

Part 4: How to Avoid Being a Major Source

Many smaller sources of air pollution have a high potential to emit (PTE) but actual emissions are well below the major source thresholds. If your PTE makes you a major source but your actual emissions are well below the major source thresholds, you can avoid being a major source by limiting your PTE. As explained in Part 2, you can limit your PTE by accepting legally and practically enforceable limits on the operation of your source (see page 2-10).

By limiting your PTE you will become a “synthetic minor” source. This means that although you are technically a major source, you have accepted limits that make you a minor source.

There are two mechanisms that may be used to limit PTE.

1. Register under Rule 208a of the Michigan Air Pollution Control Rules.
- or**
2. Obtain a Permit to Install that includes legally enforceable limits designed specifically to limit your PTE. These types of permits are also known as opt-out permits or synthetic minor permits. In this workbook we will call them “opt-out permits.”

RULE 208a

R 336.1208a (Rule 208a) of the Michigan Air Pollution Control Rules allows a source operating in compliance and maintaining actual emissions at 50 percent or less of all major source thresholds to accept these 50 percent levels as legally enforceable limits to avoid being subject to major source requirements. To be eligible for this program, your actual emissions of all regulated pollutants must be below the Rule 208a thresholds in Table 4-1.

Table 4-1: Rule 208a Thresholds

Type of Pollutant	Major Source Threshold	Rule 208a Threshold (50% Threshold)
Particulate Matter (PM)	100 tons/year	50 tons/year
Volatile Organic Compounds (VOCs)	100 tons/year	50 tons/year
Carbon Monoxide (CO)	100 tons/year	50 tons/year
Nitrogen Oxides (NOx)	100 tons/year	50 tons/year
Sulfur Dioxide (SO ₂)	100 tons/year	50 tons/year
Lead (Pb)	10 tons/year	50 tons/year
Hazardous Air Pollutants (HAPs) <ul style="list-style-type: none"> • Any single HAP • Any combination of HAPs 	10 tons/year 25 tons/year	5 tons/year 12.5 tons/year
Any other regulated air contaminant	100 tons/year	50 tons/year

Rule 208a allows a source to accept the 50 percent thresholds as legally enforceable limits by submitting to the AQD the appropriate registration form and support tables (see Appendix C).

Appendix C includes a registration form where the responsible official certifies that: (1) the source's emissions are below all threshold levels, (2) these levels are accepted as legally enforceable limits, (3) the source has been and will continue to be operated in compliance with these limits, and (4) the recordkeeping and reporting requirements of Rule 208a are met. Two summary tables are required to be submitted with this form, one that lists the individual processes at the source and the associated air emissions, and one that provides a summary of air emissions for the entire facility.

Be aware that once you register as a Rule 208a source, **you must renew your registration every year using the Rule 208a Annual Renewal Registration form (EQP 5735)**. In addition, Rule 208a sources are subject to the Michigan Air Emissions Reporting System (MAERS) and, therefore, must also submit a MAERS report each year (see page 3-2 for information about MAERS reporting).

IMPORTANT!

If you fail to renew your registration or exceed any of the 50 percent thresholds listed in Table 4-1, you will no longer be considered a Rule 208a source and automatically be subject to any applicable major source requirements.

Additional information about Rule 208a registration, including the initial and renewal registration forms, can be found on the Internet at www.deq.state.mi.us/aps (select "Opting out of Title V by Rule 208a Registration"). Air Quality Division (AQD) Operational Memorandum 4 provides more detailed information about the Rule 208a registration requirements and can be found on the Internet at www.michigan.gov/deqair (select "Laws and Rules" then "Air Quality Division Operational Memorandums").

OPT-OUT PERMIT

Another option for a business to avoid being a major source is to obtain an "opt-out" permit. This is a type of Permit to Install that can be used to establish enforceable limits that restrict the source's PTE to a level below all major source thresholds. As a result, the source is no longer subject to the major source requirements (except MAERS reporting). For example, if a source's PTE of an individual HAP is 11 tons per year, they can obtain an opt-out permit that will limit their PTE of a single HAP to 8.9 tons per year. The legally enforceable limit keeps the source below the major source threshold of 10 tons per year.

The procedure for obtaining an opt-out permit is contained in AQD's Operational Memorandum 3, which can be found on the Internet at www.michigan.gov/deqair (select "Laws and Rules" then "Air Quality Division Operational Memorandums").

Rule 208a or Opt-Out?

Obtaining an opt-out permit is often recommended over Rule 208a registration. An opt-out permit is facility specific and might provide more flexibility. In addition, Rule 208a requires that you renew every year. You do not have to renew an opt-out permit.

The following pages provide steps for completing and submitting an opt-out permit application as well as examples of some of the opt-out permit application requirements.

**S
B Inc.**

Small Business Inc. has decided that their best option would be to limit their PTE by obtaining an opt-out permit. This permit will keep them from being a major source but still give them flexibility to grow and change. Components of their opt-out permit application are on pages 4-7 to 4-11

HOW TO COMPLETE AN OPT-OUT PERMIT APPLICATION

A complete application for an opt-out permit must include all of the following components:

- Cover letter.** Be sure to include a cover letter that clearly states that the intent of the application is to reduce the source's PTE to below applicable major source thresholds and avoid applicability of the ROP Program or a particular NESHAP. The cover letter is important because it lets the permit engineer know right away why you have submitted the application. A sample cover letter is provided on page 4-7.
- Permit to Install Application Form.** Complete the Permit to Install Application form (EQP 5615 or 5615E). A blank application form is provided in Appendix D. You can also access the form on the Internet at www.michigan.gov/deq (select "Key Topics" then "Forms"). An example of how to complete this form for an opt-out permit is provided on page 4-8.
- PTE Calculations.** Include the current PTE calculations for all the emission sources located at your source. Part 2 of this workbook explains how to calculate PTE. You should include a table that summarizes your source's PTE (see pages 2-33 to 2-34) as well as PTE calculations for each of the emission units (example calculations are provided on pages 2-21 to 2-31).
- Proposed Plan.** Include a narrative plan that outlines the actions to be taken and the dates such actions will be taken to limit your source's PTE. In the plan explain why your source is exceeding an emission threshold (e.g., "there is no permitted limit on VOC emissions from Emission Unit X" or "There is no operational restriction that requires a control device be installed on Emission Unit X"). Provide some background on your source and how you came to your conclusions. You will also want to explain how you plan to restrict your emissions to below the threshold (e.g., "ABC Company would like to restrict source-wide VOC emissions to 89.9 tons/yr" or "ABC Company would like to restrict production to 1,000 parts per hour at Emission Unit X"). An example of a proposed plan is provided on page 4-9.
- Restricted PTE Calculations.** Recalculate your PTE using the limits that you are proposing. Your new calculations should show the intended effect of the proposed plan on the source's PTE. In this section you should be able to show that the emissions will be below the threshold. Include a table that summarizes the new PTE for each emission unit (see pages 4-10 and 4-11 for a sample restricted PTE table).
- Propose Enforceable Limits.** In your application you need to propose the actual limit/restriction language that you would like in your issued opt-out permit. The limits you propose can be in the form of an emission limit, production limit, and/or operational restriction. For the limit/restriction to be enforceable, you will also need to propose any monitoring or recordkeeping that will be necessary to demonstrate compliance with the limit or restriction. More information about how to propose limits and restrictions is provided on the following page. Keep in mind that your inspector or AQD permit engineer may have to alter your proposal to comply with applicable regulations.

Proposing Enforceable Limits and Restrictions

Emission Limits

An emission limit restricts the amount of an air contaminant that may be emitted over some time period (e.g., lbs/hr, lbs/day, tons/yr). The time period should be as short as possible and should take into consideration whether the type and quantity of monitoring and recordkeeping which will be necessary to demonstrate compliance with the emission limit is reasonable and appropriate. The time period should usually not exceed one month; however, a longer time period may be used if it is a rolling time period, but shall not exceed one year on a monthly rolling basis. For example, you may choose an emission limit such as tons per year; however, the emissions should be based on the monthly rolling total. This means that you need to calculate your emissions every month for the preceding 12 months. If you are proposing an emission limit, you will also need to include any monitoring, recordkeeping, and reporting requirements that are necessary to assure that the emission limits are enforceable in a practical matter. Table 4-2 provides examples of emission limits and corresponding monitoring/recordkeeping that may be proposed. It is a good idea to submit an example of the recordkeeping format you plan to use.

If the proposed emission limit does not reflect the maximum emissions of the process or process equipment operating at full design capacity without air pollution control equipment, you must also propose either a production limit or operational restriction (see page 4-5).

Table 4-2: Examples of Emission Limits

Emission Limit	Monitoring/Recordkeeping
The VOC emission rate from PAINTLINE1 shall not exceed 6 tons per year. The annual limit shall be based upon a 12-month rolling time period as determined at the end of each calendar month.	The permittee shall calculate the VOC emission rate from PAINTLINE1 monthly, for the preceding 12-month rolling time period.
The VOC emission rate for the SOURCE shall not exceed 89.9 tons per year. The annual limit shall be based upon a 12-month rolling time period as determined at the end of each calendar month.	The permittee shall calculate the total VOC emission rate from the SOURCE monthly, for the preceding 12-month rolling time period.
The individual HAP emission rate for the SOURCE shall not exceed 8.9 tons per year. The annual limit shall be based upon a 12-month rolling time period as determined at the end of each calendar month.	The permittee shall calculate the total and individual HAP emission rate from the SOURCE monthly, for the preceding 12-month rolling time period.
The total HAP emission rate for the SOURCE shall not exceed 22.49 tons per year. The annual limit shall be based upon a 12-month rolling time period as determined at the end of each calendar month.	

If the emission limit you are proposing is less than 90 percent of the applicable major source threshold (e.g. 89.9 tons VOC/yr), the permit will not have to go through a public comment period. If the emission limit you propose is 90 percent or more of the major source threshold (e.g., 24.9 tons total HAPs/yr), the permit will be subject to R 336.1205(1)(b), which requires a public comment period.

Production Limits

A production limit restricts the amount of final product that may be produced over the same time period used in the emission limit (e.g., parts/hr, widgets/day). The production limit you propose should comport with the true design and intended operation of the process or process equipment. To demonstrate compliance with a production limit, monitoring and/or recordkeeping must also be proposed. Examples of production limits are provided in Table 4-3.

Table 4-3: Examples of Production Limits

Production Limit	Monitoring/Recordkeeping
The permittee shall not process more than 100,000 tons of Hot Mix Asphalt paving materials in HMAPLANT per 12-month rolling period as determined at the end of each calendar month.	The permittee shall keep in a satisfactory manner, average hourly, monthly, and 12-month rolling time period records of the amount of hot mix asphalt paving material produced from HMAPLANT.
The permittee shall not produce more than 1,000 widgets per day	The permittee shall keep in a satisfactory manner, daily records of the amount of widgets produced from WIDGETLINE.

Operational Limits

An operational limit restricts the way a process or process equipment is operated. The limit should comport with the true design and intended operation of the process or process equipment. Examples of operational limits are provided in Table 4-4.

Table 4-4: Examples of Operational Limits

Operational Limit	Monitoring/Recordkeeping
A person shall not operate the concrete batch plant unless a fabric filter collector is installed and operating properly.	Implement and maintain a routine check to ensure proper operation of the control equipment.
A person shall not operate a painting process unless a thermal oxidizer is installed and operating properly on the paint flash-off area.	The permittee shall monitor and record, in a satisfactory manner, the temperature in the thermal oxidizer on a continuous basis in a manner and with instrumentation acceptable to the AQD. Temperature data recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval.
PROCESS#1 shall not operate more than 40 hours per calendar week.	The permittee shall keep, in a satisfactory manner, a written log of the weekly hours of operation for PROCESS#1.
GRAINDRYER shall not operate for more than an average of 200 hours per month, based on a 12-month rolling average.	The permittee shall keep, in a satisfactory manner, a monthly written log of the hours of operation of GRAINDRYER, averaged over the previous 12-month rolling time period.
The volatile organic compound emissions from PAINTLINE shall not exceed 3.5 pounds of VOC per gallon of coating, minus water, as applied.	The permittee shall keep a record of the VOC content (minus water) in pounds per gallon of each coating used in PAINTLINE.

Table 4-4: Examples of Operational Limits (continued)

Operational Limit	Monitoring/Recordkeeping
The fuel input to BOILER shall not exceed X gallons per month, based on a 12-month rolling average.	The permittee shall keep a record of the fuel input to BOILER on a monthly basis, for the preceding 12-month rolling time period.
The BOILER shall not be fired with any fuel other than sweet natural gas.	The permittee shall keep, in a satisfactory manner, a record of the fuels burned in BOILER.

Submittal Procedure

Submit two copies of your complete permit application package to the AQD Permit Section:

Air Quality Division - Permit Section
Michigan Department of Environmental Quality
P. O. Box 30260
Lansing, MI 48909 -7760

Your application will be processed by the AQD in chronological order of receipt with all other incoming permit applications. Applications for installation of new processes or for modifications other than limiting the source's PTE must be submitted as separate applications. It is your responsibility to notify both the AQD Permit Section and district staff of any situation where applications for new or modified processes and limiting PTE have been submitted and are being reviewed simultaneously.

Opt-Out Permit Cover Letter Example

**S
B Inc. Small Business, Inc.**

Permit Section Supervisor
Air Quality Division
Michigan Department of Environmental Quality
P. O. Box 30260
Lansing , MI 48909 -7760

Re: Opt-out Permit

To Whom It May Concern:

Please find the enclosed "opt-out" Permit to Install application for Small Business, Inc. The intent of this permit is to reduce our potential to emit to below applicable major source thresholds and avoid applicability of the Renewable Operating Permit (ROP) Program. Small Business Inc. primarily coats metal components for the automotive industry. While some of our processes are permitted, several are either exempt or grandfathered from the requirement to obtain a Permit to Install. As described in the attached documents, Small Business Inc.'s potential to emit VOCs and HAPs exceeds major source thresholds. The limits we are applying for would restrict our potential to emit to below the major source thresholds and put us more in line with our actual production rates and emission levels.

If you need additional information or if you have any questions related to this application, please contact me at (517) 555-1234. Thank you for your consideration.

Sincerely,

John Small Jr

John Small, Jr.
Environmental Manager
Small Business, Inc.

Permit to Install Application Example



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - AIR QUALITY DIVISION

PERMIT TO INSTALL APPLICATION

For authority to install, construct, reconstruct, relocate, or modify process, fuel-burning or refuse burning equipment and/or control equipment. Permits to install are required by administrative rules pursuant to Section 5505 of 1994 PA 451, as

FOR DEQ USE ONLY
APPLICATION NUMBER

Please type or print clearly. The "Application Instructions" and "Information Required for an Administratively Complete Permit to Install Application" are available on the AQD Permit Web Page at <http://www.deq.state.mi.us/aps>, or contact the Air Quality Division at 517-373-7023.

1. FACILITY CODES: State Registration Number (SRN) and North American Industry Classification System (NAICS)		
SRN	Z 9 9 9 9	NAICS 3 3 2 8 1 2
2. APPLICANT NAME: (Business License Name of Corporation, Partnership, Individual Owner, Government Agency)		
Small Business Inc.		
3. APPLICANT ADDRESS: (Number and Street)		MAIL CODE:
123 Nuts and Bolts Dr.		
CITY: (City, Village or Township)	STATE:	ZIP CODE:
Cool City	MI	48888
4. EQUIPMENT OR PROCESS LOCATION: (Number and Street - if different than Item 3)		
CITY: (City, Village or Township)	ZIP CODE:	COUNTY:
5. GENERAL NATURE OF BUSINESS:		
Metal parts coating for automotive industry		
6. EQUIPMENT OR PROCESS DESCRIPTION: (A Description MUST Be Provided Here. Include Emission Unit IDs. Attach additional sheets if necessary.)		
The purpose of this application is to limit our facility's potential to emit VOCs and HAPs to below major source thresholds. See attached for a complete list of equipment.		
7. REASON FOR APPLICATION: (Check all that apply.)		
<input type="checkbox"/> INSTALLATION / CONSTRUCTION OF NEW EQUIPMENT OR PROCESS		
<input type="checkbox"/> RECONSTRUCTION / MODIFICATION / RELOCATION OF EXISTING EQUIPMENT OR PROCESS - DATE INSTALLED:		
<input checked="" type="checkbox"/> OTHER - DESCRIBE Opt-Out Permit Application		
8. IF THE EQUIPMENT OR PROCESS THAT WILL BE COVERED BY THIS PERMIT TO INSTALL (PTI) IS CURRENTLY COVERED BY ANY ACTIVE PERMITS, LIST THE PTI NUMBER(S):		
999-89, 825-82		
9. DOES THIS FACILITY HAVE AN EXISTING RENEWABLE OPERATING PERMIT (ROP)? <input checked="" type="checkbox"/> NOT APPLICABLE <input type="checkbox"/> PENDING APPLICATION <input type="checkbox"/> YES		
PENDING APPLICATION OR ROP NUMBER:		
10. AUTHORIZED EMPLOYEE:	TITLE:	PHONE NUMBER: (Include Area Code)
John Small, Jr.	Vice President	(517) 555-1234
SIGNATURE:	DATE:	E-MAIL ADDRESS:
<i>John Small, Jr.</i>	5/1/05	
11. CONTACT: (If different than Authorized Employee. The person to contact with questions regarding this application)		PHONE NUMBER: (Include Area Code)
CONTACT AFFILIATION:		E-MAIL ADDRESS:
12. IS THE CONTACT PERSON AUTHORIZED TO NEGOTIATE THE TERMS AND CONDITIONS OF THE PERMIT TO INSTALL? <input type="checkbox"/> YES <input type="checkbox"/> NO		
FOR DEQ USE ONLY - DO NOT WRITE BELOW		
DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:		
DATE PERMIT TO INSTALL APPROVED:	SIGNATURE:	
DATE APPLICATION VOIDED:	SIGNATURE:	
DATE APPLICATION DENIED:	SIGNATURE:	
A PERMIT CERTIFICATE WILL BE ISSUED UPON APPROVAL OF A PERMIT TO INSTALL		

EQP 5615E (Rev. 09/2004)

**S
B Inc. Small Business, Inc.**

Proposed Plan

Small Business Inc. coats metal parts for the automotive industry. After calculating the potential to emit (PTE) for all processes, we found that we exceeded the major source thresholds for VOCs and HAPs (see attached PTE calculations). This is primarily due to the fact that our maintenance paint booth does not have any legal enforceable restrictions to limit its VOC and HAP emissions. PTE calculations indicate that the emission of VOCs and HAPs from the maintenance paint booth are well above the major source thresholds.

Our actual emission rates are well below those estimated in the PTE calculations. Therefore, we are requesting an “opt-out” Permit to Install that would include a SOURCE-WIDE emission limit of 89 tons per year for VOCs, 8.9 tons per year for a single HAP, and 22.49 tons per year for total HAPs. To demonstrate compliance with these emission limits, VOC emissions from the entire facility will be calculated monthly for the preceding 12-month rolling time period. In addition, total and individual HAP emissions from the entire facility will be calculated monthly, for the preceding 12-month rolling time period. All emission calculation records will be kept on file for at least five years. I have attached an example of the recordkeeping spreadsheets that will be used to calculate the monthly emission of VOCs and HAPs.

The limits that we are proposing are practically enforceable and would limit our emission of VOCs and HAPs to below the major source thresholds (see attached restricted PTE spreadsheet).

Proposed Enforceable Limits

We are requesting an opt-out Permit to Install containing the following conditions:

1. The individual HAP emission rate for the SOURCE shall not exceed 8.9 tons per year. The annual limit shall be based upon a 12-month rolling time period as determined at the end of each calendar month.
2. The total HAP emission rate for the SOURCE shall not exceed 22.49 tons per year. The annual limit shall be based upon a 12-month rolling time period as determined at the end of each calendar month.
3. The VOC emission rate for the SOURCE shall not exceed 89 tons per year. The annual limit shall be based upon a 12-month rolling time period as determined at the end of each calendar month.
4. The permittee shall calculate the total and individual HAP emission rate from the SOURCE monthly, for the preceding 12-month rolling time period.
5. The permittee shall calculate the total VOC emission rate from the SOURCE monthly, for the preceding 12-month rolling time period.
6. All records shall be kept on file for a period of at least five years and made available to the Department upon request.

S B Inc. Small Business, Inc.

PTE Criteria Pollutants (with restrictions) Spreadsheet Example

POTENTIAL TO EMIT CRITERIA POLLUTANTS (WITH RESTRICTIONS)

Emission Unit	CO (TON/YR)	NOx (TON/YR)	SOx (TON/YR)	PM (TON/YR)	VOC (TON/YR)	LEAD (TON/YR)
COATING BOOTHS 1-3				7.0	5.6	
OVEN	0.92	1.10	0.004	0.09	0.04	
MAINTENANCE BOOTH				2.02	134.9	
PRINTING					0.14	
287(C) BOOTH				3.31	8.62	
COLD CLEANERS					0.475	
CLEANUP					6.0	
GRINDER				57.16		
WELDING				0.03		
BOILER	3.59	4.29	0.03	0.31	0.22	
GENERATOR	3.25	15.1	1.0	1.06		
TOTAL (BASED ON PROPOSED LIMIT)	7.76	20.49	1.03	70.98	89.0	0

PTE HAPs (with restrictions) Spreadsheet Example

S Inc. Small Business, Inc.

POTENTIAL TO EMIT HAPs (WITH RESTRICTIONS)

Emission Unit	HAZARDOUS AIR POLLUTANT (TON/YR)							MI BK
	Xylene	Toluene	MEK	Chromium	Chromium (VI)	manganese		
COATING BOOTHS 1-3	5.6							
OVEN								
MAINTENANCE BOOTH	85.85	41.61	7.45					
PRINTING								
287(C) BOOTH	5.68	2.27					0.25	
COLD CLEANERS								
CLEANUP			6.0					
GRIINDER								
WELDING				0.002	0.002	0.001		
BOILER								
GENERATOR								
TOTAL (BASED ON PROPOSED LIMIT)	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9

ALL HAPs TOTAL: 22.49

