
Understanding Air Quality Permitting Exemptions

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Topics

- “Recent” work with exemptions
- Rule 278 Determination and limiting potential
- Rules 280-289
- Meaningful change in Rule 285
- Rule 290
- Rule 291
- Future work

Events of Interest Rule 278

- Gatekeeper
 - PSD/NAA/significant
 - Major HAPs
 - 40 CFR Part 61 NESHAPs
- Baghouse determination
- Limiting Potential

Rules 280-289 (www.michigan.gov/air, “click on State Air Laws and Rules, Part 2 Exemptions)

- Rule 280 - Cooling and ventilation
- Rule 281 - Cleaning/washing/drying
- Rule 282 - Furnaces, ovens, heaters
- Rule 283 - Testing and inspection
- Rule 284 - Containers
- Rule 285 - Miscellaneous
- Rule 286 - Plastic processing
- Rule 287 - Surface coating
- Rule 288 - Oil & gas processing
- Rule 289 - Asphalt & concrete

Rule 285

- Catch all
 - Replacements
 - Changes (meaningful and not meaningful)
 - Control devices
 - Engines
 - Sanding, carving, etc. all types of media
 - Metal treatment
 - Remediation

Meaningful Change

- You have a PTI
- You want to make a change
- You need to decide if a modification to your PTI is required or...
- If the change may not be meaningful or may be allowed under your existing PTI
- TAC = Toxic Air Contaminant. Defined in Rule 120 (f); 42 exemptions.
 - AQD has screening levels (SLs) for > 1200 TACs.
- “ITSL” = Initial Threshold Screening Level.
- “IRSL” = Initial Risk Screening Level.
- PTE – Potential to emit (Rule 116(n))
 - Maximum emissions when considering maximum operational capacity PTE = Maximum * 8760 hours
- HP – Hazard Potential (Rule 285(3))
 - Calculated for each TAC
 - Uses PTE and screening levels

ITSL or IRSL = SL

- “ITSL” = Initial Threshold Screening Level;
- “IRSL” = Initial Risk Screening Level;
- Located online
- www.michigan.gov/air
- View by **CAS No.**, **alphabetical** or **query**

Meaningful change

- Rule 285(3) – paraphrased
 - Must have a PTI issued on or after April 17, 1992
 - Applies only to TACs
 - Relies upon ITSLs and IRSLs
 - Uses objective quantitative method
 - $HP = (\text{hourly PTE}) \div (\text{ITSL or IRSL})$
 - Meaningful = 10%+ in HP

Rule 290 (and Rule 291)

- Define your Emission Unit and
- Define your activity then
- Confirm Rule 278

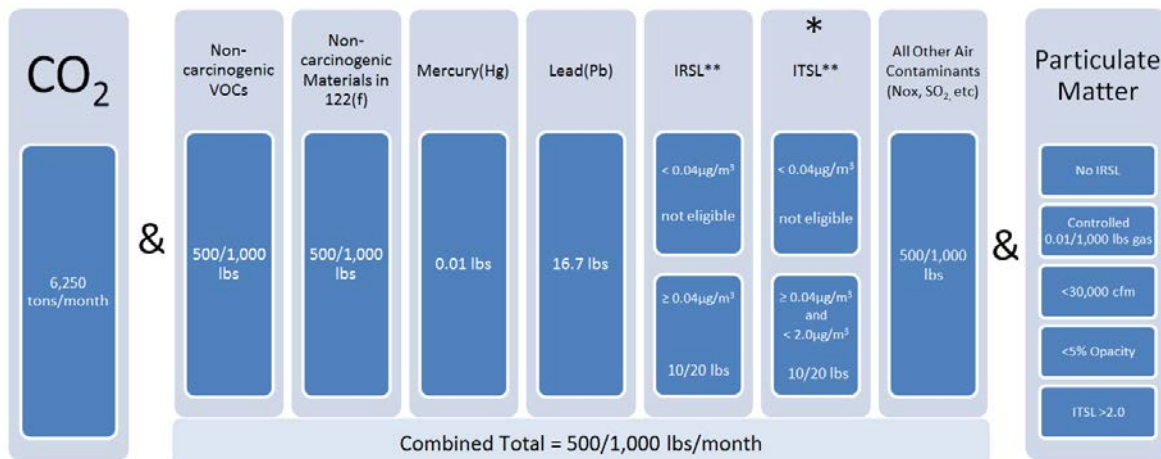
Controlled vs. Uncontrolled

- Controlled
 - 500 lbs/month and 10 lbs/month for certain TACs
 - Uncontrolled
 - 1,000 lbs/month and 20 lbs/month for certain TACs
 - Must use controlled/uncontrolled status for the entire assessment*
- * with the exception of limited noncarcinogenic particulate

VOC's and Rule 122(f)

- ...“noncarcinogenic volatile organic compounds or noncarcinogenic materials that are listed in R336.122(f)”...
- 336.122(f) "Volatile organic compound" means any compound of carbon or mixture of compounds of carbon that participates in photochemical reactions, excluding the following materials, all of which have been determined by the United States Environmental Protection Agency to have negligible photochemical reactivity:
 - (i) Carbon monoxide.
 - (ii) Carbon dioxide.
 - (iii)

Rule 290 “Bins”



* Evaluate noncarcinogenic VOCs and noncarcinogenic materials in 122(f) before this bin

** If multiple screening levels, assess in all applicable bins (...but don't double count)

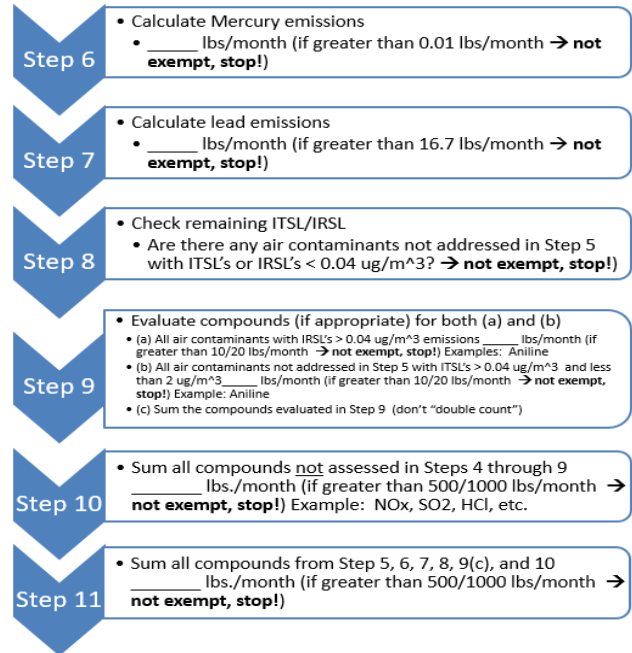
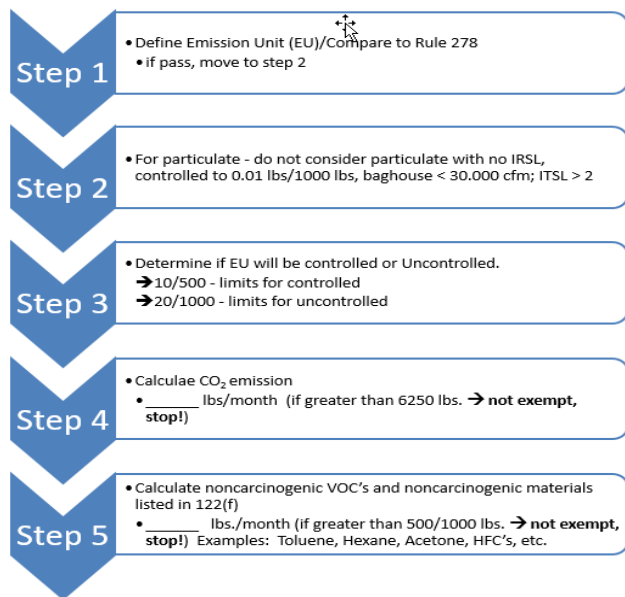
Particulate - Rule 290(2)(a)(iii)

- You can emit previously discussed pollutants in (i) and (ii) AND the particulate allowed by this portion of R290
- Requirements...
 - Particulate without IRSL
 - Control - 0.01lbs of particulate/1,000 lbs exhaust gas
 - ≤ 30,000 acfm
 - Visible emissions must ≤ 5% opacity
 - ITSL must be > 2 ug/m³

Rule 290 Flowchart

Option 1 - Rule 290 – Step by Step

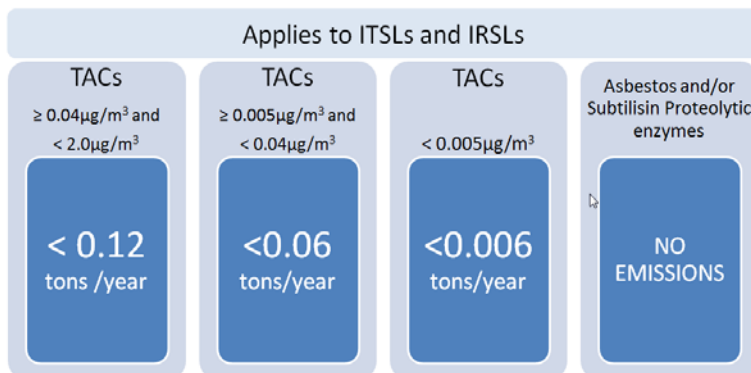
Looking at Rule 290 in a step by step manner is sometimes helpful to determine whether this Rule 201 permit exemption is appropriate for your process.



Rule 291 Overview

- New(ish) Exemption
- 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 ug/m³

Toxics Test



Rule 291 – Table 23

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

- Total TACs not listed in Table 23 with any screening level
 - Not a VOC in Rule 336.1122(f)
- Total air contaminants not listed in Table 23 that are non-carcinogenic and do not have a screening level
 - Not a TAC in Rule 336.1120(f)

Final thoughts and Planned activities

- Talk to your inspector; working on consistency tools
- More “Meaningful change” guidance?
- New R290 Guidance from PAO; internal resources
- Applicability Determinations? FAQs? Rule 291 “helpers”?
- Point outward?

Example: My new process - (A high unlikely case study)

- I’ve defined the Emission Unit and Project
- I looked at Rule 278
- I use a control for part of it
- My emissions
 - Particulate, toluene, hexane, acetone, aniline, HCL, NOx

Example: My other new process - (A 2nd preposterous case study)

- Define Emission Unit and Project
- Rule 278?
- Calculate PTE
- Emissions:
 - Toluene, 2 tons
 - Methylene chloride, 2 tons
 - Methane, 1 ton