CFR 63.1516(d).