



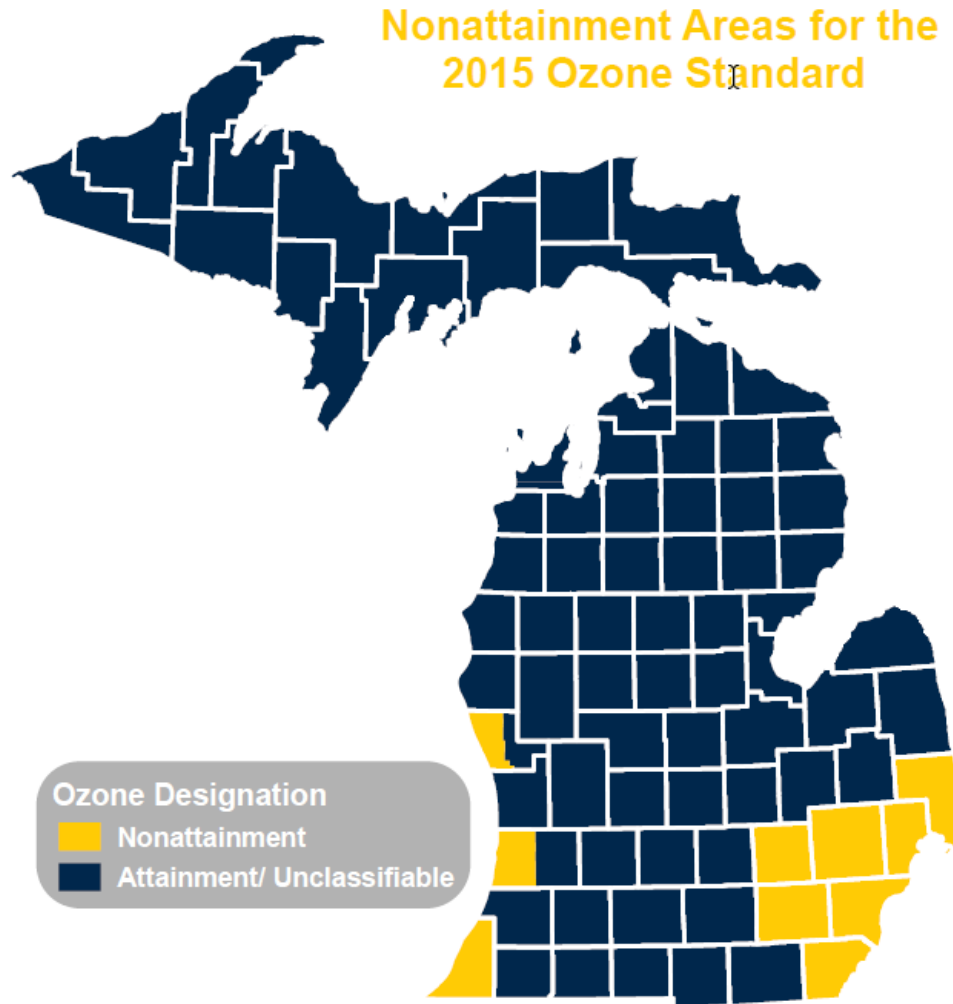
MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Nonattainment Updates Meaningful Change Rules 290 and 291

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April 30, 2019

Nonattainment Updates

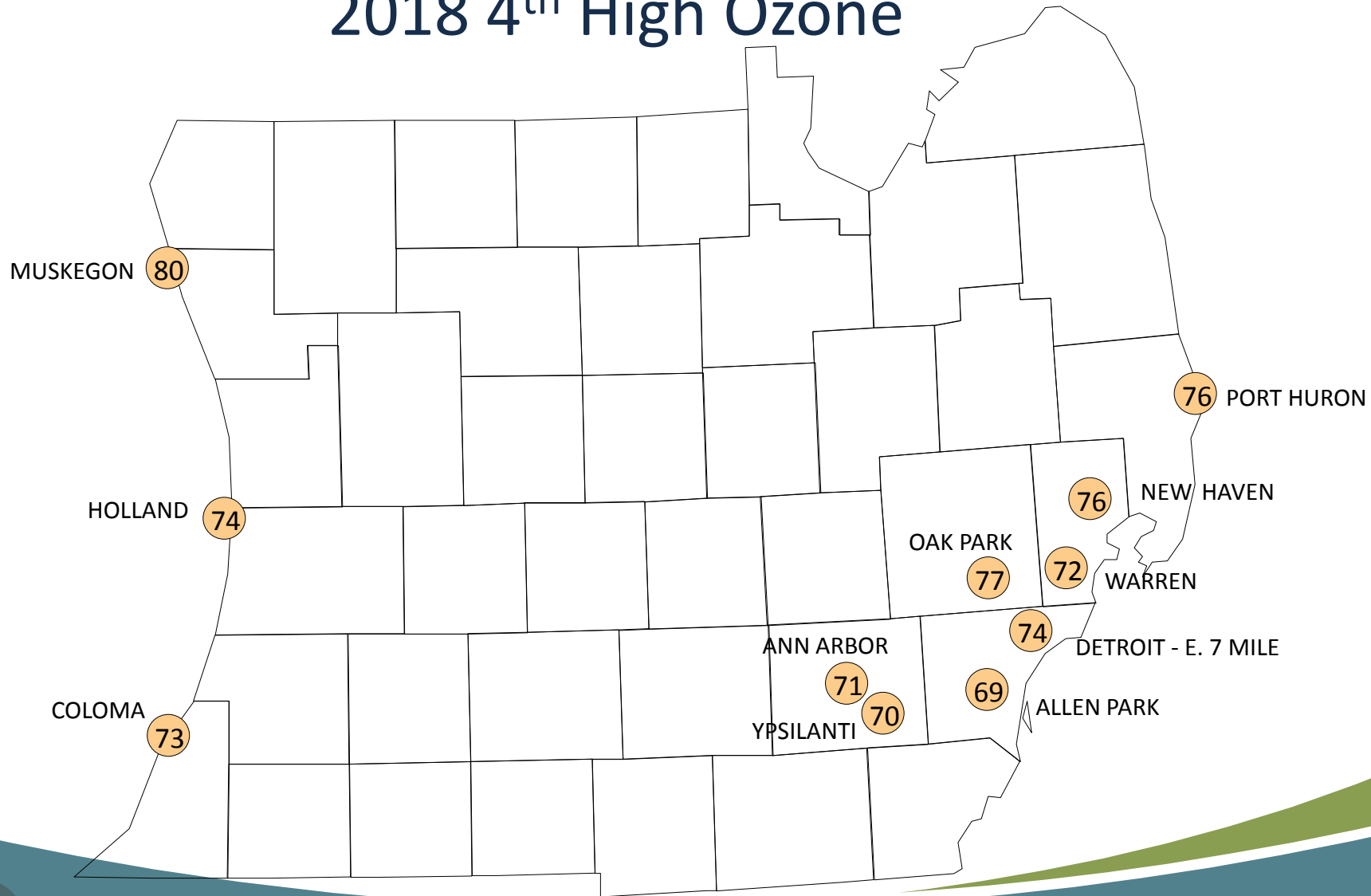


Nonattainment Updates

- Attainment is a Design Value of ≤ 70 ppb
 - A three-year average
 - Classification – Marginal (but “bump ups” if we don’t meet deadlines)
 - Attainment by 2021
 - SIP submitted by 2021
 - Assessed using 2018, 2019, 2020

Nonattainment Updates

2018 4th High Ozone



Nonattainment Updates



Nonattainment Updates

What do we HAVE to do?

Nonattainment New Source Review permitting
(Part 19 rules)

- LAER
- Offsets
- Compliance



Nonattainment Updates

What are we working on?

- Conceptual Model
 - Studies
 - Prescribed burning
 - Formaldehyde
- Control Strategies
 - RACT Rules
 - MMA Survey
 - Talking to affected companies about applicability/effectiveness
 - Considering recordkeeping “offramps”

Nonattainment Updates

What are we working on? (cont.)

- Control Strategies (cont.)
 - OTC Rules
 - Consumers Products, AIM Coatings, etc.
 - Talking to companies about applicability/effectiveness
 - Voluntary programs
 - USEPA's Advance program
 - SEMAQS, West Michigan Clean Air Coalition
 - Other ideas
 - NOx boiler tune-ups
 - Suggestions?


Nonattainment Updates

What's “on the table”?

- CAA Section 179B(b) – “but for”
(looking at precedent, contributions from Canada, discussions with EPA, etc.)
- Offset rules
- Extension(s)
- Suggestions?

Meaningful Change

- Used in Rule 285(2)(b), (c), and (f)
- Rule 285(3) Definition
- Meant to address “ad-hoc” rulemaking
- Policy and Procedure # AQD-025
- Considering some additional “guidance”

	Air Quality Division POLICY AND PROCEDURE	DEPARTMENT OF ENVIRONMENTAL QUALITY
Original Effective Date: May 9, 2017	Subject: Permit Exemption for Changes In a Process or Process Equipment That Are Not a Meaningful Change or a Meaningful Increase In Toxic Air Contaminants	Category: <input type="checkbox"/> Internal/Administrative <input checked="" type="checkbox"/> External/Non-Interpretive <input type="checkbox"/> External/Interpretive
Revised Date: N/A	Program Name: Air Permits To Install	Type: <input type="checkbox"/> Policy <input type="checkbox"/> Procedure <input checked="" type="checkbox"/> Policy and Procedure
Reformatted Date: N/A	Number: AQD-025	Page: 1 of 14

A Department of Environmental Quality (DEQ) Policy and Procedure cannot establish regulatory requirements for parties outside of the DEQ. This document provides direction to DEQ staff regarding the implementation of rules and laws administered by the DEQ. It is merely explanatory; does not affect the rights of or procedures and practices available to the public; and does not have the force and effect of law. DEQ staff shall follow the directions contained in this document.

INTRODUCTION:

This procedure discusses the use of Rule 336.1285 (Rule 285) in the Permit to Install (PTI) program, specifically the application of the term “meaningful.” There are instances when owner/operators have received a PTI and at a later time they consider making relatively small changes in the permitted process or process equipment. They may apply for a new PTI for the proposed changes or evaluate if the desired changes are allowed under a Rule 285 exemption. This procedure is intended to provide further guidance for those decisions, for owner/operators and for DEQ Air Quality Division (AQD) staff.

AUTHORITY:

Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, requires companies to obtain a PTI for certain sources of air emissions. Under Section 5505(2), rules have been promulgated to establish a PTI program administered by the department. The PTI program is applicable to each new or modified process or process equipment that emits or may emit an air contaminant. Under Section 5505(4), the department has also promulgated rules to exempt certain sources, processes or process equipment, or certain modifications to a source, process or process equipment, from the requirement to obtain a PTI.

In the Air Pollution Control Rules, Part 2 (Air Use Approval), R 336.1278 (Rule 278) excludes certain sources from PTI exemptions specified in R 336.1280 to R 336.1291 (Rules 280 to 291). R 336.1278a (Rule 278a) describes the information necessary for an owner/operator to demonstrate the applicability of a specific exemption listed in Rules 280 to 291.

R 336.1285(2)(b) (Rule 285(2)(b)) provides an exemption from the requirement to obtain a PTI for:

(b) Changes in a process or process equipment which do not involve installing, constructing, or reconstructing an emission unit and which **do not involve** any meaningful change in

Meaningful Change

Not “Meaningful” – Draft

- It’s now a rule, not much flexibility



(3) For the purposes of this rule, “meaningful” with respect to toxic air contaminant emissions is defined as follows:

(a) “Meaningful change in the quality and nature” means a change in the toxic air contaminants emitted that results in an increase in the cancer or non-cancer hazard potential that is 10% or greater, or which causes an exceedance of a permit limit. The hazard potential is the value calculated for each toxic air contaminant involved in the proposed change before and after the proposed change and it is the potential to emit

- Work with Permit Section
 - Establish Hazard Potential/base case as part of permitting process

Meaningful Change

“Meaningful”- Draft

- Rule 285(2)(c) might provide flexibility

(c) Changes in a process or process equipment that do not involve installing, constructing, or reconstructing an emission unit and that involve a meaningful change in the quality and nature or a meaningful increase in the quantity of the emission of an air contaminant resulting from any of the following:

“...involve a meaningful change...”

(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.

“...allowed by an approved permit to install...”

Meaningful Change

“Meaningful” - Draft

- Rules 224/225/226
If you'd be exempt from a toxics review anyway...
- Compliance using AER/AIR
- Use generic or historic modeling results
- Combination
- Case-by-case

Meaningful Change

Permit condition flexibility - *Draft*

- Historically
 - Require a lot of work upfront
 - Require substantial recordkeeping
- Chemical plants, automotive
- Get creative with special conditions

Meaningful Change

Pitfalls, warnings and work to do - *Draft*

- Limits when you approach screening levels?
- Don't assume (calcs & modeling can change)
- Might not be a solution for smaller sources
- Spreading work around (permits, field inspectors, modelers, toxics, etc.)



Rule 290

- Finishing up work on some updated outreach documents
- This should replace Form EQP 3558

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY, ENVIRONMENTAL SCIENCE AND SERVICES DIVISION

RULE 290 PERMIT TO INSTALL EXEMPTION: SOURCES WITH LIMITED EMISSIONS RECORD

This record is provided as a courtesy for businesses by the Michigan Department of Environmental Quality (MDEQ), Environmental Science and Services Division, Clean Air Assistance Program, and is not required to be returned or submitted to the MDEQ.

Applicable Rule: Rule 290 of the Michigan Air Pollution Control Rules

NOTE:

- Rule 290 of the Michigan Air Pollution Control Rules exempts an emission unit with limited emissions from having to apply for Permit to Install. Rule 201 requires sources to obtain a Permit to Install prior to the installation, construction, reconstruction, relocation, or modification of an emission unit. Sources using this exemption must not meet any of the criteria in Rule 278 and must be able to demonstrate compliance with the various emission limits contained in Rule 290.
- Utilization of this form is not the sole method of demonstrating compliance with the requirements of Rule 290, unless covered by a permit such as a Renewable Operating Permit (ROP). For example, an alternative method of demonstrating compliance could be determining the emissions of air contaminants from a single unit of production and recording the number of production units generated per month.
- ROP subject sources – This document must be used to track emissions unless an alternate format has been approved by the District Supervisor or alternate format is cited in the ROP.
- An emission unit that emits an air contaminant, excluding noncarcinogenic Volatile Organic Compounds (VOCs) and noncarcinogenic, non-ozone forming materials listed in Rule 122(f), that has an Initial Threshold Screening Level (ITSL) or initial Risk Screening Level (IRSL) less than 0.04 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) cannot use Rule 290.
- For all emission units exempt pursuant to Rule 290 that emit particulate emissions which have an ITSL equal to or less than 2.0 $\mu\text{g}/\text{m}^3$ and greater than or equal to 0.04 $\mu\text{g}/\text{m}^3$, the particulate emissions must be included in Section 2.
- For all emission units exempt pursuant to Rule 290 that emit particulate emissions which have an IRSL equal to or greater than 0.04 $\mu\text{g}/\text{m}^3$, the particulate emissions must be included in Section 3.
- Perchloroethylene is the only non-ozone forming material listed in Rule 122(f) that is a carcinogen. Two of the materials in Rule 122(f) Table 11, tertiary butyl alcohol and 1,2-butylene oxide, are carcinogenic and are ozone forming materials.
- If an emission unit is equipped with a control device (i.e., equipment that captures and/or destroys air contaminants) and the control device is not vital to production of the normal product of the process or to its normal operation, then there are two options of recording emissions in Sections 2, 3, 4, and 5:
 1. record all uncontrolled emissions of air contaminants (i.e., all air contaminants entering the control device); or
 2. record all controlled emissions of air contaminants (all air contaminants leaving the control device).Whichever option is chosen, make sure that option is used consistently throughout Sections 2, 3, 4, and 5.
- If the emission unit is not equipped with a control device or the control device is vital to production of the normal product of the process or to its normal operation, then the quantity of each emission of air contaminant identified in Sections 2, 3, 4, and 5 should be recorded as uncontrolled emissions.
- Monthly emission records are required to be maintained on file for the most recent two-year period and made available to the MDEQ, Air Quality Division upon request. (ROP subject sources must keep records for the most recent five year period.)

EOP 3058 (Rev. 200)

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RULE 290 PERMIT TO INSTALL EXEMPTION: SOURCES WITH LIMITED EMISSIONS RECORD (continued)			
<i>Please print or type all information.</i>			
1. COMPLETE FOR EACH EMISSION UNIT USING THE EXEMPTION IN RULE 290.			
SOURCE NAME: _____			
MONTH/YEAR: _____			
DESCRIPTION OF EMISSION UNIT (including control devices): _____ _____ _____ _____			
2. RECORD EMISSIONS OF NONCARCINOGENIC AIR CONTAMINANTS (EXCLUDING NONCARCINOGENIC VOCs AND NONCARCINOGENIC, NON-OZONE FORMING MATERIALS LISTED IN RULE 122(f)) (see Appendix A)			
ITSL ≥ 2.0 ug/m³			
(The emissions of noncarcinogenic particulate air contaminants with an ITSL > 2.0 ug/m ³ do not have to be recorded in this table as long as the emission unit is in compliance with the requirements in Section 6.)			
CAS #	Chemical Name	Uncontrolled Emissions (lbs/month)	Controlled Emissions (lbs/month)
Monthly Total		①	②
2.0 ug/m³ > ITSL ≥ 0.04 ug/m³			
CAS #	Chemical Name	Uncontrolled Emissions (lbs/month)	Controlled Emissions (lbs/month)
Monthly Total		③	④
Compliance Criteria:			
<ul style="list-style-type: none"> The total in Box ① must be $\leq 1,000$ pounds or the total in Box ② must be ≤ 500 pounds. If the total in Box ① or in Box ② is greater than the respective emission limitations, contact your local district office. The total in Box ③ must be ≤ 20 pounds or the total in Box ④ must be ≤ 10 pounds. If the total in Box ③ or in Box ④ is greater than the respective emission limitations, contact your local district office. 			

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Rule 290

Option 1 - Rule 290 – Step by Step

Looking at Rule 290 in a step by step manner is sometimes helpful to determine whether this Rule 201 permit exemption is appropriate for your process.

Step 1

- Define Emission Unit (EU) and Compare to Rule 278
- if pass Rule 278, move to step 2

Step 2

- For particulate - do not count towards total emissions if it: has no IRSL, is controlled to 0.01 lbs/1000 lbs of exhaust gas, uses a baghouse < 30,000 cfm; has an ITSL > 2 ug/m³, and is less than 5% opacity

Step 3

- Determine if EU will be controlled or Uncontrolled.
 - 10 lbs/500 lbs - limits for controlled
 - 20 lbs/1000 lbs - limits for uncontrolled

Step 4

- Calculate CO₂ equivalent emissions
 - _____ lbs/month (if greater than 6250 tons → **not exempt, stop!**)

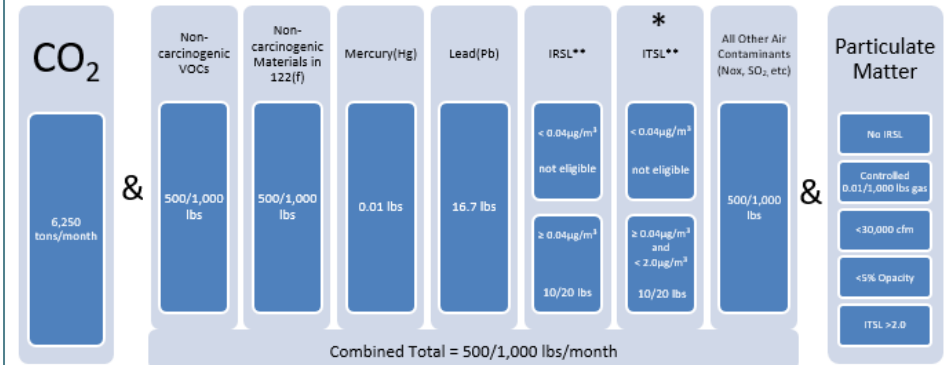
Step 5

- Calculate noncarcinogenic VOC's and noncarcinogenic materials listed in 122(f)
 - _____ lbs./month (if greater than 500/1000 lbs. → **not exempt, stop!**) Examples: Toluene, Hexane, Acetone, HFC's, etc.

Option 2 - Rule 290 Bins

Thinking of Rule 290 calculations in this manner may also help visualize how pollutants should be categorized and calculated.

- The values listed below are allowable emission limits in pounds or tons for each category under Rule 290.
- Because pollutants may have multiple screening levels, contaminants might need to be considered in multiple IRSL/ITSL bins, but only consider the emission ONCE as part of the "combined total".
- Particulate matter meeting the appropriate criteria do not count toward the "combined total", however any particulate that doesn't meet that criteria needs to be accounted for in the appropriate bin.



* Noncarcinogenic VOCs and noncarcinogenic materials in Rule 122(f) do not need to be evaluated in the ITSL bins.
 ** If multiple screening levels, assess in all applicable bins

Working on Option 3 – table format

Rule 291

- Not SIP approved (yet)
- Based on potential emissions
- No ongoing recordkeeping
 - Date of installation
 - Description of Emission Unit
 - Determination
 - TAC screening level (ITSL/IRSL) at time of installation
- Allows small amounts of TACs $< 0.04 \mu\text{g}/\text{m}^3$

Rule 291

Rule 291 (2)(a)-(d) – Toxics test

Step 1

Applies to ITSLs and IRSLS

TACs

$\geq 0.04\mu\text{g}/\text{m}^3$ and
 $< 2.0\mu\text{g}/\text{m}^3$

< 0.12
tons /year

TACs

$\geq 0.005\mu\text{g}/\text{m}^3$ and
 $< 0.04\mu\text{g}/\text{m}^3$

<0.06
tons/year

TACs

$< 0.005\mu\text{g}/\text{m}^3$

<0.006
tons/year

Asbestos and/or
Subtilisin Proteolytic
enzymes

NO
EMISSIONS

Rule 291

Step 2

Air Contaminant	Potential Emissions Not to be Exceeded
CO ₂ equivalent	75,000 tons per year
CO	10 tons per year
NO _x	10 tons per year
SO ₂	10 tons per year
VOC (as defined in R 336.1122)	5 tons per year
PM	10 tons per year
PM ₁₀	5 tons per year
PM _{2.5}	3 tons per year
Lead	0.1 tons per year
Fluorides	1 ton per year
Sulfuric acid mist	0.12 tons per year
Hydrogen sulfide	2 tons per year
Total reduced sulfur	2 tons per year
Reduced sulfur compounds	2 tons per year
Total mercury	0.12 pounds per year
Total toxic air contaminants not listed in table 23 with any screening level	5 tons per year
Total air contaminants not listed in table 23 that are non-carcinogenic and do not have a screening level	6 tons per year

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