

- c. Pursuant to 35 Ill. Adm. Code 212.321(a), except as further provided in 35 Ill. Adm. Code Part 212, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.321(c).
- d. Pursuant to 35 Ill. Adm. Code 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
- 3. Pursuant to 35 Ill. Adm. Code 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm.
- 4a. This permit is issued based on the lead recovery rotary furnace not being subject to the New Source Performance Standard 40 CFR Part 60, Subpart L - Standards of Performance for Secondary Lead Smelters, because this source is not a lead smelting facility.
- b. This permit is issued based on the lead recovery rotary furnace not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) from Secondary Lead Smelting, 40 CFR Part 63, Subpart X, because this source is not a lead smelting facility as defined in 40 CFR 63.542
- c. This permit is issued based on the lead recovery rotary furnace not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Nonferrous Metals Processing Area Sources, 40 CFR Part 63 Subpart TTTTTT, because this source is not a secondary nonferrous metals processing facility as defined in 40 CFR 63.11472.
- d. This permit is issued based on the lead recovery rotary furnace not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP): Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, 40 CFR Part 63 Subpart ZZZZZZ, because this source is not an aluminum foundry, copper foundry, or other nonferrous foundry as defined in 40 CFR 63.11556.
- 5a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in material or installation of controls, in order to eliminate the odor nuisance.
- b. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic inspections and maintenance

on the emission unit and pollution control equipment such that the emission unit and pollution control equipment are kept in proper working condition and not causes a violation of the Illinois Environmental Protection Act or regulations promulgated therein.

- c. Pollution control devices shall be in operation at all times when the associated emission unit(s) is in operation and emitting air contaminants.
- d. The lead recovery rotary furnace shall only be operated with natural gas as the fuel. The use of any other fuel in the lead recovery rotary furnace requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
- 6a. Emissions and operation of the lead recovery rotary furnace shall not exceed the following limits:

Metal Throughput		Emission Factor		Control Efficiency	E M I S S I O N S			
		lbs/ton			PM		Lead	
(Tons/Mo)	(Tons/Yr)	PM	Lead	(%)	(Lbs/Mo)	(Lbs/Yr)	(Lbs/Mo)	(Lbs/Yr)
80	80	70	16	99	56	56	13	13

These limits are based on the maximum metal feed rate of the lead recovery rotary furnace (1.0 ton/hour), 80 hours of operations per year and standard emission factors (Tables 12.11-2, AP-42, Fifth Edition, SCC 3-04-004-04).

- b. This permit is issued based on negligible emissions of nitrogen oxides (NO_x) and carbon monoxide (CO) from the natural gas combustion in the lead recovery rotary furnace. For this purpose, emissions of each pollutant shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
- c. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 7a. Within 45 days after commencing operations of the lead recovery rotary furnace, stack testing shall be conducted during conditions which are representative of maximum emissions of each pollutant. During the stack test, concentration and mass emissions of particulate matter (PM) and lead (Pb) shall be measured at the outlet of the new furnace and at the inlet to and the outlet of the baghouse.
- b. The following USEPA methods and procedures shall be used for testing of emissions:

Location of Sample Points	40 CFR 60, Appendix A, Method 1
Gas Flow and Velocity	40 CFR 60, Appendix A, Method 2

Flue Gas Weight	40 CFR 60, Appendix A, Method 3
Moisture	40 CFR 60, Appendix A, Method 4
Particulate Matter	40 CFR 60, Appendix A, Method 5
Lead	40 CFR 60, Appendix A, Method 12

- c. The permanent total enclosure shall be verified on compliance with criteria specified in Method 204 (40 CFR Part 52, Appendix M).
- d. The Illinois EPA shall be notified prior to this test to enable the Illinois EPA to observe it. Written notification for the expected date of testing shall be submitted a minimum of thirty (30) days prior to the expected date. Written notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.
- e. At least 30 days prior to the actual date of testing a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing, including as a minimum:
 - i. The company/entity that will be performing sampling and analysis and their experience with similar tests.
 - ii. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined.
 - iii. The specific determinations of emissions and operation which are intended to be made, including sampling and monitoring locations.
 - iv. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods. The specific sampling, analytical and quality control procedures which will be used, with an identification of the standard methods upon which they are based.
 - v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justifications.
 - vi. Any proposed use of an alternative test method, with detailed justification.
 - vii. The format and content of the Source Test Report.
- f. Copies of the Final Source Test Report(s) for these tests shall be submitted to the Illinois EPA within 60 days after the testing is completed.

- g. The Final Source Test Report shall include as a minimum:
 - i. A summary of results.
 - ii. General information.
 - iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule.
 - iv. Detailed description of test conditions, including:
 - A. Process information, i.e., mode(s) of operation, process rate, e.g. fuel or raw material consumption,
 - B. Control equipment information, i.e., equipment condition and operating parameters during testing, and
 - C. A discussion of any preparatory actions taken, i.e., inspections, maintenance and repair.
 - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
 - vi. An explanation of any discrepancies among individual tests or anomalous data.
 - vii. The results of all quality control evaluation, including a copy of all quality control data.
 - viii. The operating parameters of the control device during testing (temperature, pressure drop, scrubbing flow rate, etc.).
- h. Satisfactory completion of this test so as to demonstrate compliance with applicable regulatory requirements and emission standards is a prerequisite to issuance of a revised operating permit, pursuant to 35 Ill. Adm. Code 201.160.
- 8a. The Permittee shall install, operate, calibrate, and maintain a source oriented Federal Reference Method (FRM) high-volume total suspended particulate (TSP) monitor to measure ambient concentrations of lead (Pb).
 - i. The monitor must meet the reference method for high-volume sampling of TSP as specified in 40 CFR 50, Appendix B;
 - ii. The monitor shall be sited, taking into account logistics and the potential for population exposure, where the Pb concentration is expected to be at its maximum and installed in accordance with the siting criteria of 40 CFR 58 Appendix E;

- iii. The Permittee shall operate the monitor following the operating procedures identified in the "Quality Assurance handbook for Air Pollution Measurement Systems" (<http://www.epa.gov/ttn/amtic/files/ambient/pm25/ga/QA-Handbook-Vol-II.pdf>); 40 CFR Part 58, Appendix A; and any specified procedures in the manufacture's maintenance manual for the unit used to monitor for Pb;
 - iv. Samples shall be collected on a one in six day schedule following the federal monitoring schedule as posted on EPA's website (<http://epa.gov/ttn/amtic/calendar.html>); and
 - v. The Permittee must contract with a laboratory that will analyze the samples in accordance with the analysis method for Pb in TSP as specified in 40 CFR 50 Appendix G.
- b. Prior to beginning installation of the monitor, the Permittee shall submit the proposed siting with physical measurements and photos to the Illinois EPA for review and approval;
 - c. Prior to beginning operation of the monitor, the Permittee shall submit a Quality Assurance Project Plan (QAPP) and standard operating procedure (SOP) to the Illinois EPA for review and approval. See <http://www.epa.gov/quality/qs-docs/g5-final.pdf> and <http://www.epa.gov/quality/qs-docs/g6-final.pdf> for guidance documentation.
 - d. The air monitoring station shall be installed and begin operation within six months of startup of the new furnace (unless additional time is approved by the Illinois EPA) and shall remain in operation for a period of at least 12 months and no more than 24 months, unless otherwise agreed to by the Permittee and Illinois EPA.
 - e. Removal of the air monitoring station prior to 24 months is subject to review and approval by the Illinois EPA. If any rolling 3-month average lead concentration exceeds the NAAQS, then the Permittee shall continue to monitor at this location or at another location as specified by the Illinois EPA until such time that the monitor meets the requirement for discontinuation pursuant to 40 CFR 58.14.
 - f. The Permittee must provide personnel from Illinois EPA with access to the monitoring site location and respond to any inquiries from such personnel regarding monitor siting, operation, or maintenance. In the event that an inspector or auditor identifies problems, the Permittee must take appropriate corrective actions. Any changes made to the monitoring siting, operations, or maintenance must be approved the Illinois EPA prior to the change.
 - g. The Permittee must keep a daily log and monthly reports of the following information, to be submitted to Illinois EPA:

- i. Sample analysis results (sample period, Pb content, flow rate, date, and time);
 - ii. Monitoring downtime (date, time duration, and reason) along with any corrective actions taken;
 - iii. Quality Performance/Control check data (date, time, parameter, and result) along with any corrective actions taken;
 - iv. Facility production resulting in Pb emissions (material usage, hours of operation, Pb emissions, date, and time);
 - v. Local meteorological measurements on sample run dates (wind direction, wind speed, temperature, rain/snowfall, and atmospheric pressure).
9. The Permittee shall maintain the following records during the operation of the lead recovery rotary furnace and associated baghouse under the authority of this Construction Permit:
- a. A file containing the following information for the baghouse, with supporting documentation:
 - i. The design capacity (scfm) and performance of the device (outlet PM concentration, in gr/dscf or mg/dscm), as specified by the manufacturer;
 - ii. The operating procedures for each device recommended by the manufacturer, including recommended range of pressure drop, maximum operating temperature, and, for the baghouse, practices for cleaning of bags; and
 - iii. The maintenance and inspection procedures recommended by the manufacturer.
 - b. An operating log or other records for the lead recovery rotary furnace that at a minimum contains the following for each batch of material or heat processed in a furnace:
 - i. Amount of raw material charged (tons) and description of raw materials processed, i.e., (Estimated percentage of different components, in the raw materials, e.g., spent projectiles, etc.).
 - ii. Start time and duration of the heat (hours) and temperature (°C);
 - iii. Final batch size (tons), product type or grade, and lead content (percent by weight); and
 - iv. Average charge rate per batch based on amount charged divided by batch time (tons/hour).

- c. Records of the following information for the lead recovery rotary furnace:
 - i. Total metal production (tons/month and tons/year); and
 - ii. Total natural gas usage (scf/month and scf/year).
- d. An operating log or other records for the control system that, at a minimum, includes the following information for each heat in the rotary furnace:
 - i. Information confirming that the capture system operated properly, including proper settings for dampers in the ductwork during different phases of the heat;
 - ii. Information confirming that the baghouse operated properly.
- e. An inspection and maintenance log or other records for the control system that, at a minimum, include:
 - i. Inspection data:
 - A. Date and time of inspection;
 - B. Identification of personnel that performed each inspection;
 - C. Observed condition of control equipment; and
 - D. Recommendations based on inspection.
 - ii. Maintenance and repairs records, including replacement of filters/bags:
 - A. Dates maintenance and repairs were initiated and completed;
 - B. Identification of personnel that performed each maintenance and repairs;
 - C. Reason for maintenance or repair, e.g., regularly scheduled preventive maintenance or activity to respond to observed defect; and
 - D. Description of the maintenance and repairs.
- f. A log or other records for malfunction and breakdown for the lead recovery rotary furnace and associated control equipment. At a minimum, these records shall include:
 - i. Date and duration of malfunction or breakdown;

- ii. A full and detailed description of the malfunction or breakdown, with likely cause of the malfunction or breakdown;
 - iii. The effect of the malfunction or breakdown on emissions and, if applicable emission limits may have been exceeded, an estimate of the quantity of additional emissions, with supporting analysis;
 - iv. The measures used to reduce the quantity of emissions and the duration of the malfunction or breakdown; and
 - v. The steps taken to prevent similar malfunctions or breakdowns or reduce their frequency and severity.
- g. Records related to emissions of the lead recovery rotary furnace that contain the following information:
- i. A file for the lead recovery rotary furnace that contains the allowable emission rate of 35 Ill. Adm. Code 212.321 for each batch based on the average charge rate determined in condition 9(b)(iv), with supporting documentation;
 - ii. A file that contains calculations for the maximum emissions of PM and lead from the rotary furnaces, in pounds/hour, when operating at their maximum rates, with supporting documentation, which shall be updated as necessary to keep accurate and true; and
 - iii. Records of emissions of PM, NO_x, CO, and lead (tons/month and tons/year), with supporting calculations.
10. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.
- 11a. If a malfunction or breakdown of the lead recovery rotary furnace or associated control system occurs, the Permittee shall notify the Illinois EPA's Air Compliance Section and Regional Office in writing by electronic mail or facsimile by 10:00 a.m. of the next business day. This notification shall include the date and duration of the incident and a brief description of the incident and need not include a copy of the detailed records required by Condition 9(f).

Illinois Environmental Protection Agency
Division of Air Pollution Control
4302 North Main Street
Rockford, Illinois 61103
Facsimile No. 815/987-7005
Email: Thomas.Walsh@illinois.gov

- b. If there is an exceedance of or deviation from the requirements of this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance/deviation. The report shall include any emissions released as a result of the deviation, a copy of relevant records, a description of the exceedance or deviation, the causes and efforts to reduce emissions, deviations and future occurrences.
12. One (1) copy of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Field Operation Section
5415 North University
Peoria, Illinois 61614

and one (1) copy of any documents relating to emissions performance testing shall be sent to the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Source Monitoring Unit
9511 West Harrison
Des Plaines, Illinois 60016

The OPERATING permit application is DENIED because the Illinois Environmental Protection Act, Section 9, and Ill. Adm. Code 201.160 might be violated. Pursuant to Section 201.160, an operating permit may not be issued until the equipment has been constructed or modified in accordance with applicable conditions in this construction permit. The Illinois EPA suggests that you re-apply for the operating permit after the construction is completed and testing is satisfactory performed in accordance with the construction permit. This information must be submitted in triplicate and should reference the application and I.D. numbers assigned above.

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The denial of the operating permit for the new lead recovery rotary furnace has no impact on previously issued permits.

If you have any questions on this permit, please call Valeriy Brodsky at 217/785-1705.

Robert W. Bernoteit
Acting Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

RWB:VJB:psj

cc: Region 2
Ray Pilapil, CES