

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Wabash Alloys Division of Connell Limited Partnership
4525 West Old 24
Wabash, Indiana 46992**

is hereby authorized to construct

- (a) rotary furnace #3, with a maximum melt rate of 3.95 tons of aluminum per hour and a maximum heat input capacity of 7.5 million British Thermal Units (Btu) per hour, with an afterburner used for VOC control and an existing baghouse used for particulate matter control.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP-169-8475-00010	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

Construction Conditions

General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
2. That this permit to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

3. That pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.
4. That pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. That notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

6. That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:
 - (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
 - (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
 - (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1-7.1(Fees).
 - (e) Pursuant to 326 IAC 2-7-4, the permittee applied for a Title V operating permit on August 1, 1996. The operation permit issued shall contain as a minimum the conditions in the

Operation Conditions section of this permit.

7. That when the facility is constructed and placed into operation the following operation conditions shall be met:

Operation Conditions

General Operation Conditions

1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
2. That the permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder.

Preventive Maintenance Plan

3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), Wabash Alloys Division of Connell Limited Partnership shall prepare and maintain a preventive maintenance plan, including the following information:
 - (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
 - (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
 - (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

Transfer of Permit

4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):
 - (a) In the event that ownership of this rotary furnace is changed, Wabash Alloys Division of Connell Limited Partnership shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
 - (b) The written notification shall be sufficient to transfer the permit from Wabash Alloys Division of Connell Limited Partnership to the new owner.
 - (c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. That pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:
- (a) Violation of any conditions of this permit.
 - (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
 - (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
 - (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
 - (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That a copy of this permit shall be available on the premises of the source.

Performance Testing

7. That pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance stack tests shall be performed for PM and PM10 on the rotary furnace exhausting through the existing baghouse within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-2.1 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.
- (a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.
 - (b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.
 - (c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.
 - (d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.
 - (e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of

the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

Malfunction Condition

8. That pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

Annual Emission Reporting

9. That pursuant to 326 IAC 2-6 (Emission Reporting), the owner/operator of Wabash Alloys Division of Connell Limited Partnership must annually submit an emission statement for the facility. This statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. A copy of this rule is enclosed. The annual statement must be submitted to:

**Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015**

The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

Opacity Limitations

10. That pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:
 - (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
 - (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.
11. That pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration), the baghouse shall operate at all times that the rotary furnace #3 is in operation. The particulate matter emissions from the rotary furnace shall not exceed 5.48 pounds per hour. This limit will also satisfy the requirements of 326 IAC 6-3-2 (Process Operations). The PM10 emissions from the rotary furnace shall not exceed 3.20 pounds per hour. These limits are necessary in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

Baghouse Operating Condition

12. That the baghouse shall be operated at all times when the rotary furnace is in operation.
 - (a) The permittee shall take readings of the total static pressure drop across the baghouses, at least once per working shift. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 2 to 4 inches of water. The Preventive Maintenance Plan for these baghouses shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of this range for any one reading.
 - (b) The instrument used for determining the pressure shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.
 - (c) The gauge employed to take the pressure drop across the baghouses or any part of the facility shall have a scale such that the expected normal reading shall be no less than 20 percent of full scale and be accurate within $\pm 2\%$ of full scale reading. The instrument shall be quality assured and maintained as specified by the vendor.
 - (d) An inspection shall be performed each calendar quarter of the all the baghouses. Defective bags shall be replaced. A record shall be kept of the results of the inspection and the number of bags replaced.
 - (e) In the event that a bag's failure has been observed:
 - (i) The affected compartments will be shut down immediately until the failed units have been replaced.
 - (ii) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

Visible Emission Notations

13. That visible emission notations of all exhaust to the atmosphere from the furnace baghouse shall be performed once per working shift. A trained employee will record whether emissions are normal or abnormal.
- (a) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, 80% of the time the process is in operation, not counting start up or shut down time.
 - (b) In the case of batch or discontinuous operation, readings shall be taken during that part of the operation specified in the facility's specific condition prescribing visible emissions.
 - (c) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal and abnormal visible emissions for that specific process.
 - (d) The Preventive Maintenance Plan for this facility shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

Fugitive Dust Emissions

14. That pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), if fugitive dust is visible crossing the boundary or property line of the source, or if any of the criteria specified in 326 IAC 6-4(1) through (4) are violated, the source is in violation of this fugitive dust rule. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

Open Burning

15. That the permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

Record Keeping Requirements

16. That a log of information necessary to document compliance with operation permit condition no. 12 shall be maintained. These records shall be kept for at least the past 36 month period and made available upon request to the Office of Air Management (OAM).

Best Available Control Technology

17. That pursuant to 326 IAC 8-1-6 (BACT), the afterburner system shall operate at all times that the rotary furnace is in operation. When operating, the afterburner shall maintain a minimum operating temperature of 1,200° F to maintain a minimum 90% overall efficiency for volatile organic compound (VOC). This system shall also consist of a sealed door and refractory lined discharge duct.

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name: Wabash Alloys Division of Connell Limited Partnership
 Source Location: 4525 West Old 24, Wabash, Indiana 46992
 County: Wabash
 Construction Permit No.: 169-8475-00010
 SIC Code: 3341
 Permit Reviewer: Nisha Sizemore

The Office of Air Management (OAM) has reviewed an application from Wabash Alloys Division of Connell Limited Partnership relating to the construction and operation of a new rotary furnace, specifically the following equipment:

- (a) rotary furnace #3, with a maximum melt rate of 3.5 tons of aluminum per hour and a maximum heat input capacity of 7.5 million British Thermal Units (Btu) per hour, with an afterburner used for VOC control and an existing baghouse used for particulate matter control.

Previous Permit Applications

On October 2, 1996, Wabash Alloys submitted a permit application for a reverberatory furnace. The application for the rotary furnace was received on April 18, 1997. Wabash Alloys was informed that the two applications would need to be combined and reviewed under PSD. When reviewed together, the two projects triggered PSD review. Instead of pursuing a PSD permit, Wabash Alloys chose to withdraw the application for the reverberatory furnace. This allowed the application for the rotary furnace to be reviewed under the synthetic minor provisions in the state air regulations. If Wabash Alloys re-submits the application for the reverberatory furnace within 18 months of the issuance of this final permit, the new permit application will need to be reviewed as a PSD permit.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
43	#3 rotary furnace with baghouse	40	6.3	70,000	140

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on April 18, 1997, with additional information received on July 7, 1997.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (6 pages).

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	45.5	1160
Particulate Matter (PM10)	45.5	1160
Sulfur Dioxide (SO ₂)	21.7	21.7
Volatile Organic Compounds (VOC)	39.1	39.1
Carbon Monoxide (CO)	73.5	73.5
Nitrogen Oxides (NO _x)	10.0	10.0
Single Hazardous Air Pollutant (HAP)	neg.	neg.
Combination of HAPs	neg.	neg.

- (a) Allowable particulate matter emissions are determined from the applicability of rule 326 IAC 6-3 according to the following calculation:

$$E = 4.10 P^{0.67}, \text{ where: } P \text{ is the process weight in tons/hr and } E \text{ is the calculated emission rate in lbs/hr}$$

$$E = 4.10 (3.95)^{0.67} = 10.29 \text{ lbs/hr}$$

- (b) The allowable emissions based on the rules cited are less than the potential emissions, therefore, the allowable emissions are used for the permitting determination.

- (c) Allowable emissions (as defined in the Indiana Rule) of VOC, particulate matter and particulate matter less than ten microns (PM10) are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen are precursors for the formation of ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Wabash County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Wabash County has been classified as attainment or unclassifiable for all other regulated pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is one of the 28 listed source categories under 326 IAC 2-2, the fugitive PM emissions are counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	724
SO ₂	385
VOC	316
CO	19
NO _x	106

- (a) This existing source is a major stationary source because at least one attainment regulated pollutant is emitted at a rate of 250 tons per year.
- (b) These emissions were based on Facility Quick Look Report, dated September 18, 1996.

Proposed Modification

PSD PTE from the proposed modification (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity and/or as limited):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO ₂ (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Proposed Modification	24	14	21.7	4.09	73.5	10.0
PSD or Offset Significant Level	25	15	40	40	100	40

- (a) This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 application on August 1, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 63 applicable to this facility.

State Rule Applicability

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source has the potential to emit more than 100 tons per year of sulfur dioxide, nitrogen oxides, and volatile organic compounds. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1-2 (Visible Emission Limitations)

Pursuant to this rule, except as provided in 326 IAC 5-1-3 (Temporary Exemptions):

- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.

- (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

326 IAC 2-2 (Prevention of Significant Deterioration)

The baghouse shall operate at all times that the rotary furnace #3 is in operation. The particulate matter emissions from the rotary furnace shall not exceed 5.48 pounds per hour. This limit will also satisfy the requirements of 326 IAC 6-3-2 (Process Operations). The PM10 emissions from the rotary furnace shall not exceed 3.20 pounds per hour. These limits are necessary in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

326 IAC 2-1-3 (Construction and Operating Permit Requirements)

Pursuant to this rule, compliance stack tests shall be performed for PM and PM10 on the rotary furnace exhausting through the existing baghouse within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-2.1 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.

- (a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.
- (b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.
- (c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.
- (d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.
- (e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

326 IAC 1-6-2 (Records; Notice of Malfunction)

Pursuant to this rule, the following conditions shall apply:

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.

- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

326 IAC 8-1-6 Best Available Control Technology (BACT)

The rotary furnace is subject to 326 IAC 8-1-6 Best Available Control Technology (BACT) because it has the potential to emit volatile organic compounds in excess of 25 tons per year. The company completed and submitted to OAM a top-down BACT analysis to determine the best controls which were economically and technically feasible. The BACT shall be the use of an afterburner system with a minimum overall efficiency of 90% for VOC. This system also consists of a sealed door and refractory lined discharge duct. This system shall be in operation at all times that the rotary furnace is in operation.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

This rotary furnace will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.

Conclusion

The construction of this rotary aluminum furnace will be subject to the conditions of the attached proposed Construction Permit No. CP-169-8475, Plt ID No. 169-00010.

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for New Construction and Operation

Source Name: Wabash Alloys Division of Connell Limited Partnership
Source Location: 4525 West Old 24, Wabash, Indiana 46992
County: Wabash
Construction Permit No.: 169-8475-00010
SIC Code: 3341
Permit Reviewer: Nisha Sizemore

On September 26, 1997, the Office of Air Management (OAM) had a notice published in The Wabash Plain Dealer, Wabash, Indiana, stating that Wabash Alloys had applied for a construction permit to construct and operate a rotary aluminum melt furnace with an afterburner and an existing baghouse for emissions control. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAM has made the following changes to the permit.

1. Operation condition number 17 has been changed to require a minimum operating temperature for the afterburner.
2. Page 3 of the Technical Support Document states that the source is a major source because at least one attainment regulated pollutant is emitted at a rate of 250 tons per year. It should state that this existing source is a major stationary source because it is in one of the 28 listed source categories and at least one regulated pollutant is emitted at a rate of 100 tons per year or more. This change does not affect any of the permit conditions.

On October 28, 1997, Wabash Alloys submitted comments on the proposed construction permit. The summary of the comments and corresponding responses is as follows:

Comment #1

The maximum capacity of the rotary furnace should be 3.95 tons per hour, not 3.5 tons per hour.

Response #1

This change has been made on the first page of final permit in the section describing the emission units. All potential emissions calculations were based on a capacity of 3.95 tons per hour; therefore, no changes are necessary in the calculations or in any of the operation conditions of the permit.

Appendix A: Secondary Metal Production

Aluminum

Company Name: Wabash Alloys Division of Connell Limited Partnership
 Address City IN Zip: 4525 West Old 24, Wabash, Indiana
 CP: 169-6791
 Pit ID: 169-0010
 Reviewer: Janusz Johnson
 Date: November 6, 1996

NEW FURNACE NO. 16 potential emissions

SCC# 3-04-001-03 Smelting Furnace/Reverberatory						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Aluminum/alloy agents	17593.00	2000	8.80			
	PM lbs/ton Produced 4.30	PM10 lbs/ton Produced 2.60	SOx lbs/ton Produced 0.00	NOx lbs/ton Produced 0.00	VOC lbs/ton Produced 0.00	CO lbs/tons Produced --
Potential Emissions lbs/hr	37.8	22.9	0.0	0.0	0.0	--
Potential Emissions lbs/day	907.8	548.9	0.0	0.0	0.0	--
Potential Emissions tons/year	165.7	100.2	0.0	0.0	0.0	--
SCC# 3-04-001-04 Fluxing/Chlorine						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Flux	198.00	2000	0.10			
	PM lbs/ton Chlorine 1000.00	PM10 lbs/ton Chlorine 532.00	SOx lbs/ton Chlorine 0.00	NOx lbs/ton Chlorine 0.00	VOC lbs/ton Chlorine 0.00	CO lbs/tons Chlorine --
Potential Emissions lbs/hr	99.0	52.7	0.0	0.0	0.0	--
Potential Emissions lbs/day	2376.0	1264.0	0.0	0.0	0.0	--
Potential Emissions tons/year	433.6	230.7	0.0	0.0	0.0	0.00

OLD FURNACE NO. 16 Emissions based on actual operating hours from 1989 and 1990

SCC# 3-04-001-03 Smelting Furnace/Reverberatory						
TYPE OF MATERIAL	actual hours operated avg. hours/yr	avg. Throughput LBS/HR	1 TON/2000 lbs	TON/HR		
Aluminum	7620.00	5085.90	2000	2.54		
	PM lbs/ton Produced 4.30	PM10 lbs/ton Produced 2.60	SOx lbs/ton Produced 0.00	NOx lbs/ton Produced 0.00	VOC lbs/ton Produced 0.00	CO lbs/tons Produced --
Actual Emissions tons/year	41.7	25.2	0.0	0.0	0.0	--
SCC# 3-04-001-04 Fluxing/Chlorine						
TYPE OF MATERIAL	actual hours operated avg. hours/yr	avg. Throughput LBS/HR	1 TON/2000 lbs	TON/HR		
Flux	7620.00	57.24	2000	0.03		
	PM lbs/ton Chlorine 1000.00	PM10 lbs/ton Chlorine 532.00	SOx lbs/ton Chlorine 0.00	NOx lbs/ton Chlorine 0.00	VOC lbs/ton Chlorine 0.00	CO lbs/tons Chlorine --
Potential Emissions tons/year	109.0	58.0	0.0	0.0	0.0	ERR

afterburner

Appendix A: Emission Calculations

Natural Gas Combustion Only

MM Btu/hr 0.3 - < 10

Commercial Boiler

Company Name: Wabash Alloys Division of Connell Limited Partnership

Address City IN Zip: 4525 W. Old 24, Wabash, IN 46992

CP: 169-8475

Plt ID: 169-00010

Reviewer: Nisha Sizemore

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

7.5

65.7

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	11.9	11.9	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.4	0.4	0.0	3.3	0.2	0.7

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2 as amended 10/96, and 1.4-3, SCC #1-03-006-03

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton