



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

9/9/2013

Mr. Dennis Bates
Skyline Steel, LLC
12355 State Route 7
Belpre, OH 45714

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0684010138
Permit Number: P0115337
Permit Type: OAC Chapter 3745-31 Modification
County: Washington

Certified Mail

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging 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 Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Southeast District Office at (740)385-8501 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-SEDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Skyline Steel, LLC**

Facility ID:	0684010138
Permit Number:	P0115337
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	9/9/2013
Effective:	9/9/2013
Expiration:	12/22/2016



**Division of Air Pollution Control
Permit-to-Install and Operate**

for
Skyline Steel, LLC

Table of Contents

Authorization	1
A. Standard Terms and Conditions	3
1. What does this permit-to-install and operate ("PTIO") allow me to do?.....	4
2. Who is responsible for complying with this permit?	4
3. What records must I keep under this permit?	4
4. What are my permit fees and when do I pay them?.....	4
5. When does my PTIO expire, and when do I need to submit my renewal application?	4
6. What happens to this permit if my project is delayed or I do not install or modify my source?	5
7. What reports must I submit under this permit?	5
8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?	5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ...	5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?	6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?	6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently?	6
13. Can I transfer this permit to a new owner or operator?.....	7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?	7
15. What happens if a portion of this permit is determined to be invalid?	7
B. Facility-Wide Terms and Conditions.....	8
C. Emissions Unit Terms and Conditions	10
1. P901, Dry plasma cutting	11



Final Permit-to-Install and Operate
 Skyline Steel, LLC
Permit Number: P0115337
Facility ID: 0684010138
Effective Date: 9/9/2013

Authorization

Facility ID: 0684010138
 Application Number(s): A0048706
 Permit Number: P0115337
 Permit Description: Permitting of an already installed source that has operating at de-minimis levels via record keeping in the past. Dry plasma cutting of steel sheet pile manufacturing using oxygen and nitrogen and controlled with a baghouse.
 Permit Type: OAC Chapter 3745-31 Modification
 Permit Fee: \$1,000.00
 Issue Date: 9/9/2013
 Effective Date: 9/9/2013
 Expiration Date: 12/22/2016
 Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Skyline Steel, LLC
 12355 State Route 7
 Belpre, OH 45714

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southeast District Office
 2195 Front Street
 Logan, OH 43138
 (740)385-8501

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section 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 described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


 Scott J. Nally
 Director



Final Permit-to-Install and Operate
Skyline Steel, LLC
Permit Number: P0115337
Facility ID: 0684010138
Effective Date: 9/9/2013

Authorization (continued)

Permit Number: P0115337
Permit Description: Permitting of an already installed source that has operating at de-minimis levels via record keeping in the past. Dry plasma cutting of steel sheet pile manufacturing using oxygen and nitrogen and controlled with a baghouse.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	P902
Company Equipment ID:	Plasma cutting
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
Skyline Steel, LLC
Permit Number: P0115337
Facility ID: 0684010138
Effective Date: 9/9/2013

A. Standard Terms and Conditions



1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.



10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Southeast District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting¹ a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

¹ Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).



13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



Final Permit-to-Install and Operate
Skyline Steel, LLC
Permit Number: P0115337
Facility ID: 0684010138
Effective Date: 9/9/2013

B. Facility-Wide Terms and Conditions



Final Permit-to-Install and Operate

Skyline Steel, LLC

Permit Number: P0115337

Facility ID: 0684010138

Effective Date: 9/9/2013

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.



Final Permit-to-Install and Operate
Skyline Steel, LLC
Permit Number: P0115337
Facility ID: 0684010138
Effective Date: 9/9/2013

C. Emissions Unit Terms and Conditions



1. P901, Dry plasma cutting

Operations, Property and/or Equipment Description:

Dry plasma cutting of manufactured steel sheet pile on 3 Hypertherm 3,000 units using nitrogen and oxygen (maximum of 475 cuts/day, 40,000 lbs of steel/hr) controlled with a baghouse (with 90% capture and 99.9% control of PE) and located inside of a building with exhaust vented outside of the building.

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

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. g)(1).

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) **Applicable Emissions Limitations and/or Control Requirements**

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Nitrogen Oxide (NO _x) emissions shall not exceed 10.01 tons per rolling, 12-month period.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Particulate emissions (PE) from the baghouse stack serving this emission unit shall not exceed 0.003 lb/hr and 0.01 ton per year. There shall be no visible PE from any stack serving this emissions unit. Fugitive PE shall not exceed 0.65 ton per year. No visible PE of fugitive dust from the egress points of the building housing this



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		emissions unit. Best available control measures that are sufficient to minimize or eliminate visible PE of fugitive dust. See b)(2)a. and b)(2)c-d.
c.	OAC rule 3745-31-05(C), as effective 12/01/06	See b)(2)b.
d.	OAC rule 3745-17-07(B)	This emissions limitation is less stringent than the limitations listed under OAC rule 3745-31-05.
e.	OAC rule 3745-17-08(B)	Reasonable available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See b)(2)c.-d.
f.	OAC rule 3745-17-07(A)	This emissions limitation is less stringent than the limitations listed under OAC rule 3745-31-05.
g.	OAC rule 3745-17-11	PE from the stack shall not exceed 30.5 lbs/hr. This emissions limitation is less stringent than the limitations listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant emissions less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revision to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limits/control measures no longer apply.



- b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the SIP.

Permit to Install and Operate P0114690 for this air contaminant source takes into account the following voluntary restriction (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3):

- i. PE from the baghouse stack serving this emission unit shall not exceed 0.01 ton per year;
- ii. There shall be no visible PE from any stack serving this emissions unit.
- iii. Fugitive PE shall not exceed 0.65 ton per year;
- iv. No visible PE of fugitive dust from the egress points of the building housing this emissions unit; and
- v. The emissions from the dry plasma cutting shall be located inside of a building and vented to a baghouse with a capture efficiency of 90% and control efficiency of 99.9% at all times the emissions unit is in operation;

- c. The permittee shall employ best/reasonably available control measures on this emissions unit for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee shall employ a capture system, which includes enclosures that eliminate visible particulate emissions of fugitive dust at the point of capture to the extent possible with good engineering design and vents the emissions to a baghouse that is capable of meeting the applicable requirements. In addition, in accordance with the permittee's permit application, the emissions unit shall be located inside of a building. Nothing in this paragraph shall prohibit the permittee from employing additional control measures to ensure compliance.

- d. Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05 and 3745-17-08(B).

c) Operational Restrictions

- (1) The emissions from the dry plasma cutting shall be vented to a baghouse with a capture efficiency of 90% and control efficiency of 99.9% at all times the emissions unit is in operation and the dry plasma cutting shall be located inside of a building.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform daily checks, when the emissions unit is in operation, for any visible emissions from the stack and any visible fugitive emissions from the building serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:



- a. the color of the emissions;
- b. the total duration of any visible emissions incident; and
- c. any corrective actions taken to eliminate the visible emissions.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitations:

Total NO_x emissions shall not exceed 10.01 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emissions limitation is demonstrated by the following calculations and emissions factors in "Emission of Fume, Nitrogen Oxides and Noise in Plasma Cutting of Stainless Steel and Mild Steel", The Swedish Institute of Production Engineering Research, March 1994:

$$(5.5 \text{ liters NO}_x/1 \text{ minute})(60 \text{ minutes/hr})(1 \text{ m}^3/1,000 \text{ liters})(3.16 \text{ kg/m}^3)(2.20462262185 \text{ lbs/kg}) = 2.29898 \text{ lbs of NO}_x/\text{hr}$$

$$(2.29898 \text{ lb/hr})(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 10.01 \text{ TPY of NO}_x \text{ (fugitive and stack combined)}$$

Where:

5.5 liters NO_x/1 minute = liters of NO_x per minute of operation per emission factor document cited above.

3.16 kg/m³ = density of NO_x



b. Emissions Limitations:

PE from the baghouse stack serving this emission unit shall not exceed 0.003 lb/hr and 0.01 ton per year.

PE from the stack shall not exceed 30.5 lbs/hr (From OAC rule 3745-17-11, Table 1).

Applicable Compliance Method:

The lb/hr emissions limitation was based on the following calculations (using worst case scenario as presented in application) and emissions factors in "Emission of Fume, Nitrogen Oxides and Noise in Plasma Cutting of Stainless Steel and Mild Steel", The Swedish Institute of Production Engineering Research, March 1994:

$$(0.25 \text{ inches/cut})(0.5 \text{ inches/cut})(48 \text{ inches/cut}) = 6 \text{ inches}^3/\text{cut}$$

$$(6 \text{ inches}^3/\text{cut})(1 \text{ cm}^3/0.061023744 \text{ inches}^3)(35 \text{ cuts/hr})(7.85 \text{ g/cm}^3)(0.0022046 \text{ lb/g}) = 59.555 \text{ lbs of steel weight removed}$$

$$(59.55 \text{ lbs/hr})(0.05) = 2.97775 \text{ lbs of PE/hr uncontrolled}$$

$$(2.97775 \text{ lbs/hr})(0.95)(1-0.999) = 0.003 \text{ lb of PE/hr controlled}$$

Where:

0.25 inches/cut = Kerf of material as submitted in application

0.5 inches/cut = thickness of material as submitted in application

48 inches/cut = width of material as submitted in application

35 cuts/hr = maximum number of cuts per hour as submitted in application

7.85 g/cm³ = density of mild steel

0.05 = decimal fraction of steel weight removed that is PE per emission factor document cited above.

0.95 = decimal fraction of PE capture efficiency for the baghouse, as submitted in application

0.999 = decimal fraction of PE control efficiency for the baghouse as submitted in application

If required, particulate emissions shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.



Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$(0.003 \text{ lb/hr})(8,760 \text{ hrs/yr})(1 \text{ ton}/2,000 \text{ lbs.}) = 0.01 \text{ TPY of PE from the stack}$$

c. Emissions Limitation:

Fugitive PE shall not exceed 0.65 ton per year.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be demonstrated by the following calculations(using worst case scenario as presented in application) and emissions factors in "Emission of Fume, Nitrogen Oxides and Noise in Plasma Cutting of Stainless Steel and Mild Steel", The Swedish Institute of Production Engineering Research, March 1994 :

$$(0.25 \text{ inches/cut})(0.5 \text{ inches/cut})(48 \text{ inches/cut})= 6 \text{ inches}^3/ \text{ cut}$$

$$(6 \text{ inches}^3/ \text{ cut})(1 \text{ cm}^3/0.061023744 \text{ inches}^3)(35 \text{ cuts/hr})(7.85 \text{ g/cm}^3)(0.0022046 \text{ lb/g}) = 59.555 \text{ lbs of steel weight removed}$$

$$(59.55 \text{ lbs/hr})(0.05) = 2.97775 \text{ lbs of PE/hr uncontrolled}$$

$$(2.97775 \text{ lbs/hr})(1- 0.95)(8,760 \text{ hrs/yr})(1 \text{ ton}/2,000 \text{ lbs}) = 0.65 \text{ TPY of fugitive PE}$$

Where:

0.25 inches/cut = Kerf of material as submitted in application

0.5 inches/cut = thickness of material as submitted in application

48 inches/cut = width of material as submitted in application

35 cuts/hr = maximum number of cuts per hour as submitted in application

7.85 g/cm³ = density of mild steel

0.05 = decimal fraction of steel weight removed that is PE per emission factor document cited above.

0.95 = decimal fraction of PE capture efficiency for the baghouse, as submitted in application

d. Emissions Limitations:

There shall be no visible PE from any stack serving this emissions unit.

No visible PE of fugitive dust from the egress points of the building in which this emissions unit is in.



Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 22.

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified Permit-to-Install and Operate (PTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials or use of new materials that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTIO.