State of Ohio Environmental Protection Agency

Street Address: Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329 Mailing Address: Lazarus Gov. Center

RE: DRAFT PERMIT TO INSTALL **CERTIFIED MAIL**
FRANKLIN COUNTY
Application No: 01-08433
DATE: 10/9/2001

NuCore Automotive
Stanley Greenblott
2100 Refugee Rd
Columbus, OH 43207

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed of final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **$400** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Thomas G. Rigo

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

cc: **USEPA** **CDO**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install	**Issue Date: To be entered upon final issuance**
Terms and Conditions	**Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 01-08433

Application Number:	01-08433
APS Premise Number:	0125042360
Permit Fee:	**To be entered upon final issuance**
Name of Facility:	NuCore Automotive
Person to Contact:	Stanley Greenblott
Address:	2100 Refugee Rd Columbus, OH 43207

Location of proposed air contaminant source(s) [emissions unit(s)]:
2100 Refugee Rd
Columbus, **Ohio**

Description of proposed emissions unit(s):
Aluminum King 8000 melting furnace with afterburner.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

_____

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

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

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any

information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may

lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance

that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit to Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing

operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the source(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
PM	5.0
NOx	2.6
SO2	15.3
OC	0.21
CO	0.4

Emissions Unit ID: **P001**

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements
	OAC rule 3745-17-11(A)(2)
P001 - aluminum sweating furnace w/afterburner (2,000 pounds per hour maximum capacity), modification of PTI 01-6855.	OAC rule 3745-31-05(A)(3)
	40 CFR 63 Subpart RRR
	OAC rule 3745-17-07(A)(1)

Applicable Emissions Limitations/Control Measures	
Particulate emissions shall not exceed 1.14 pound per hour and 5.0 tons per year. See section A.2.a below.	Dioxan/Furan emissions shall not exceed 0.8 nanogram TEQ per dry standard cubic meter at 11% oxygen. And see Sections A.2.c, A.2.d, B.1, C.1, C.2, C.4, D.1, D.2, D.3, and D.4 below.
Nitrogen oxide emissions shall not exceed 0.6 pound per hour and 2.6 tons per year.	
Sulfur dioxide emissions shall not exceed 3.5 pound per hour and 15.3 tons per year.	
Organic compound emissions shall not exceed 0.05 pound per hour and 0.21 ton per year. See sections A.2.b and C.1 below.	
Carbon monoxide emissions shall not exceed 0.1 pound per hour and 0.4 ton per year	
Stack opacity shall not exceed 5% opacity as a three minute average.	
The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).	
The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).	

2. Additional Terms and Conditions

2.a The 1.14 pound particulate, 0.6 pound nitrogen oxides, and 3.5 pounds sulfur dioxide emission per hour limitations, for this emissions unit, were established to reflect the maximum hourly potential to emit at a process weight rate of 2,000 pounds per hour. The carbon monoxide limit was established at the potential natural gas usage of the furnace. Therefore, it is not necessary to develop recordkeeping and/or reporting requirements to ensure compliance with this limit.

2.b The 0.05 pound organic compound emission limitation is calculated at the maximum charge rate of 2,000 pounds per hour, using an emission factor of 2.4 pounds per ton, from the Source Classification Code (SCC) 3-04-001-01 for a secondary aluminum sweating furnace, to which 98% overall control efficiency is applied.

2.c The permittee proposes to comply with the limit from 40 CFR 63 subpart RRR paragraph 63.1504(f)(2), as an area source, through the compliance method found in paragraph 63.1504(f)(1), by maintaining an afterburner with a design residence time of two seconds or greater, and an operating temperature of 1600 degrees Fahrenheit or greater.

2.d The permittee shall operate this emissions unit and associated air pollution control equipment in accordance with provisions in 40CFR Subpart RRR. The permittee shall prepare an Operation, Maintenance and Monitoring (OM&M) Plan to include the following information:

a. process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for the afterburner;

b. monitoring schedule for the afterburner and the emissions unit;

c. procedures for the proper operation and maintenance of the sweating furnace and the afterburner used to meet the 2 second retention time at 1600 degrees Fahrenheit;

d. procedures for proper operation and maintenance of monitoring devices or systems used to determine compliance including:

i. calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and

ii. procedures for the quality control and quality assurance of continuous

monitoring systems as required by the general provisions in Subpart A 40CFR 63.

e. procedures for monitoring process and control device parameter, including procedures for annual inspections of afterburners and the capture/collection system;

f. corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the established value or range including:

i. procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and

ii. procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed; and

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.

2.e This PTI replaces PTI 01-6855, as issued September 24, 1997, and represents net increase of 1.3 tons particulate emissions, 1.5 ton nitrogen oxide, 15.3 tons sulfur dioxide, 0.14 ton organic compound and 0.2 ton carbon monoxide per year.

B. Operational Restrictions

1. The average combustion temperature within the thermal afterburner, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1600 degrees Fahrenheit.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate, calibrate, and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal afterburner when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitoring device must meet each of the following performance and equipment specifications.

a. the temperature monitoring device must be installed at the exit of the combustion zone of each afterburner;

b. the monitoring system must record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block of time;

c. the recorder response range must include zero and 1.5 times the average temperature of 1600 degrees Fahrenheit; and

d. the reference method must be a National Institute of Standards and Technology (NIST) calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

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

a. all 3-hour blocks of time during which the average combustion temperature within the secondary afterburner, when the emissions unit was in operation, was less than 1,600 degrees Fahrenheit;

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

c. for any excursions identified above, a brief explanation of the cause of the excursion and the corrective action taken.

2. At a minimum, the permitee shall conduct an inspection of the afterburner and capture/collection system at least once per year. The results of all inspections and repairs must be recorded. At a minimum, an inspection must include:

3. The permitee shall operate this emissions unit and associated air pollution control equipment in accordance with provisions in 40CFR Subpart 63.1507(g). The permittee shall follow operating procedures contained in the Operation and Maintenance Manual (O&MM), received July 21, 2001, which includes annual inspections of the afterburner. At a minimum of once per year, the permitee shall conduct an inspection of each burner and record the results. At a minimum, an inspection must include:

a. inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;

b. inspection for proper adjustment of combustion air;

c. inspection of internal structures (e.g. baffles) to ensure structural integrity;

d. inspection of dampers, fans, and blowers for proper operation;

e. inspection for proper sealing;

f. inspection of motors for proper operation;

g. inspection of combustion chamber refractory lining and clean and replace lining as necessary;

h. inspection of afterburner shell for corrosion and /or hot spots;

i. documentation, for the burn cycle that follows the inspection, that the afterburner is operating properly and any necessary adjustments have been made; and

j. following an equipment inspection, all necessary repairs must be completed in accordance with the requirements of the O&MM plan.

The permittee shall maintain a record of the annual afterburner inspections, in accordance with procedures outlined in 40 CFR 63 subpart RRR 63.1517(b)(2). All changes in the O&MM shall be approved in writing by Ohio EPA prior to implementation.

4. The owner or operator must retain each record, referenced below, for at least five years following the date of occurrence, measurement, maintenance, corrective action report or record.. The most recent 2 years if records must be retained at the facility. The remaining 3 years of records may be retained off-site. The owner or operator may retain records on microfilm, computer discs, magnetic tape or microfiche. The following information must recorded.

   a. the 15-minute block average afterburner operating temperature, 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; and

   b. the results of annual afterburner inspections.

5. The permittee shall maintain a record of the manufacturer's specifications or analysis of the afterburner, which documents the design residence time to be no less than 2 seconds and the design operating temperature to be no less than 1600 degrees Fahrenheit.

6. The permit to install for this emissions unit P001 was evaluated based on the actual 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant:

Pollutant: Aluminum fumes
TLV: 5 mg/m3
Maximum Hourly Emission Rate: 1.1 lbs/hr
Predicted 1-Hour Maximum Ground-Level Concentration: 96.6 ug/m3
MAGLC: 169 ug/m3

Physical changes to or changes 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 Toxic 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 applying 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 for 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 still 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. where 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 permittee shall submit deviation (excursion) reports which identify all 3 hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified above.

2. The permittee shall submit deviation (excursion) reports which identify any record of deviation from the procedures, inspection or instrument calibration schedules, and/or reporting requirements contained in the OM&M plan.

3. The permittee shall submit a notification of compliance status report within 60 days of startup, as required in 40 CFR 63.1514(b).

4. The permittee shall submit semiannual excess emissions/summary reports within 30 days after the end of each calendar half of each year, as required in 40 CFR 63.10(e)(3). When no deviations of parameters have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

E. Testing Requirements

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

1. Emission Limitation:

   Particulate emissions shall not exceed 1.14 pound per hour and 5.0 tons per year.

Applicable Compliance Method:

Compliance may be calculated by use of an emission factor of 1.14 lbs PM/ton of metal derived from Method 5 test results from a similar emissions unit times the maximum process weight of 2,000 pounds per hour.

.

The annual emission rate is calculated assuming 8,760 hours per year of operation.

2. Emission Limitation:

Organic compound emissions shall not exceed 0.05 pound per hour and 0.21 ton per year

Applicable Compliance Method:

Compliance may be determined by use of the SCC #3-04-001-01 emission factor of 2.4 lbs OC/ton of metal times 1.0 ton metal per hour times 98% control efficiency.

The annual emission rate is calculated assuming 8,760 hours per year of operation.

3. Emission Limitation:

Sulfur dioxide emissions shall not exceed 3.5 pounds per hour and 15.3 tons per year

Applicable Compliance Method:

Compliance may be determined by use of the SCC #3-04-001-01 emission factor of 3.5 lbs sulfur dioxide/ton of metal times 1.0 ton metal per hour.

The annual emission rate is calculated assuming 8,760 hours per year of operation.

4. Emission Limitation:

Nitrogen oxide emissions shall not exceed 0.6 pound per hour and 2.6 tons per year

Applicable Compliance Method:

Compliance may be determined by use of the SCC #3-04-001-01 emission factor of 0.6 lb nitrogen oxide/ton of metal times 1.0 ton metal per hour.

The annual emission rate is calculated assuming 8,760 hours per year of operation.

5. Emission Limitation:

Carbon monoxide emissions shall not exceed 0.1 lb/hr and 0.4 ton per year

Applicable Compliance Method:

Compliance may be determined by use of the SCC #1-01-006-04 emission factor of 40 lbs carbon monoxide per MM ft3 times 2,500 ft3 burned/hr equal 0.1 pounds per hour.

The annual emission rate is calculated assuming 8,760 hours per year of operation.

6. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 5% opacity, as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by visible emissions monitoring performed in accordance with 40CFR Part 60, Appendix A, Method 9 using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

F. Miscellaneous Requirements

None

NEW SOURCE REVIEW FORM B

PTI Number: 01-08433 Facility ID: 0125042360

FACILITY NAME NuCore Automotive

FACILITY DESCRIPTION Aluminum King 8000 melting furnace with afterburner. CITY/TWP Columbus

SIC CODE 5093 SCC CODE 3-04-001-01 EMISSIONS UNIT ID P001

EMISSIONS UNIT DESCRIPTION aluminum sweating furnace w/afterburner (1,200 lbs/hr feed rate). modification of PTI 01-6855

DATE INSTALLED 03/98

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	Attainment			1.14	5.0
PM_{10}					
Sulfur Dioxide	Attainment			3.5	15.3
Organic Compounds	Attainment			0.05	0.21
Nitrogen Oxides	Attainment			0.6	2.6
Carbon Monoxide				0.1	0.4
Lead					
Other: Air Toxics	Aluminum fumes			0.8	

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? Subpart RRR PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination Use of afterburner, compliance with the toxic policy and applicable rule and regulations.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? $ 5,000

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? x YES ____ NO

IDENTIFY THE AIR CONTAMINANTS: Aluminum fumes

NEW SOURCE REVIEW FORM B

PTI Number: 01-08433 Facility ID: 0125042360

FACILITY NAME NuCore Automotive

FACILITY DESCRIPTION Aluminum King 8000 melting furnace with afterburner. CITY/TWP Columbus

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit hard copy items to AQM&P, DAPC, Central Office, and electronic files to **airpti@epa.state.oh.us**

Please fill out the following. If the checkbox does not work, replace it with an 'X'	Electronic	**Additional information** File Name Convention (your PTI # plus this letter)	Hard Copy	None
Calculations (required)	☒	0000000**c**.wpd	☐	
Modeling form/results	☐	0000000**s**.wpd	☐	☒
PTI Application (complete or partial)*	☐	0000000**a**.wpd	☐	☒
BAT Study	☐	0000000**b.**wpd	☐	☒
Other/misc.	☐	0000000**t**.wpd	☐	☒

* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

PTI 01-08433

General Information

Nu-Core is proposing to replace a natural gas-fired AK-7000 sweating furnace installed in March, 1998 with an AK-8500 sweating furnace at process weight rate of 2,000 pounds per hour. CDO issued PTI 01-6855 on September 24, 1997 with emission limits based on combustion of natural gas and particulate emission data from Method 5 testing. The permit required the use of an afterburner, compliance with the Ohio EPA toxic policy and an hourly charge rate not to exceed 2,000 pounds metal per hour. Nu-Core had installed a twenty foot refractory brick stack to comply with the 40CFR63 Subpart RRR to maintain a 2 second retention time at 1600 degrees. A datalogger is used to record the exit stack gas temperature to insure that it does not fall below the restrictions as a 3-hour average.

Applicable Rules

OAC rule 3745-31-05(A)(3) -

Stack emissions will be restricted to 5% opacity as a 3-minute average, using BAT established for PTI 01-4944 issued on July 7, 1994 for a 2,000 lbs/hr sweating furnace. The allowable limits are based on emission factors of pounds of pollutant per pound of aluminum sweated at the maximum process weight rate of 2,000 pounds per hour. For particulate matter, the Method 5 data submitted for the testing conducted on the Aluminum King AK-7000 on May 18, 1993 for the run with the highest hourly emission rate was divided by the tons of metal sweated during that run. For all other pollutants, Source Classification Codes (SCC) emission factors were multiplied times the process weight rate and by 8,760 hours of operation per year. A 98% control efficiency was applied to the organic compound emission rate to reflect best control efficiency generally realized from a thermal oxidizer with a bed temperature of 1,600 degrees for 2 seconds.

NEW SOURCE REVIEW FORM B

PTI Number: 01-08433 Facility ID: 0125042360

FACILITY NAME NuCore Automotive

FACILITY DESCRIPTION Aluminum King 8000 melting furnace with afterburner. CITY/TWP Columbus

OAC rule 3745-17-07(B) -This is less stringent than established under OAC rule 3745-31-05, with a limit of 5% opacity as a 3-minute average.

OAC rule 3745-17-11(A) -The allowable limit calculated under this rule from Table 1 or Figure 2 are less stringent than established based on emission test data for sweating aluminum at 1 ton/hr.

Calculations - SCC 3-04-001-01 Sweating furnace -2,000 lbs/hr (1 ton/hr)

Pollutant	E F/C E	1 ton/hr	8,760 hrs/yr
NOX	0.6 lb/ton	0.6 lb/hr	2.6 tons/yr
OC	2.4 lb/ton/98%	0.05 lb/hr	0.21 ton/yr
SO2	3.5 lb/ton	3.5 lbs/hr	15.3 tons/yr
PM *	1.14 lb/ton	1.14 lb/hr	5.0 tons/yr
CO 2.5 MM BTU/hr	40 lb/MM ft3	0.1 lb/hr	0.4 ton/yr

Stack data AK-7000 5/18/93 Method 5 - 0.8 lb/hr * 3 hr run/2.1 tons charged = 1.14 pound/ton charged uncontrolled carbon monoxide emissions were not quantified for the SCC code

Fee Explanation -

A fee of $400.00 should be assessed based on the process weight rate of 2,000 pounds per hour under SIC code 5093.

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

☐ **Synthetic Minor Determination and/or** ☐ **Netting Determination**

Permit To Install **ENTER PTI NUMBER HERE**

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

NONE

Please complete:

SUMMARY (for informational purposes only)

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
PM	5.0
NOx	2.6
SO2	15.3
OC	0.21
CO	0.4

NEW SOURCE REVIEW FORM B

PTI Number: 01-08433 Facility ID: 0125042360

FACILITY NAME	NuCore Automotive		
FACILITY DESCRIPTION	Aluminum King 8000 melting furnace with afterburner.	CITY/TWP	Columbus