

Can I use an exemption?

Understanding Rule 278

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Agenda

- Overview of exemption process
- What is R 278?
- Requirements of R 278
- Determine your exemption category
- Example
- Conclusion

Overview of Exemption Process

1. Review the initial requirements of an exemption under R 278
2. If you meet the R 278 criteria, look at the individual exemptions to find your category R 280-R 291
3. Review the specific category and determine if your process meets the requirements
4. Maintain records, if any, as required by your exemption.
5. If your process changes it may no longer be exempt, any time you have changes ensure that you are reviewing those changes to ensure that you still meet the exemption criteria

What is R 278?

R 278 exclusion from exemption

- Any activity subject to PSD (R 278(1)(a))
- Any activity that results in increase of actual emissions greater than in R 119 (R 278(1)(b))
- New or reconstruction of Major Source HAPs (R 278(2))
- Construction or Modification if NESHAP applies (R 278(3))
- Only applies for requiring permit, must be compliant with other applicable requirements (R 278(4))

R 278a Scope of exemptions

- Description of the exempt process (R 278(1)(a))
- Cite the specific exemption
- An analysis of why R 278 does not apply (R 278(1)(b))
- Must provide this within 30-days of request. (R 278(2))

R 278 (1)

- (1) The exemptions specified in R 336.1280 to R 336.1291 do not apply to either of the following:
- (a) Any activity that is subject to prevention of significant deterioration of air quality regulations or new source review for major sources in nonattainment areas regulations.
 - (b) Any activity that results in an increase in actual emissions greater than the significance levels defined in R 336.1119. For the purpose of this rule, "activity" means the concurrent and related installation, construction, reconstruction, relocation, or modification of any process or process equipment

PSD Activities



Rule 119 significance levels

Significance Levels (From Rule 119)

Air Contaminant	Emission Rate
Carbon monoxide	100 TPY
Nitrogen oxides	40 TPY
Sulfur dioxide	40 TPY
Particulate matter	25 TPY
PM-10	15 TPY
PM-2.5	10 TPY
Volatile organic compounds	40 TPY
Lead	0.6 TPY
Fluorides	3 TPY
Sulfuric acid mist	7 TPY
Hydrogen Sulfide (H ₂ S)	10 TPY
Total reduced sulfur compounds (including H ₂ S)	10 TPY

Rule 119 significance levels

Reduced sulfur compounds (including H ₂ S)	10 TPY
Municipal waste combustor organics, measured as total tetra- through octachlorinated dibenzo-p-dioxins and dibenzofurans	3.2x10 ⁻⁶ Mg/year or 3.2x10 ⁻⁶ TPY
Municipal waste combustor metals (as PM)	14 Mg/year or 15 TPY
Municipal waste combustor acid gases (measured as SO ₂ and HCL)	36 Mg/year or 40 TPY
Municipal solid waste landfill emissions (measured as nonmethane organic compounds)	45 Mg/year or 50 TPY

R 278 (2)

(2) The exemptions specified in R 336.1280 to R 336.1291 do not apply to the construction of a new major source of hazardous air pollutants (HAPs) or reconstruction of a major source of hazardous air pollutants, as defined in 40 CFR §63.2 and subject to §63.5(b)(3), national emission standards for hazardous air pollutants, adopted by reference in R 336.1902.

R 278 (3)

(3) The exemptions specified in R 336.1280 to R 336.1291 do not apply to a construction or modification as defined in and subject to 40 CFR part 61, national emission standards for hazardous air pollutants, adopted by reference in R 336.1902.

R 278 (4)

(4) The exemptions in R 336.1280 to R 336.1291 apply to the requirement to obtain a permit to install only and do not exempt any source from complying with any other applicable requirement or existing permit limitation.

R 278a (1)

- (1) To be eligible for a specific exemption listed in R 336.1280 to R 336.1291, any owner or operator of an exempt process or exempt process equipment must be able to provide information demonstrating the applicability of the exemption. The demonstration may include the following information:
- (a) A description of the exempt process or process equipment, including the date of installation.
 - (b) The specific exemption being used by the process or process equipment.
 - (c) An analysis demonstrating that R 336.1278 does not apply to the process or process equipment.

R 278a (2)

(2) The demonstration required by this rule shall be provided within 30 days of a written request from the department. Any other records required within a specific exemption shall be provided within timeframes established within that specific exemption.

Exemption categories

- R 281 (R 336.1281) cleaning, washing, and drying equipment
- R 282 (R 336.1282) furnaces, ovens, and heaters
- R 283 (R 336.1283) testing and inspection equipment
- R 284 (R 336.1284) containers
- R 285 (R 336.1285) miscellaneous
- R 286 (R 336.1286) plastic processing equipment
- R 287 (R 336.1287) surface coating equipment
- R 288 (R 336.1288) oil and gas processing equipment
- R 289 (R 336.1289) asphalt and concrete production equipment
- R 290 (R 336.1290) emission units with limited emissions
- R 291 (R 336.1291) emission units with “de minimum” emissions

Example

Bowman Inc is an existing business with a PTI.

Bowman Inc is going to add the following equipment:

4 new office heaters at 10,000 BTU/hr each

R 278 Review

Any activity subject to PSD (R 278(1)(a))

The process is not subject to PSD review.

Any activity that results in increase of actual emissions R 119 (R 278(1)(b))
the emissions increase does not meet R 119 thresholds.

New or reconstruction of Major Source HAPs (R 278(2))

Bowman inc. is not a major source of HAPS

Construction or Modification if NESHAP applies (R 278(3))

The process is not covered under Part 61.

Only applies for requiring permit, must be compliant with other applicable requirements (R 278(4))

Source is compliant with all other applicable requirements

Specific exemption review

R 336.1282 Permit to install exemptions; furnaces, ovens, and heaters.
Rule 282.

(1) This rule does not apply if prohibited by R 336.1278 and unless the requirements of R 336.1278a have been met.

(2) The requirement of R 336.1201(1) to obtain a permit to install does not apply to any of the following:

(a) Any of the following processes or process equipment which are electrically heated or which fire sweet gas fuel or no. 1 or no. 2 fuel oil at a maximum total heat input rate of not more than 10,000,000 Btu per hour:

(i) Furnaces for heat treating or forging glass or metals, the use of that does not involve ammonia, molten materials, oil-coated parts, or oil quenching.

(ii) Porcelain enameling furnaces or porcelain enameling drying ovens.

(iii) Kilns for firing ceramic ware.

(iv) Crucible furnaces, pot furnaces, or induction melting and holding furnaces that have a capacity of 1,000 pounds or less each, in which sweating or distilling is not conducted and in which fluxing is not conducted utilizing free chlorine, chloride or fluoride derivatives, or ammonium compounds.

Specific exemption review

(b) Fuel-burning equipment which is used for space heating, service water heating, electric power generation, oil and gas production or processing, or indirect heating and which burns only the following fuels:

(i) Sweet natural gas, synthetic natural gas, liquefied petroleum gas, or a combination thereof and the equipment has a rated heat input capacity of not more than 50,000,000 Btu per hour.

(ii) No. 1 and no. 2 fuel oils, distillate oil, the gaseous fuels specified in paragraph (i) of this subdivision, or a combination thereof that contains not more than 0.40% sulfur by weight and the equipment has a rated heat input capacity of not more than 20,000,000 Btu per hour.

(iii) Wood, wood residue, or wood waste that is not painted or treated with wood preservatives, which does not contain more than 25% plywood, chipboard, particleboard, and other types of manufactured wood boards, that is not contaminated with other waste materials, and the equipment has a rated heat input capacity of not more than 6,000,000 Btu per hour.

(iv) Waste oil or used oil fuels that are generated on the geographical site and the equipment has a rated heat input capacity of not more than 500,000 Btu per hour.

What Bowman Inc. keeps on record

Description of the exempt process (R 278(1)(a))

four 10,000 BTU/hr space heaters that are fired by natural gas were added to keep the working spaces of the company comfortable during cold weather operations.

Cite the specific exemption

Rule 282(2)(b)(i) is the applicable exemption. The heaters are used for space heating, burning natural gas, and have a heat input of less than 50,000,000 BTU/hr.

An analysis of why R 278 does not apply (R 278(1)(b))

The cumulative emissions for my four heaters does not meet the significance level.

Must provide this within 30-days of request. (R 278a(2)) –

Ready to send when requested.

Conclusion

- We discussed how to determine if there is an exemption
- We discussed the requirements of R 278
- We discussed the exemption categories
- We put it all together with an example

Questions?

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