



Air Permitting

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Assistance**

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Goal

Provide you with a basic understanding of the air permitting requirements.

- n Types of air permits**
- n Who needs one**
- n How to apply for one**



Handouts

Air Quality Compliance

- Who Regulates Air Quality
- How is Air Quality Regulated
- Air Permitting



Who Regulates Air Quality?

- U.S. EPA
- DEQ, Air Quality Division
- Local Government



How is Air Quality Regulated?

Clean Air Act



**Part 55, of the Natural Resources
and Environmental Protection Act**

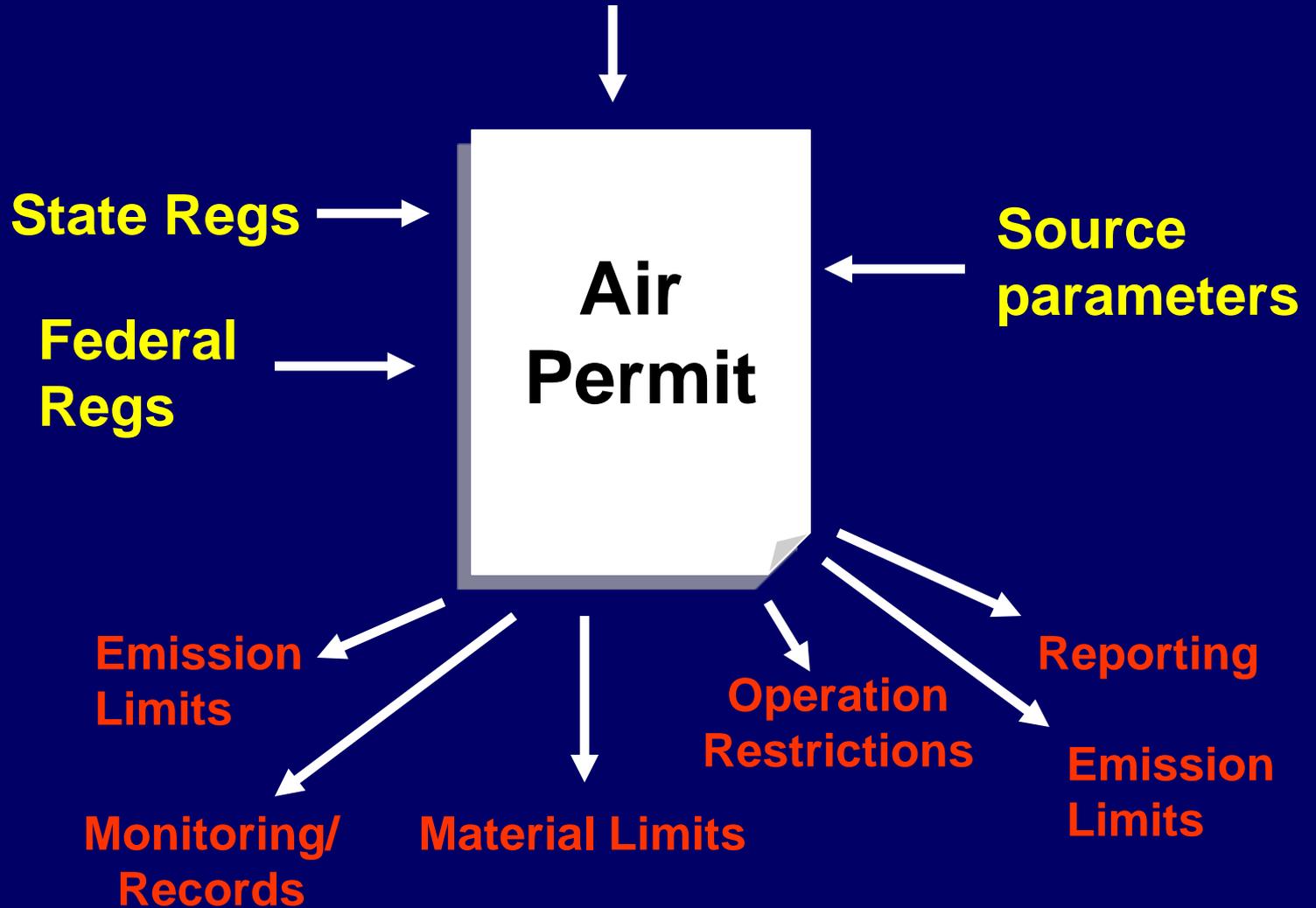


Michigan Air Pollution Control Rules





Source Information



Types of Air Permits

- Permit to Install
- Renewable Operating Permit



Permit to Install

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

August 1, 2008

PERMIT TO INSTALL
No. 999-08

ISSUED TO
Sample Corporation

LOCATED AT
123 S. Main St
Anytown, Michigan 48888

IN THE COUNTY OF
Ingham

STATE REGISTRATION NUMBER
29999

The Air Quality Division has approved the delegation of authority from the Michigan Department of Environmental Quality in accordance with and subject to the provisions of the Michigan Control of the Natural Resources Act, Pursuant to Air Pollution Control Act, authority to install the identified emission source and the attached conditions to install is allowed pursuant to Rule 201.17(1) of the Michigan Administrative Code. This permit is hereby issued in accordance with Part 55, Air Pollution Control Act, PA 451, as amended. This permit constitutes the permittee's agreement to comply with the administrative rules of the Michigan Department of Environmental Quality identified in this Permit.

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 201.17(1) OF THE MICHIGAN ADMINISTRATIVE CODE:	
7/1/2008	
DATE PERMIT TO INSTALL APPROVED:	
8/1/2008	
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

Pre-construction Permit

- A.K.A New Source Review Permit
- Applicable to any business regardless of size
- Pre-Construction Permit

R 336.1201 Permits to install.

Rule 201. (1) Except as allowed in R 336.1202 or R 336.1278 to R 336.1290, a person shall not install, construct, reconstruct, relocate, or modify any process or process equipment, including control equipment pertaining thereto, which may emit any of the following, unless a permit to install which authorizes such action is issued by the department:

- (a) Any air pollutant regulated by title I of the clean air act and its associated rules, including 40 C.F.R. §§51.165 and 52.21.
- (b) Any air contaminant.

A person who plans to install, construct, reconstruct, relocate, or modify any such

(2) To authorize a person to install, construct, reconstruct, relocate, or modify process or process equipment solely pursuant to subrule (1)(b) of this rule or to consolidate state-only enforceable conditions within a renewable operating permit when the renewable operating permit is issued pursuant to R 336.1214. This permit may establish terms and conditions that are legally enforceable solely pursuant to R 336.1224 to R 336.1232, R 336.1901, or other regulations that are not federally enforceable. Each condition in a permit issued pursuant to this subrule shall be identified as state-only enforceable.

(3) A permit to install may be approved subject to any condition, specified in writing, that is reasonably necessary to assure compliance with all applicable requirements.

(4) If a person decides not to install, construct, reconstruct, relocate, or modify the process or process equipment as authorized by a permit to install, then the person, or the authorized agent pursuant to R 336.1204, shall notify the department, in writing, and upon receipt of the notification by the department, the permit to install shall become void. If the installation, reconstruction, or relocation of the equipment, for which a permit has been issued, has not commenced within, or has been interrupted for, 18 months, then the permit to install shall become void, unless otherwise authorized by the department as a condition of the permit to install.

(5) Upon issuance of a permit to install, the emissions from the process or process equipment allowed by the permit to install shall be included in the potential to emit of the stationary source. Upon the physical removal of the process or process equipment, or

Rule 201

When is a Permit to Install Required?

- Air permit is required if process or activity emits and air contaminant.
- Unless, process or activity is specifically exempted in rules.



When is a Permit to Install Required?

- **Permit Not Required if:**
 - n **No air emissions**
 - n **Grandfathered**

**Installed before Aug 15, 1967
Never been modified**



Do I Need an Air Permit?

PERMIT TO INSTALL EXEMPTION HANDBOOK

Michigan Air Pollution Control Rules
R336.1278 – R 336.1290 (Rules 278 – 290)



December 2005



(b) Fuel-burni
generation, oil and

(i) Sweet
equipment has a

ice heating, service water heating, electric power
ct heating and which burns only the following fuels:
petroleum gas, or a combination thereof and the
than 50,000,000 Btu per hour.

History: 1979 ACS 1, Eff. Jan. 19, 1980; 1992 MR 4, Eff. Apr. 17, 1992; 1993 MR 11, Eff. Nov. 18, 1993; 1995 MR 7, Eff. July 26, 1995; 2003 MR 12, Eff. July 1, 2003.

Common Air Emission Sources

- Boilers
- Standby Generators
- Degreasers
- Bulb crushers
- Paint Operations



Boilers – Permits



- Exemption = R 336.1282(b)
- Permit to Install Required if:
 - n Nat gas > 50 million Btu/hr
 - n Fuel Oil >20 million Btu/hr
- General Permit for 100 million Btu/Hr Boilers



Standby Generators - Permits

- Exemption = R 336.1285(g)
- Permit Required if:
 - n Generator > 10 Million Btu/hr
 - n Emissions are “Significant”
- General Permit to Install for Generators



Degreasers/Cold Cleaners

- Exemption = R 336.281(h)
- Exempt if air/vapor interface not more than than 10 ft²



Bulb Crushers

Needs an approved state air permit (Permit to Install) prior to installation.



Painting Operations

- Exemption = R 336.1287(c)
- Air Permit Required if use > 200 gal coating/month
- Must keep records





Limited Emissions Exemption

- Exemption = R 336.1290
- Exempts sources of limited emissions
- Monthly emissions below threshold
- Must keep monthly records

Permit to Install Exemptions

Rule 278

**“What’s
Significant?”**

Rule 278

- ü Excludes projects with “significant” emissions from being exempt

Permit to Install Exemptions

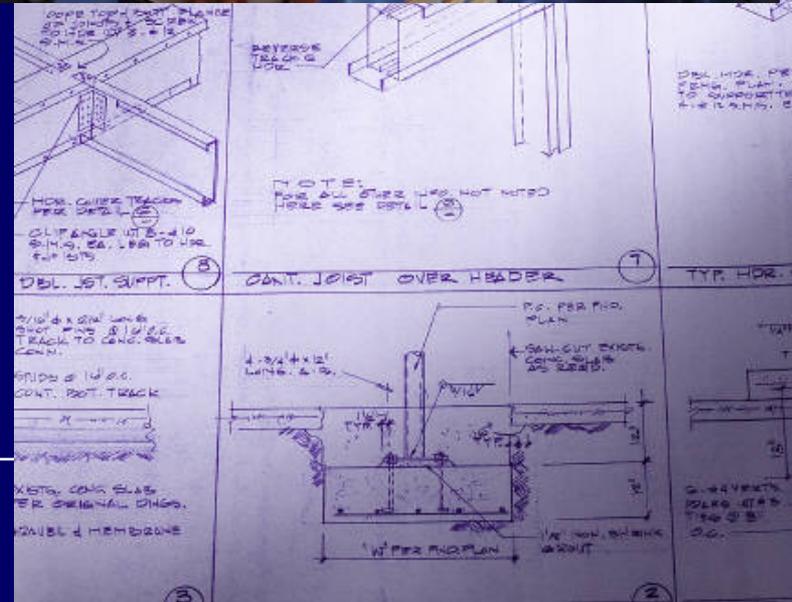
Rule 119(e) = “Significant”

Pollutant	Emission Rate
CO	100 tpy
SO2	40 tpy
Nitrogen Oxides	40 tpy
PM10 and PM2.5	15 tpy
VOC	40 tpy

Permit to Install Exemptions

Rule 278

- ü Is there an exemption?
- ü Are emissions significant?
- ü Exempt or Not Exempt



Permit to Install Exemptions

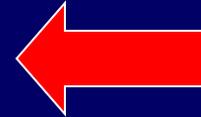
Rule 278

- ü **Rule 278 applies to entire project**
- ü **Compare Significant Emissions threshold to entire project**

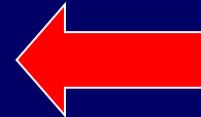


**Is a Permit
Required to
Install the
Generators?**

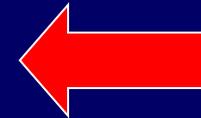
15 tons NOx



15 tons NOx



15 tons NOx



**Installed
within 18
months**



(iii) Changes in a process or process equipment to the extent that such changes do not alter the quality and nature, or increase the quantity, of the emission of the air contaminant beyond the level which has been described in and allowed by an approved permit to install, permit to operate, or order of the department.

(d) Reconstruction or replacement of air pollution control equipment with equivalent or more efficient equipment.

(e) Installation, construction, or replacement of air pollution control equipment for an existing process or process equipment for the purpose of complying with the national emission standards of hazardous air pollutants regulated under section 112 of part A of title I of the clean air act, 84 Statutes 1685, 42 U.S.C. §7412.

(f) Installation or construction of air pollution control equipment for an existing process or process equipment if the control equipment itself does not actually generate a significant amount of criteria air contaminants as defined in R 336.1119(e) or a meaningful quantity of toxic air contaminants.

(g) Internal combustion engines that have less than 10,000,000 Btu/hour maximum heat input.

(g) Internal combustion engines that have less than 10,000,000 Btu/hour maximum heat input.

(h) Vacuum pumps in laboratory or pilot plant operations.

(i) Brazing, soldering, welding, or plasma coating equipment.



(ii) Die casting machines.

(iii) Equipment for surface preparation of metals by use of aqueous solutions, except for acid solutions.

(iv) Atmosphere generators used in connection with metal heat treating processes.

(v) Equipment used exclusively for sintering of glass or metals, but not exempting equipment used for sintering metal-bearing ores, metal scale, clay, flyash, or metal compounds.

(vi) Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals, plastics, concrete, rubber, paper stock, wood, or wood products which meets any of the following:

(A) Equipment used on a nonproduction basis.

(B) Equipment has emissions that are released only into the general in-plant environment.

(C) Equipment has externally vented emissions controlled by an appropriately designed and operated fabric filter collector that, for all specified operations with metal, is preceded by a mechanical precleaner.

(vii) Photographic process equipment by which an image is reproduced upon material sensitized to radiant energy, including any of the following:

(A) Blueprint machines.



Significant Thresholds

Pollutant	Emission Rate
CO	100 tpy
SO ₂	40 tpy
Nitrogen Oxides	40 tpy
PM ₁₀ and PM _{2.5}	15 tpy
VOC	40 tpy

One Project
45 tons NOx

15 tons NOx ←



15 tons NOx ←



Is a Permit
Required to
Install the
Generators?

15 tons NOx ←



YES



Let's Review



Is there an exemption?



Permit Required



YES

Are emissions from project less than significant?



Permit Required



Permit NOT Required (exempt)



**What do I
need to do if
there's an
exemption?**



**Verify
Exemption
with District
office**

**Keep
exemption
determination
in file**



**What if I need a
permit?**



Permit to Install

Cannot begin
construction/installation
until permit issued



The Air Permit Application

○ Free www.deq.state.mi.us/aps/#PTI

DEQ 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 amended.

FOR DEQ USE
APPLICATION NUMBER

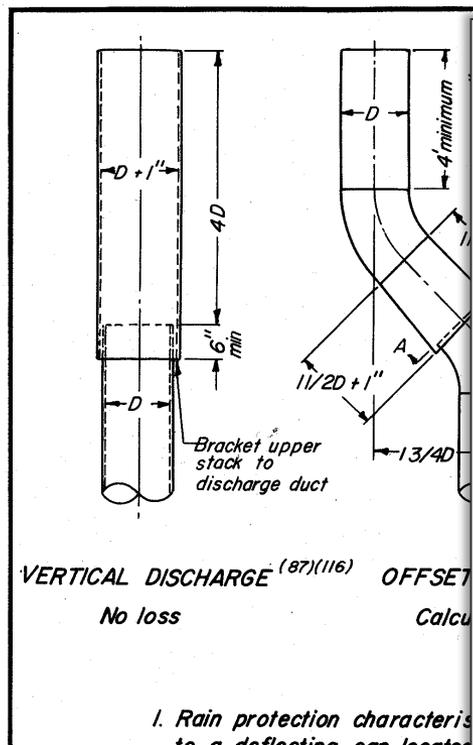
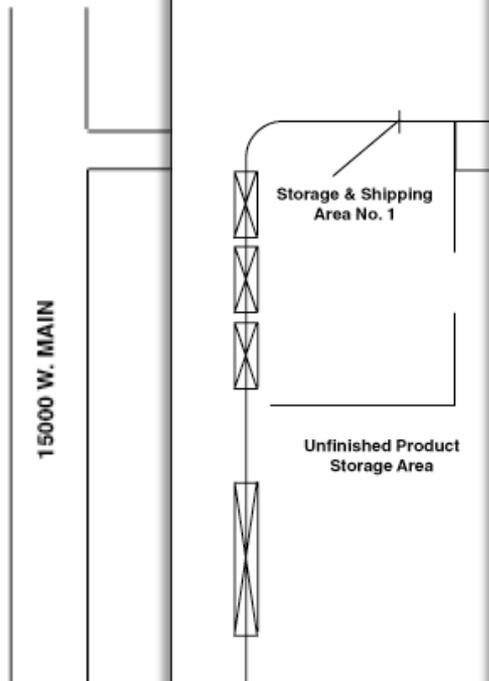
Please type or print clearly. The "Application Instructions" and "Information Required for an Administratively Complete Permit to Install Application" are available on the Air Quality Division (AQD) Permit Web Page at <http://www.deq.state.mi.us/aps>. Please call the AQD at 517-373-7023 if you have not been contacted within 15 days of your application submittal.

1. FACILITY CODES: State Registration Number (SRN) and North American Industry Classification System (NAICS)			
SRN	<input type="text"/>	NAICS	<input type="text"/>
2. APPLICANT NAME: (Business License Name of Corporation, Partnership, Individual Owner, Government Agency)			
3. APPLICANT ADDRESS: (Number and Street)			MAIL CODE:
CITY: (City, Village or Township)	STATE:	ZIP CODE:	COUNTY:
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			
6. EQUIPMENT OR PROCESS DESCRIPTION: (A Description MUST Be Provided Here. Include Emission Unit IDs. Attach additional sheets if necessary; number and date each page of the submittal.)			
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 type="checkbox"/> OTHER - DESCRIBE			
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):			
9. DOES THIS FACILITY HAVE AN EXISTING RENEWABLE OPERATING PERMIT (ROP)? <input 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)
SIGNATURE:		DATE:	E-MAIL ADDRESS:

The Air Permit Application

- o Basic Source Information

- n Stack info; Process and site information; emission estimates; etc.



CPI Chromewell Plating, Inc.

E-DIP PROCESS

Method of Emission Calculations:

The expected and maximum allowable emissions of VOCs from the E-Dip coating process are calculated using the mass balance approach.

Assumptions:

The E-Dip coating is comprised of a two-part system consisting of a resin material and resin paste. The materials are blended at a ratio of 10 parts resin material to 1 part resin paste. The hourly throughput of resin material and resin paste is 50 and 5 gallons, respectively. The coating vendors estimate CPI's monthly coating usage rate for the E-Dip process to be approximately 16,000 gallons and 1,600 gallons of resin material and resin paste, respectively. The maximum usage rate of resin materials and resin paste is determined by increasing the expected usages by 25% to account for increases in product demand. Thus the maximum usage of resin material and resin paste is 20,000 gallons and 2,000 gallons, respectively. The VOC content of the resin material and resin paste is 0.102 and 0.42 lbs/gallon, respectively. All of the material usage and VOC content data is summarized below:

Material	VOC Content	Hourly Usage	Projected Monthly Usage	Maximum Monthly Usage

The Air Permit

- Contains requirements source is subject to
- Contract between state of MI and business

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

August 1, 2008

PERMIT TO INSTALL
No. 999-08

DEQ

ISSUED TO
Sample Corporation

LOCATED AT
123 S. Main St
Anytown, Michigan 48888

IN THE COUNTY OF
Ingham

STATE REGISTRATION NUMBER
Z9999



The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5605(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: 7/1/2008	
DATE PERMIT TO INSTALL APPROVED: 8/1/2008	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

Permit to Install

The permit will identify requirements.

- § Emission and material Limits
- § Operational Restrictions
- § Recordkeeping, monitoring, reporting

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

August 1, 2008

PERMIT TO INSTALL
No. 999-08

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Sample Corporation

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123 S. Main St
Anytown, Michigan 48888

IN THE COUNTY OF
Ingham

STATE REGISTRATION NUMBER
Z9999

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article 8, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(5).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 205: 7/1/2008	
DATE PERMIT TO INSTALL APPROVED 8/1/2008	SIGNATURE
DATE PERMIT ISSUED	SIGNATURE
DATE PERMIT REVOKED	SIGNATURE

Renewable Operating Permit (ROP)

- A.K.A Title V Permit
- Title V of Clean Air Act
- Required if Facility is a “Major Source”
- Combines requirements from issued PTIs

**STATE OF MICHIGAN
RENEWABLE OPERATING PERMIT**

IS HEREBY ISSUED TO

Sample Corporation
SRN: Z9999

LOCATED AT

123 Main Street
Anytown, MI 49000-0007

Permit Number: 199600543

Effective Date: July 18, 2001

Expiration Date: July 18, 2006

This permit is issued in accordance with and subject to Part 5506(3) of Article II, Chapter 1, Part 55 (Air Pollution Control) of P. A. 451 of 1994. Pursuant to Air Pollution Control Rule 336.1210(1), this permit constitutes the permittee's authority to operate the major stationary source identified above in accordance with the general conditions, special conditions and all emissions standards applicable to the major stationary source and all emissions from the source. Operation of the major stationary source and all emissions from the source are subject to all applicable future or amended rules and regulations of the Michigan Department of Environmental Quality under the Clean Air Act.

This permit does not relieve the permittee from the obligation to obtain the necessary permits to install pursuant to process or process equipment that does not obviate the necessity of government as required by law.

Michigan Department of Environmental Quality

Heidi G. Hollenbach
Grand Rapids District Supervisor

Major Sources Only

Major Source

- Potential to Emit

- n > 100 tons/yr Criteria Air Pollutant

- n > 10 tons/yr single Hazardous Air Pollutant

- n > 25 tons/yr total Hazardous Air Pollutants

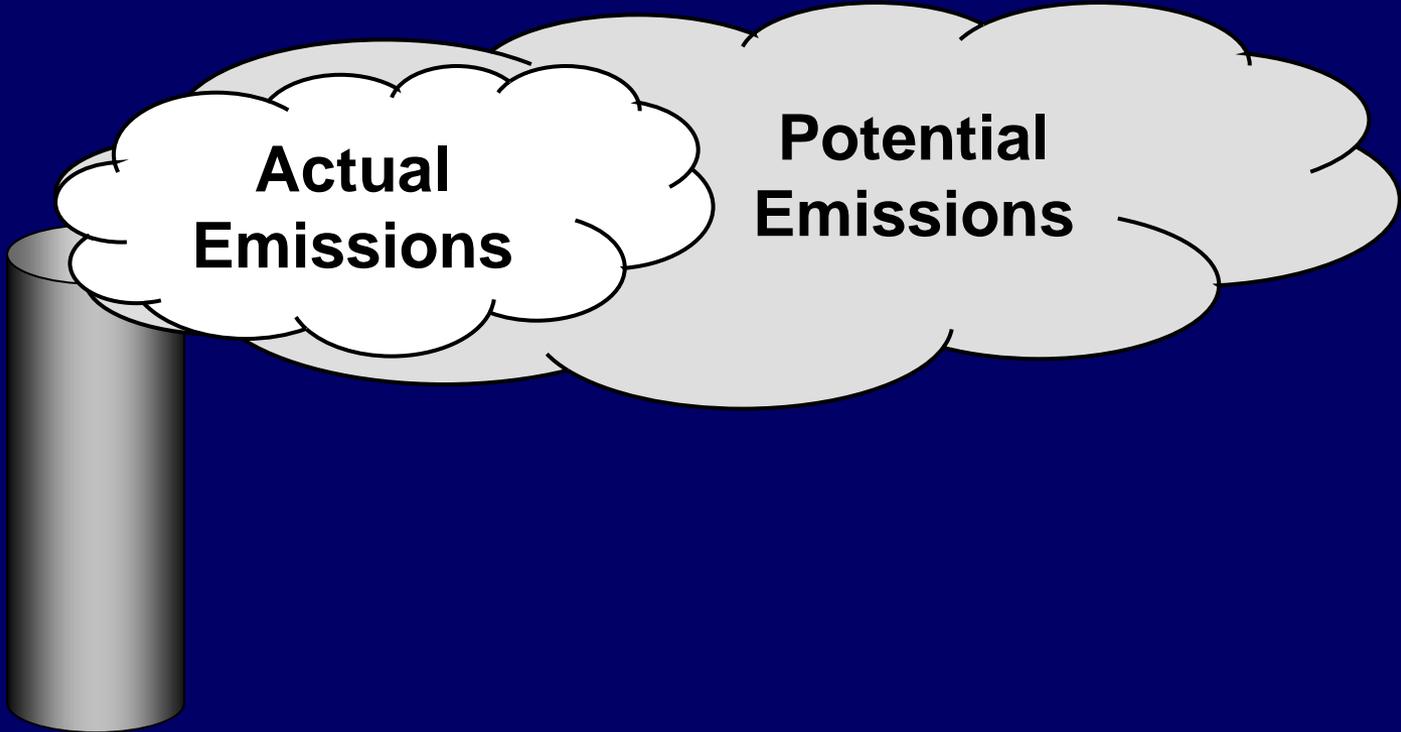




Potential to Emit

- Maximum amount of air contaminants that your source could emit if:
 - n Operate at 100% of design capacity;
 - n Operated 24hrs/day, 365 days/yr
 - n Worse-case materials used or processed 100% of the time
 - n No air pollution control equipment

Potential to Emit



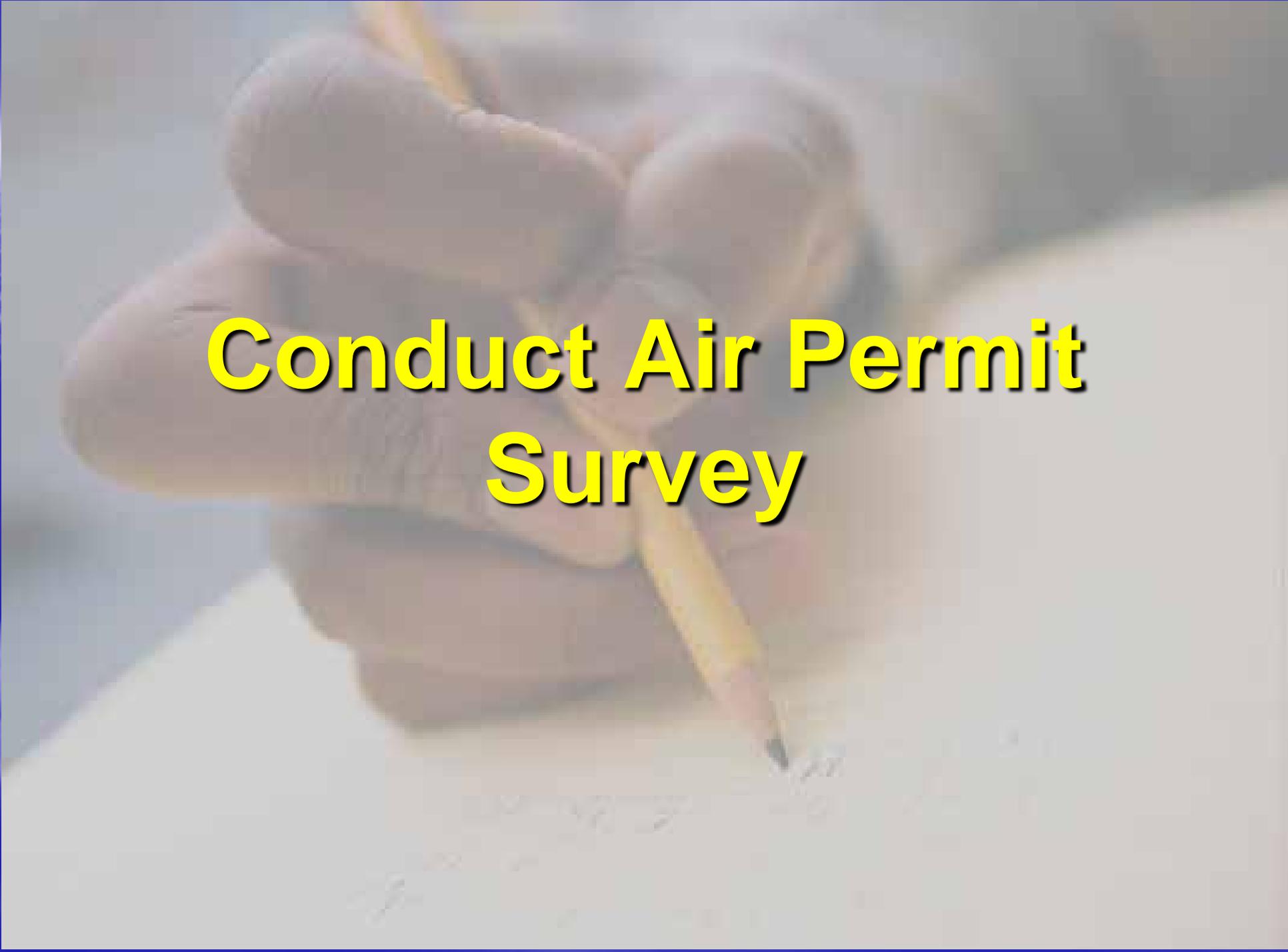
**Actual
Emissions**

**Potential
Emissions**

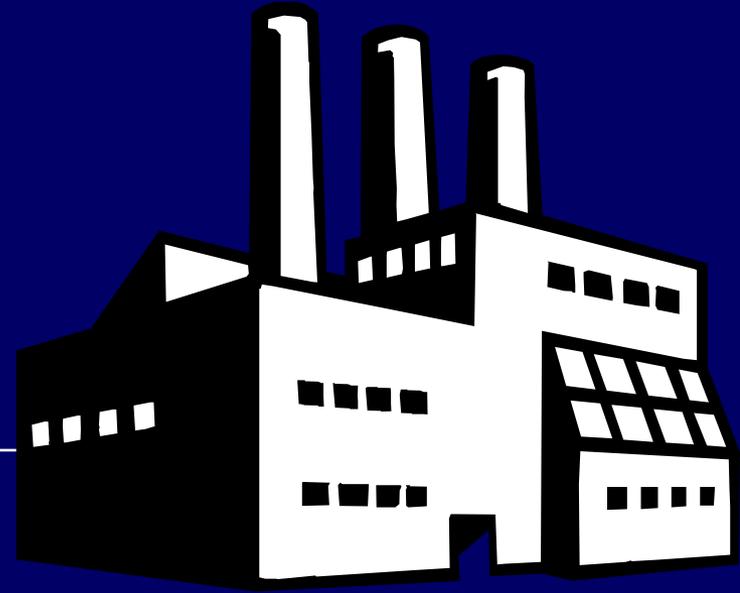
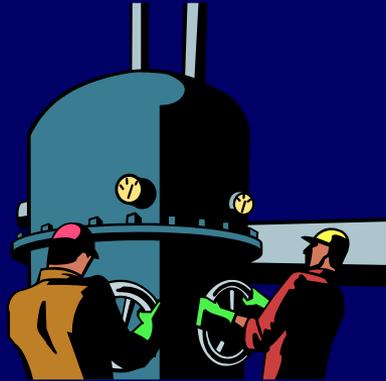


ROP Requirements

- Apply within 12 months of becoming a major source
- Renew Every 5 years
- Annual Air Quality Fee
- Annual Air Emissions Reporting
- Annual and Semi-Annual Compliance Reporting
- Deviation Reporting

A close-up photograph of a hand holding a pencil, poised to write on a document. The background is slightly blurred, showing the texture of the paper and the hand. Overlaid on the center of the image is the text "Conduct Air Permit Survey" in a bold, yellow, sans-serif font with a black outline.

Conduct Air Permit Survey





**Include
emission
sources
without
Stacks**



Sources of Air Emissions

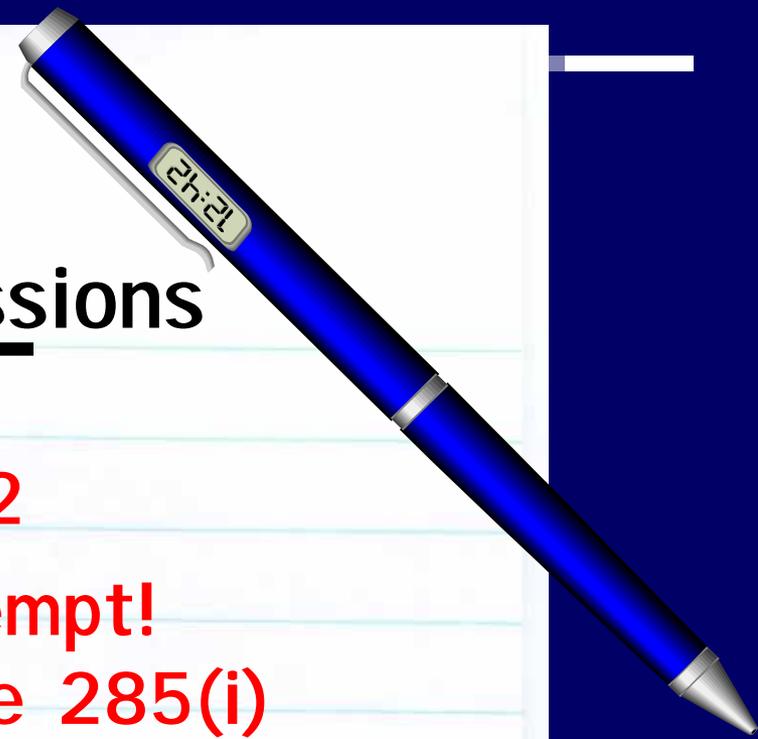
boiler PTI #999-02

welding station exempt!
Rule 285(i)

Paint Booth 1 & 2 PTI #999-95

Paint Booth #3 exempt!
Rule 287(c)

Cold cleaner exempt! Rule 281(h)



What if I Don't Have a Permit?

- Initiate application process ASAP!
- Contact district office

Don't wait for an inspector to find the violation!



QUESTIONS?

