

Draft 11/10/2016

Draft Changes to Chapters 173-400 WAC and 173-401 WAC

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**RCW 70.94.431(8) Civil penalties --- Excusable excess emissions.**

By January 1, 1992, the department shall develop rules for excusing excess emissions from enforcement action if such excess emissions are unavoidable. The rules shall specify the criteria and procedures for the department and local air authorities to determine whether a period of excess emissions is excusable in accordance with the state implementation plan.

**WAC 173-400-040 General standards for maximum emissions.**

- (1) General requirements.
  - (a) All sources and emissions units are required to meet the emission standards of this chapter. Where an emission standard listed in another chapter is applicable to a specific emissions unit, such standard takes precedence over a general emission standard listed in this chapter.
  - (b) When two or more emissions units are connected to a common stack and the operator elects not to provide the means or facilities to sample emissions from the individual emissions units, and the relative contributions of the individual emissions units to the common discharge are not readily distinguishable, then the emissions of the common stack must meet the most restrictive standard of any of the connected emissions units.
  - (c) All emissions units are required to use reasonably available control technology (RACT) which may be determined for some sources or source categories to be more stringent than the applicable emission limitations of any chapter of Title 173 WAC. Where current controls are determined to be less than RACT, the permitting authority shall, as provided in RCW 70.94.154, define RACT for each source or source category and issue a rule or regulatory order requiring the installation of RACT.
- (2) **Visible emissions.** No person shall cause or allow the emission for more than three minutes, in any one hour, of an air contaminant from any emissions unit which at the emission point, or within a reasonable distance of the emission point, exceeds twenty percent opacity except:
  - ~~(a) When the emissions occur due to soot blowing/grate cleaning and the operator can demonstrate that the emissions will not exceed twenty percent opacity for more than fifteen minutes in any eight consecutive hours. The intent of this provision is to allow the soot blowing and grate cleaning necessary to the operation of boiler facilities. This practice, except for testing and trouble shooting, is to be scheduled for the same approximate times each day and the permitting authority must be advised of the schedule.~~
  - ~~(b)~~(a) When the owner or operator of a source supplies valid data to show that the presence of uncombined water is the only reason for the opacity to exceed twenty percent.

~~(e)~~(b) When two or more emission units are connected to a common stack, the permitting authority may allow or require the use of an alternate time period if it is more representative of normal operations.

~~(d)~~(c) When an alternate opacity limit has been established per RCW 70.94.331(2)(c).

~~(d)~~ When emissions occur due to start-up of a hog fuel or wood fired boiler, visible emissions may exceed 20 percent opacity but not exceed 40 percent opacity for more than 3 minutes in a one hour period. Visible emissions may not exceed twenty percent for more than 3 minutes in an hour when the earlier of:

**Commented [ARN1]:** Lynnette Haller's suggested wording. Clean and concise.

(i) The dry particulate control has met its minimum operating temperature, at which time the control is to be operated; or

(ii) Four hours has elapsed since the beginning of start-up.

**Commented [ARN2]:** ORCAA notes that they have a unit that takes 8 – 16 hours to startup.

(e) When the emissions occur due to soot blowing or grate cleaning of a hog fuel or wood fired boiler, visible emissions may exceed 20 percent opacity but not exceed 40 percent opacity on a 6 minute average, for more than fifteen minutes in any eight consecutive hours. To use this exception, the soot blowing and/or grate cleaning must be scheduled for the same approximate time(s) each day and the permitting authority must be advised of the schedule.

Both Area and Major source MACT rules require compliance no later than 4 hours after useful thermal energy is supplied to the facility.

This standard is equal or more stringent than the Boiler MACT work practice which ends 4 hours after thermal energy is delivered to the process.

We could replicate the Boiler MACT criteria of to use clean fuel for startup and the same definition of when it ends though. POLICY

(f) Visible emissions that occur during curing of furnace refractory after maintenance repair or replacement in an existing furnace or boiler may exceed 20 percent opacity, on a 6 minute average, but not exceed 40 percent opacity, on a 6 minute average, provided the following requirements are met:

**Commented [ARN3]:** This sets up a maximum opacity standard that applies for soot blowing operations.

As noted in comments from the local agencies, this seems to be a reasonable maximum opacity for soot blowing and grate cleaning in the units they regulate.

(i) The total duration of refractory curing does not exceed 36 hours, unless provided for in a NOC approval or regulatory order issued under WAC 173-400-082; and

**Commented [ARN4]:** Request to relate to a test method. EPA RM9 was preferred approach on phone call. Alternate would be 3 minutes/hour.

(ii) The owner/operator has supplied the permitting authority a copy of the manufacturer's instructions on curing refractory in the furnace/boiler; and

**Commented [ARN5]:** I think I have translated the suggestions from SWCAA and ORCAA on refractory curing. The common small units are from Wellons, and this is the company's instructions supplied by SWCAA.

(iii) The manufacturer's instructions on curing refractory are followed, including all instructions on temperature increase rates and holding temperatures and time; and

(iv) The emission controls are engaged as soon as possible during the curing process; and

(v) The owner/operator notifies the permitting authority at least one working day prior to the start of the refractory curing process.

~~(e)~~(g) Exemptions from twenty percent opacity standard.

- (i) Visible emissions reader certification testing. Visible emissions from the "smoke generator" used for testing and certification of visible emissions readers per the requirements of 40 C.F.R. Part 60, Appendix A, Reference Method 9 and ecology methods 9A and 9B shall be exempt from compliance with the twenty percent opacity limitation while being used for certifying visible emission readers.
- (ii) Military training exercises. Visible emissions resulting from military obscurant training exercises are exempt from compliance with the twenty percent opacity limitation provided the following criteria are met:
  - (A) No visible emissions shall cross the boundary of the military training site/reservation.
  - (B) The operation shall have in place methods, which have been reviewed and approved by the permitting authority, to detect changes in weather that would cause the obscurant to cross the site boundary either during the course of the exercise or prior to the start of the exercise. The approved methods shall include provisions that result in cancellation of the training exercise, cease the use of obscurants during the exercise until weather conditions would allow such training to occur without causing obscurant to leave the site boundary of the military site/reservation.
- (iii) Firefighter training. Visible emissions from fixed and mobile firefighter training facilities while being used to train firefighters and while complying with the requirements of chapter 173-425 WAC.
- (iv) Established as an alternate emission limit under WAC 173-400-082.

- (3) **Fallout.** No person shall cause or allow the emission of particulate matter from any source to be deposited beyond the property under direct control of the owner or operator of the source in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material is deposited.
- (4) **Fugitive emissions.** The owner or operator of any emissions unit engaging in materials handling, construction, demolition or other operation which is a source of fugitive emission:
  - (a) If located in an attainment area and not impacting any nonattainment area, shall take reasonable precautions to prevent the release of air contaminants from the operation.
  - (b) If the emissions unit has been identified as a significant contributor to the nonattainment status of a designated nonattainment area, the owner or operator

shall be required to use reasonable and available control methods, which shall include any necessary changes in technology, process, or other control strategies to control emissions of the air contaminants for which nonattainment has been designated.

- (5) **Odors.** Any person who shall cause or allow the generation of any odor from any source or activity which may unreasonably interfere with any other property owner's use and enjoyment of ~~his~~their property must use recognized good practice and procedures to reduce these odors to a reasonable minimum.
- (6) **Emissions detrimental to persons or property.** No person shall cause or allow the emission of any air contaminant from any source if it is detrimental to the health, safety, or welfare of any person, or causes damage to property or business.
- (7) **Sulfur dioxide.** No person shall cause or allow the emission of a gas containing sulfur dioxide from any emissions unit in excess of one thousand ppm of sulfur dioxide on a dry basis, corrected to seven percent oxygen for combustion sources, and based on the average of any period of sixty consecutive minutes, except:

~~When the owner or operator of an emissions unit supplies emission data and can demonstrate to the permitting authority that there is no feasible method of reducing the concentration to less than one thousand ppm (on a dry basis, corrected to seven percent oxygen for combustion sources) and that the state and federal ambient air quality standards for sulfur dioxide will not be exceeded. In such cases, the permitting authority may require specific ambient air monitoring stations be established, operated, and maintained by the owner or operator at mutually approved locations. All sampling results will be made available upon request and a monthly summary will be submitted to the permitting authority.~~

- (a) During shutdown of a sulfur recovery unit described in 40 CFR 63.1579, the owner or operator shall:
  - (i) Follow the facility's written startup, shutdown, or maintenance procedures; and
  - ~~(ii)~~ Limit emissions to less than 100 pounds/hour from the event instead of the numeric limit prescribed by this subsection.
- (b) The permitting authority may, by regulatory order, approve for a specific emission unit(s) an alternative to the sulfur dioxide emission limit imposed by this subsection (WAC 173-400-040(7)).
  - (i) An order issued under this subsection which approves an alternative limit in lieu of the 1 hour average of 1000 ppm<sub>dv</sub>, at 7% oxygen sulfur dioxide standard, shall not take effect until the alternative sulfur dioxide limit is approved by EPA as an amendment to the SIP.

**Commented [ARN6]:** Proposing to delete this paragraph entirely. EPA has refused to accept it into the SIP, and without its inclusion in the SIP is of no practical value to a source.

**Commented [ARN7]:** NWCAA still questioning if this is needed. One comment came up on whether flares are included in this analysis, PSCAA noted that US Oil has a challenge with startup of its SRU. I noted that WSPA/BP have focused on shutdown, especially at BP.

**Commented [ARN8]:** NWCAA provided data indicate that most events are below 100 lb/event.

WSPA modeled the BP facility assuming 150 and 200 lb/hr for every hour of SRU shutdown and demonstrated that the ambient SO2 standards would not be exceeded as a result of unit shutdown emissions. Emissions during SRU start-up are not the problem with these units, according to BP sources, just unit shutdowns.

**Commented [ARN9]:** Lynn Tober suggests that 100 lb/hr would be reasonable rather than 100 lb total.

**Commented [AM10]:** The overarching principle we recommend is that any new exemptions not exempt activities for which an agency issued enforcement action in the past.

We evaluated (and provided) 5 years of data for SRU startups, shutdowns, and malfunctions. The data shows that there are certain low flow situations during routine maintenance periods where the 1,000 ppm SO2 limit is exceeded, but total mass emissions are low. These situations didn't involve upsets or malfunctions, and we used/allowed the SSM exemption. In general, mass emissions of SO2 during the period when emissions exceeded the SO2 limit were less than 100 pounds for the entire event. A mass emission limit makes sense in this case. 100 pounds per event (or a corresponding lb/hr limit) may be a good option. We suggest linking the exemption with the statement that the facility must follow their written startup/shutdown procedures and flare management plan. This will help to exclude instances where emissions are caused by human error or other preventable situations (for which we have cited facilities in the past).

We suggest the proposed language in lieu of earlier language which required that facilities follow Subpart UUU instead of complying with the numeric SO2 limit. The requirement to follow UUU doesn't address NAAQS compliance and has the potential to allow for exceedances of the NAAQS. In addition, some activities for which NWCAA issued NOV's in the past could be exempted.

**Commented [ARN11]:** This is not optional since it relates specifically to the 1000 ppm SO2 standard which is the SIP limit.

According to EPA, no state issued regulatory order may allow an exceedance of an emission standard or limitation contained in a SIP. The rationale is that such an order is illegal under the federal act (there are no variance provisions in federal law).

While the local authorities and sources would like the flexibility to establish alternative operating scenarios with appropriate alternative emission limitations and make changes to those scenarios as needed, EPA tells us this level of flexibility is not available.

**Commented [ARN12]:** An exception to an existing BACT limit for startup or shutdown can be handled as a permit modification rather than this process if the permitting authority so chooses. This process would only need to be followed for a new limit/work practice that could/would exceed the 1000 ppm limit.

The proposal at 082 could be utilized for any other change that does not result in the SIP limit being exceeded???

- (ii) The regulatory order must specify the emission unit(s) at the source subject to the alternative emission limitation and the criteria defining when the alternative emission limitation is applicable.
- (iii) An alternative sulfur dioxide limitation approved under this subsection may be a numerical limitation, technology requirement or a work practice standard.
- (iv) The permitting authority must follow the mandatory public comment period requirements specified in WAC 173-400-171.
- (v) An order issued under this subsection shall include:
  - (A) Requirements to minimize the frequency and duration of the approved alternative operating scenario;
  - (B) A requirement that the emission unit(s) involved are operated in a manner consistent with good operating practices for minimizing emissions;
  - (C) Monitoring, recordkeeping and reporting requirements sufficient to ensure that the source complies with any condition established in the order.
- (vi) The permitting authority may assess and collect fees at the rate prescribed by the permitting authority's fee schedule.
- (vii) The owner or operator of a source requesting approval of an alternative sulfur dioxide limitation applicable to specific operating scenario(s) must demonstrate **all of the following** to the satisfaction of the permitting authority:
  - (A) The NAAQS and Washington ambient air quality standards for oxides of sulfur contained in **chapter** 173-476 WAC will not be exceeded at any time, based on worst-case meteorological conditions and emission rates. The ambient air quality standards analysis must include the effects of background sulfur dioxide concentrations and sulfur dioxide emissions from adjacent facilities.
  - (B) Demonstrate that all practicable steps will be made to minimize the quantity and impact of emissions during the alternative operating scenario.

**Commented [GE(13)]:** Clarifies that public notice requirements apply.

**Commented [ARN14]:** EPA specifies this as contemporaneous, signed records plus other relevant evidence, i.e., CEM data. ([80 FR 33840](#), page 33980, middle column item (7)). Should this have the added criteria in the preamble included?

(C) The alternative limitation would not exceed the levels allowed by an applicable sulfur dioxide emission standard in 40 C.F.R. Parts 60, 61, 62, 63, or 72.

(D) It is not technologically feasible to design and implement a control system or operating scenario that would avoid the need for an alternative emission standard.

(E) The operating characteristics of the emission unit(s) for which an alternative emission standard is being requested that prevent meeting the sulfur dioxide standard in this subsection during the specific operating scenario(s).

(8) **Concealment and masking.** No person shall cause or allow the installation or use of any means which conceals or masks an emission of an air contaminant which would otherwise violate any provisions of this chapter.

(9) **Fugitive dust.**

(a) The owner or operator of a source or activity that generates fugitive dust must take reasonable precautions to prevent that fugitive dust from becoming airborne and must maintain and operate the source to minimize emissions.

(b) The owner or operator of any existing source or activity that generates fugitive dust that has been identified as a significant contributor to a PM-10 or PM-2.5 nonattainment area is required to use reasonably available control technology to control emissions. Significance will be determined by the criteria found in WAC 173-400-113(4).

(10) Requirement to minimize emissions. Sources are required to operate installed control equipment, utilize good combustion control on combustion units, and utilize good operational practices to minimize emissions at all times, including during startup, shutdown, and malfunction events.

(11) Operation of installed air pollution control equipment. All air pollution control equipment installed on an emission unit or source must be operated at all times, including startup, shutdown, and periods of malfunction, recognizing limitations imposed by the need to protect of personnel and equipment from fire and to meet personnel and fire safety requirements. All installed air pollution control equipment will start operation before or at the same time as the emissions producing unit or as follows:

(a) Baghouses and dry electrostatic precipitators on a combustion unit shall be operated as soon as the gas temperature in the control is at dew point for the flue gas.

**Commented [ARN15]:** The purpose of this list of fed rules is to assure we do not design an alternative standard that would allow an applicable federal standard to be exceeded.

As NWCAA has noted, we cannot allow these standards to be exceeded in permitting. These are the maximum allowable emissions in most cases for sources/units regulated under these EPA rules.

**Commented [ARN16]:** Suggestion based on a review of SSM regulations in other states.

**Commented [ARN17]:** Suggestion based on a review of SSM regulations in other states.

- (b) Selective catalytic reduction systems will begin operation no later than the time the catalyst bed reaches minimum operating temperature (300 – 400 F for low temperature catalysts, 850F for high temperature catalysts).
- (c) Selective non-catalytic reduction shall begin operation by the time the gas at the ammonia injection point is above 1500F.
- (d) Dry sorbent injection systems for acid gas control shall begin operation when the flue gas is above 300F.

**WAC 173-400-070 Emission standards for certain source categories.**

Ecology finds that the reasonable regulation of sources within certain categories requires separate standards applicable to such categories. The standards set forth in this section shall be the maximum allowable standards for emissions units within the categories listed. Except as specifically provided in this section, such emissions units shall not be required to meet the provisions of WAC 173-400-040, 173-400-050 and 173-400-060.

- (1) **Wigwam and silo burners.** As of January 1, 2020, it is illegal to use a wigwam or silo burner in Washington. A wigwam or silo burner may operate until midnight December 31, 2019 provided it complies with the following:
  - (a) All wigwam and silo burners designed to dispose of wood waste must meet all provisions of WAC 173-400-040 (3), (4), (5), (6), (7), (8), and WAC 173-400-050(4) or ~~173-400-115 (40 C.F.R. Part 60, subpart DDDD)~~ 40 C.F.R. Part 62, Subpart III as applicable.
  - (b) All wigwam and silo burners must use RACT. All emissions units shall be operated and maintained to minimize emissions. These requirements may include a controlled tangential vent overfire air system, an adequate underfire system, elimination of all unnecessary openings, a controlled feed and other modifications determined necessary by ecology or the permitting authority.
  - (c) It shall be unlawful to install or increase the existing use of any burner that does not meet all requirements for new sources including those requirements specified in WAC 173-400-040 and 173-400-050, except operating hours.
  - (d) The permit authority may establish additional requirements for wigwam and silo burners. These requirements may include but shall not be limited to:
    - (i) A requirement to meet all provisions of WAC 173-400-040 and 173-400-050. Wigwam and silo burners will be considered to be in compliance if they meet the requirements contained in WAC 173-400-040(2), visible emissions. An exception is made for a startup period not to exceed thirty minutes in any eight consecutive hours.

**Commented [ARN18]:** CRO identified Zosel Lumber as owning a Wigwam that is permitted to operate. This provides an opportunity for the company to develop an alternative to using their wigwam burner. Procedurally we will need to get the name and contact for the owner and make direct contact with them about this proposal. Probably need to inform the legislators for that area also.

The unit probably shouldn't be operated anyway since it probably can't demonstrate compliance with the dioxin limit in the emission guideline.

**Commented [ARN19]:** Should there be a process to petition for a longer compliance schedule? such as for a low/no profit operation or one that does not have ready access to an alternative use for the waste now being burned in the wigwam or silo burner?

**Commented [GE(20):** Current section 115 does not adopt DDDD. EPA adopted a part 62 rule for this guideline in 2003.

- (ii) A requirement to apply BACT.
- (iii) A requirement to reduce or eliminate emissions if ecology establishes that such emissions unreasonably interfere with the use and enjoyment of the property of others or are a cause of violation of ambient air standards.

(2) **Hog fuel and wood fired boilers.** ~~Hog fuel and wood-fired boilers shall:~~

(a) ~~Hog fuel boilers shall m~~Meet all provisions of WAC 173-400-040 and 173-400-050(1); ~~except that emissions may exceed twenty percent opacity for up to fifteen consecutive minutes once in any eight hours. The intent of this provision is to allow soot blowing and grate cleaning necessary to the operation of these units. This practice is to be scheduled for the same specific times each day and the permitting authority shall be notified of the schedule or any changes.~~

~~(b) All hog fuel boilers shall utilize RACT and shall be operated and maintained to minimize emissions.~~

~~(b) During start-up of a hog fuel or wood fired boiler with an dry electrostatic precipitator particulate emission control device:~~

~~(i) Visible emissions must not exceed an opacity limit of forty percent for more than 3 minutes in a one hour period, until the earlier of:~~

~~(A) The electrostatic precipitator temperature is above the dew point (minimum operating temperature) allowing it to be energized; or~~

~~(B) Four hours has elapsed since the beginning of start-up; and~~

~~(ii) Not exceed an opacity limit of 40 percent during soot blowing. Soot blowing is confined to one fifteen minute period during an eight-hour period.~~

~~(iii) This practice must be scheduled for the same specific times each day and the permitting authority shall be notified of the schedule or any changes.~~

(3) **Orchard heating.**

- (a) Burning of rubber materials, asphaltic products, crankcase oil or petroleum wastes, plastic, or garbage is prohibited.
- (b) It is unlawful to burn any material or operate any orchard-heating device that causes a visible emission exceeding twenty percent opacity for more than 3 minutes in a one hour period; ~~except during the first thirty minutes after such device or material is ignited.~~
- (c) Work practice limitation during start-up placeholder.

(4) **Grain elevators.**

**Commented [ARN21]:** We could delete all of this section since it does not add any additional requirements or alternate emission standards.

Retaining this paragraph simply keeps consistency with history and likely with conditions in some AOPs.

**Commented [ARN22]:** We are not proposing to provide an alternative particulate emission standard for these units. They all have to meet either the major or areas source boiler MACT requirements.

This subsection could be eliminated since it addresses opacity standard and is already included in that section.

I propose to delete all of (2) since it does not identify any new or additional requirements. Also propose this subsection be marked (Reserved) so as to not muck up numbering in rest of section.

**Commented [ARN23]:** We should use only one version of this startup and soot blowing criteria. It doesn't matter to me whether this gets copied to 040 or the 040 criteria get moved here.

If we decide to delete this subsection, the decision is made.

**Commented [ARN24]:** Does YRCAA have anything that can help us here? Or know of anything from the ag community to refer to?

Any grain elevator which is primarily classified as a materials handling operation shall meet all the provisions of WAC 173-400-040 (2), (3), (4), and (5).

~~(5)~~ Catalytic cracking units.

~~All existing catalytic cracking units shall meet all provisions of WAC 173-400-040 (2), 040 (2), (3), (4), (5), (6), and (7) and:~~

~~(-) No person shall cause or allow the emission for more than three minutes, in any one hour, of an air contaminant from any catalytic cracking unit which at the emission point, or within a reasonable distance of the emission point, exceeds forty percent opacity.~~

~~(-) No person shall cause or allow the emission of particulate material in excess of 0.46 grams per dry cubic meter at standard conditions (0.20 grains/dscf) of exhaust gas.~~

~~(a) (b) All new catalytic cracking units shall meet all provisions of WAC 173-400-115.~~

**Commented [ARN25]:** Backsliding demonstration required for SIP Submittal.

**Commented [ARN26]:** Propose to delete because NSPS and MACT more stringent and all CCUs are subject to one or both standards. Also not a requirement of part 51.

~~(6)~~(5) Other wood waste burners.

(a) Wood waste burners not specifically provided for in this section shall meet all applicable provisions of WAC 173-400-040. In addition, wood waste burners subject to WAC 173-400-050(4) or ~~173-400-115 (40 C.F.R. 60 subpart DDDD)~~ 40 CFR Part 62, Subpart III must meet all applicable provisions of those sections.

(b) Such wood waste burners shall utilize RACT and shall be operated and maintained to minimize emissions.

**Commented [GE(27)]:** Federal implementation plan for the emission guideline in subpart DDDD.

~~(6)~~ Sulfuric acid plants.

~~No person shall cause to be discharged into the atmosphere from a sulfuric acid plant, any gases which contain acid mist, expressed as H<sub>2</sub>SO<sub>4</sub>, in excess of 0.15 pounds per ton of acid produced. Sulfuric acid production shall be expressed as one hundred percent H<sub>2</sub>SO<sub>4</sub>.~~

**Commented [GE(28)]:** Recommend deleting because 40 CFR 60.83(a)(1) requires this standard. (NSPS for sulfuric acid plants - Subpart H)

~~(7)~~(6) Municipal solid waste landfills constructed, reconstructed, or modified before May 30, 1991

**Commented [ARN29]:** Not a requirement in Part 51 either.

**Commented [ARN30]:** EPA revised the associated emission guideline. Translating that guideline into rule language is beyond the scope of this focused rulemaking. Ecology will address the guideline during a future rule update.

**WAC 173-400-081 Emission limits during startup and shutdown.**

(1) In promulgating technology-based emission standards and establishing emission limits when making control technology determinations (e.g., BACT, RACT, LAER, BART) the permitting ~~authorities~~ authority will consider any physical constraints on the ability of a source to comply with the applicable standard during startup or shutdown.

**Commented [ARN31]:** This would be standards issued by rule under RCW 70.94.331 or 154.

**Commented [ARN32]:** These are NOC specific decisions and emission limitations.

- (2) Where-When the permitting authority determines, as part of its control technology determination, that the source or source category, when operated and maintained in accordance with good air pollution control practice, is not capable of achieving continuous compliance with an emission limitation or standard during startup or shutdown, the permitting authority must include in the standard or regulatory order appropriate emission limitations, operating parameters, or other criteria to regulate the performance of the source during startup or shutdown conditions.
- (3) In modeling the emissions of a source for purposes of demonstrating attainment or maintenance of national ambient air quality standards, the permitting authorities shall take into account any incremental increase in allowable emissions under startup or shutdown conditions authorized by an emission limitation or other operating parameter adopted under this rule.
- (4) Any emission limitation or other parameter adopted under this rule which increases allowable emissions during startup or shutdown conditions over levels authorized in Washington's state implementation plan shall not take effect until approved by EPA as a SIP amendment.

**Commented [ARN33]:** Suggestion from Mark Goodin to clarify the intent of this subsection.  
 Any revisions we end up with result in EPA needing to review and approve this section again.

**(NEW) WAC 173-400-082 Establishing emissions limitations for startup and shutdown for previously permitted sources or stationary sources.**

- (1) For an emission unit(s), the permitting authority may approve an alternative emission limit applicable to an emission unit during startup or shutdown, or both, that will apply instead of one or more of the emission standards listed below. The applicable emission standards are:
  - (a) Opacity standard in WAC 173-400-040(2);
  - (b) Sulfur dioxide emission standard in WAC 173-400-040(7); and
  - (c) Particulate matter standards in WAC 173-400-050 and 060.
- (2) An alternative emission limitation approved under this provision may be a numerical limitation, technology requirement, or a work practice standard.
- (3) Regulatory order.
  - (a) The permitting authority must include the alternative emission limitation in a regulatory order.
  - (b) The regulatory order must specify the emission unit(s) at the source or stationary source subject to the alternative emission limitation and the criteria defining when the alternative emission limitation is applicable.

**Commented [ARN34]:** Those commenters who have expressed an opinion indicate inside 081 is the wrong place for this generic option. A new rule section seems to be the preferred approach.

In the future we will need to be able to explain that 081 is done during the NOC/NSR permitting process and 082 occurs after the permittee is in operation.

**Commented [ARN35]:** Existing units wanting alternative limits that apply from BACT/LAER permit requirements can utilize NOC revision process – 'Change of conditions' and 081 to establish an alternate BACT limit.

This process is only needed to exceed the SIP emission limits.

**Commented [ARN36]:** Now limited to the Ecology SIP pollutants.

Do any of the local air agencies have an additional NAAQS pollutant with emissions standards in the SIP?

(c) The permitting authority must follow the mandatory public comment period requirements specified in WAC 173-400-171.

**Commented [GE(37)]:** Clarifies that public notice requirements apply.

(d) An order issued under this subsection shall include:

(i) Requirements to minimize the frequency and duration of the approved alternative operating scenario;

(ii) A requirement that the emission unit(s) involved are operated in a manner consistent with good operating practices for minimizing emissions; and

(iii) Monitoring, recordkeeping and reporting requirements sufficient to ensure that the source complies with any condition established in the order.

(e) An order issued under this provision that increases permitted emissions over levels authorized in the Washington SIP shall not take effect until approved by EPA as a SIP amendment.

(4) The owner or operator of a source or stationary source requesting approval of an alternative emission limitation applicable to specific operating scenario(s) must demonstrate to the satisfaction of the permitting authority:

(a) The NAAQS and Washington ambient air quality standards in chapter 173-476 WAC will not be exceeded at any time, based on worst case meteorological conditions and emission rates. The ambient air quality standards analysis must include the effects of background concentrations and emissions from adjacent facilities.

(b) Demonstrate that all practicable steps will be made to minimize the quantity and impact of emissions during the alternative operating scenario. The demonstration must show:

(i) The alternative limitation would not exceed the levels allowed by an applicable emission standard in 40 C.F.R. Parts 60, 61, 62, 63, or 72.

(ii) It is not technologically feasible to design and implement a control system or operating scenario that would enable the emission unit, source, or stationary source to comply with the emission standard and avoid the need for an alternative emission standard.

(iii) The alternative emission limitation will be in place for the shortest practicable amount of time.

(iv) The alternative emission limitation proposed must:

**Commented [ARN38]:** As noted before, this list reiterates that we cannot have an alternative emission scenario/standard that would allow for an applicable federal requirement to be exceeded.

This could be removed from the rule text.

I am proposing to include it to remind future permit writers and the applicants/regulatees of this limitation.

- (A) Reflect best operational practices for the emission unit(s) involved; and
- (B) Minimize the extent, duration, and emissions resulting from the alternative operating scenario.
- (v) The operating characteristics of the emission unit(s) for which an alternative emission standard is being requested that prevent meeting the emission standard during the specific operating scenario(s).

(NEW) WAC 173-400-083 Malfunction abatement plan.

Commented [ARN39]: This is a suggestion based on the Georgia and North Carolina rules.

- (1) Owners and operators of sources and stationary sources must have and follow a malfunction abatement plan. The plan must be available for inspection by the permitting authority on request.
- (2) The malfunction abatement plan must address:
  - (a) A program of preventive maintenance including:
    - (i) Identification of individuals or positions responsible for inspection, maintenance and repair of air pollution control devices
    - (ii) Identification of individuals and positions responsible for inspection, maintenance and repair of emission units
    - (iii) A description or checklist of items or conditions that will be inspected and maintained
    - (iv) The frequency of the inspection, maintenance and repairs and
    - (v) Identification parts and listing of quantities of replacement parts that must be maintained in on-site inventory in order to maintain the equipment.
  - (b) Identification of:
    - (i) The process and operational variables that may be and are monitored to detect a malfunction
    - (ii) Normal operating ranges of these variables
    - (iii) A description of how the variables are monitored and readings recorded.

~~(a)(c)~~ Identification of the corrective actions that the owner or operator will take in response to a malfunction of the emitting equipment or the emission control equipment.

(3) The owner or operator must maintain logs demonstrating the malfunction abatement plan is being implemented. The logs are to be available for inspection by the permitting authority on request.

**WAC 173-400-107 Unavoidable excess emissions.**

This section is in effect until the effective date of EPA's incorporation of the entirety of WAC [173-400-108](#) and [173-400-109](#) into the Washington state implementation plan as replacement for this section. This section is not effective starting on that date.

**Commented [ARN40]:** Consensus is to keep this section in place without any adjustments and make all changes to section 109. Therefore, we propose no change.

**WAC 173-400-108 Excess emissions reporting.**

This section takes effect on the effective date of EPA's incorporation of the entirety of WAC [173-400-108](#) and [173-400-109](#) into the Washington ~~state implementation plan~~ SIP as replacement for WAC 173-400-107.

(1) Excess emissions must be reported to the permitting authority. The owner or operator of a source with:

(a) Excess emissions which represent a potential threat to human health or safety must notify the permitting authority as soon as possible, but in no case later than twelve hours after the excess emissions were discovered.

**Commented [ARN41]:** Commenters have challenged the reporting requirement, noting that any report in the first 12 or 24 hours after an excess emissions event will be incomplete and require additional information.

(b) Excess emissions occurring during emissions unit or emission control system upsets or malfunctions which the owner or operator of the source believes to be unavoidable, per the criteria under WAC 173-400-109, must ~~be reported to~~ notify the permitting authority as soon as possible, ~~but in no case later than twenty four hours~~ after the excess emissions were discovered.

Notifications are what are now provided, so the change is to clarify that the source must notify the authority of the event, and follow up with the analysis report per the routine schedule, so as to assure the report is complete the first time.

**Commented [ARN42]:** Do we need to specify how to notify? Or leave that up to each office?

(c) ~~Other e~~Excess emissions must ~~be reported~~ submit a report to the permitting authority:  
(i) Within thirty days after the end of the month during which the event occurred;  
(ii) As part of the routine emission monitoring reports; or  
(iii) As provided in WAC 173-401-615 for chapter [173-401](#) WAC sources.

**Commented [ARN43]:** NWCAA notes their rule requires and sources are subject to a 12 hour notification requirement.

Idaho requires a notice within 24 hours and Oregon requires it within the calendar day. Other state rules reviewed generally use a 12 or 24 hour period.

**Commented [ARN44]:** AS EPA noted, discovery might be after the event occurred and only found through emissions reporting.

(2) For those sources not required to report under WAC [173-401-615](#), the report must contain at least the following information:

**Commented [ARN45]:** [WAC 173-401-615\(3\)\(b\)](#) requires prompt reporting of deviations. Includes our proposed (1)(a) and (1)(c)(i).

(a) Date, time, duration of the episode;

Note, that section 109 requires submittal on a different schedule if the source wants the excess emissions to be deemed unavoidable and not subject to penalty.

- (b) Known causes;
  - (c) For exceedances of ~~nonopacity~~-emission limitations other than opacity, an estimate of the quantity of excess emissions;
  - (d) The corrective actions taken; and
  - (e) The preventive measures taken or planned to minimize the chance of recurrence.
- (3) For any excess emission event that the owner or operator claims to be unavoidable under WAC 173-400-109, the report must include the following information in addition to that required in subsection (2) of this section:
- (a) Properly signed, contemporaneous records documenting the owner or operator's actions in response to the excess emissions event;
  - (b) Information on whether installed emission monitoring and pollution control systems were operating at the time of the exceedance. If either or both systems were not operating, information on the cause and duration of the outage;
  - (c) All additional information required under WAC 173-400-109 (3), (4) or (5) supporting the claim that the excess emissions were unavoidable.

**WAC 173-400-109 Unavoidable excess emissions.**

This section takes effect on the effective date of EPA's incorporation of the entirety of WAC 173-400-108 and 173-400-109 into the Washington state implementation plan as replacement for WAC 173-400-107.

- (1) Excess emissions determined to be unavoidable under the procedures and criteria in this section are violations of the applicable statute, ~~regulation~~rule, permit, or regulatory order.

- (a) The permitting authority determines whether excess emissions are unavoidable based on the information supplied by the source.

- (b) Excess emissions determined to be unavoidable are a:

- (i) ~~Violation under WAC 173-400-230(1) and~~ subject to remedies in WAC 173-400-230(3), (4), and (6);

- (ii) ~~Not subject to penalty under WAC 173-400-230(2). In~~ a federal enforcement action filed under 42 U.S.C. 7413 or 7604, a federal court will determine what weight to assign to the permitting authority's determination that an excess emissions event does or does not qualify as unavoidable under the criteria in this section.

~~Unavoidable excess emissions are subject to injunctive relief but not penalty. The decision that excess emissions are unavoidable is made by~~

**Commented [ARN46]:** Not obvious, but legally this means mostly 'subject to a NOV', but a broader context in that it also includes a compliance order or assurance of discontinuance order following the NOV.

We are not giving away our ability to follow-up on a violation with an order or other non-penalty action to prevent it reoccurring, but we are willing to forego the civil penalty.

**Commented [ARN47]:** These are CAA section 113 and 304. Using the USC designation is a clearer way to reference the sections (and the legal lingo as far as I have learned).

**Commented [ARN48]:** EPA suggests this could be removed. I prefer to include it if for no other reason that it is advisory to sources that permitting authority action may not be the end of potential enforcement.

EPA may choose to not incorporate this subsection into the SIP.

~~the permitting authority, however, in a federal enforcement action filed under 42 U.S.C. § 7413 or 7604 the decision making authority shall determine what weight, if any, to assign to the permitting authority's determination that an excess emissions event does or does not qualify as unavoidable under the criteria in subsections (3), (4), and (5) of this section.~~

(2) (a) The owner or operator of a source shall have the burden of proving to the permitting authority ~~or the decision making authority in an enforcement action~~ that excess emissions were unavoidable. This demonstration shall be a condition to obtaining relief under subsections ~~(3) and~~ (4) of this section.

~~(b) Excess emissions that cause a monitored exceedance of any relevant ambient air quality standard do not qualify for relief under this section.~~

~~(e)(b) This section does not apply to exceedances of emission standards promulgated under in 40 C.F.R. Parts 60, 61, 62, 63, and 72, or a permitting authority's adoption by reference of such these federal standards.~~

~~This section does not apply to exceedance of emission limits and standards contained in contained in a PSD permit issued solely by EPA.~~

~~(3) Excess emissions due to startup or shutdown conditions will be considered unavoidable provided the source reports as required by WAC 173-400-108 and adequately demonstrates that:~~

- ~~(-) Excess emissions could not have been prevented through careful planning and design;~~
- ~~(-) Startup or shutdown was done as expeditiously as practicable;~~
- ~~(-) All emission monitoring systems were kept in operation unless their shutdown was necessary to prevent loss of life, personal injury, or severe property damage;~~
- ~~(-) The emissions were minimized consistent with safety and good air pollution control practice during the startup and shutdown period;~~
- ~~(-) If a bypass of control equipment occurs, that such bypass is necessary to prevent loss of life, personal injury, or severe property damage; and~~

~~(10)(3) Excess emissions that occur due to upsets or malfunctions during routine startup or shutdown are treated as upsets or malfunctions under subsection (54) of this section.~~

~~(10) Maintenance. Excess emissions during scheduled maintenance may be considered unavoidable if the source reports as required by WAC 173-400-108 and adequately demonstrates that the excess emissions could not have been avoided through reasonable design, better scheduling for maintenance or through better operation and maintenance practices.~~

**Commented [ARN49]:** This is from the old policy, not from the current policy statement. We might choose to delete it, since the 1999 policy implied that modeling could make this demonstration. We made the choice in 2010 to go with monitored as a compromise approach that R10 did not agree with.

**Commented [ARN50]:** This was part of the old policy, not the current policy statement. The current statement implies that relying on an NSPS or MACT standard for emission limitations in the SIP is inappropriate. Our text actually clarifies the relationship between this state authority and the NSPS/MACT world of emission standards. I would tend to retain this due to the additional clarity it adds.

EPA's current policy doesn't specifically address exceedances of NSPS and NESHAP/MACT limits that are - by design- not part of the SIP. It states that they will be modified to clarify startup, shutdown and malfunction exceedances.

**Commented [ARN51]:** Added at Region 10's request under PSD delegation. May not be necessary now since we have all of them in our jurisdiction after SIP approval.

**Commented [ARN52]:** Prohibited under EPA's current excess emissions policy statement. In the SIP Call EPA repeatedly states that startup and shutdown are known events that can be planned and anticipated within the permitting context. As such they are not unexpected events like an equipment malfunction or upset.

Suggestion is to delete this in its entirety. BUT in apparent opposition to clear statements in the SIP Call, Region 10 (Julie V.) suggested that criteria for a planned startup or shutdown could be included. This proposal does not follow the Region's suggestion because it is so at variance with the plain statements in the SIP Call.

We do provide an opportunity for the source to get startup and shutdown criteria added to an existing NOC via the WAAC 173-400-111 Change of Conditions, or if the new limit would exceed a SIP limit, the proposed section 082.

**Commented [ARN53]:** This is to address the situation where during a startup of a facility like a gas turbine, that there is a malfunction of the system that causes a restart of the startup process.

Also can cover the situation where following the criteria in an 081 startup or shutdown condition still results in an oops that wasn't anticipated.

~~(1)~~(4) Excess emissions due to upsets or equipment malfunctions will be considered unavoidable provided the source reports as required by WAC 173-400-108 and adequately demonstrates to the permitting authority that:

- (a) The event was not caused by poor or inadequate design, operation, maintenance, or any other reasonably preventable condition;
- (b) The event was not of a recurring pattern indicative of inadequate design, operation, or maintenance;
- (c) When the operator knew or should have known that an emission standard or permit condition was being exceeded, the operator took immediate and appropriate corrective action in a manner consistent with safety and good air pollution control practice for minimizing emissions during the event, taking into account the total emissions impact of the corrective action. Actions taken could include slowing or shutting down the emission unit or source as necessary to minimize emissions; ~~when the operator knew or should have known that an emission standard or permit condition was being exceeded; and~~

~~(d) If the emitting equipment had to continue operation during the malfunction for safety reasons to prevent the loss of life, prevent personal injury, or to minimize overall emissions, repairs were made in an expeditious fashion;~~

~~(e)~~(e) All emission monitoring systems and pollution control systems were kept operating to the extent possible unless their shutdown was necessary to prevent loss of life, personal injury, or severe property damage;

(f) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent possible;

~~(g)~~(g) Evidence all elements of the malfunction abatement plan were followed; and

(h) All practicable steps were taken to minimize the impact of the excess emissions on ambient air quality.

**Commented [ARN54]:** EPA policy statement and SIP Call would prefer this to be 'may' to better reflect this is a discretionary action on the part of the agency.

State law reads m more like 'will' not be subject to enforcement.

To better match state law and the SIP Call's criteria, I propose to use 'will' and make the penalty discretionary.

Criteria that the demonstration has to be to the satisfaction of the permitting authority tends to even make a 'will' context' more discretionary; inadequate demonstration = no excuse from penalty.

**Commented [ARN55]:** i.e., emissions from shutting down the unit/plant may result in greater emissions and potential adverse impact than allowing the emitting unit to continue operation.

This of course assumes the malfunction causing the excess emissions was not due to the actual unit but possibly its control equipment or a related processing unit.

**Commented [ARN56]:** Suggested by permitting authorities as added criteria to justify operating. A key is that continuing operations for pure monetary reasons is not adequate justification.

**Commented [ARN57]:** This is one of EPA's basic criteria to be met for forgoing issuance of a penalty.

**Commented [ARN58]:** Link to suggested malfunction abatement plan. Delete this if the malfunction plan is not included.

**Commented [ARN59]:** Added from EPA's current policy. It is a more general version of the earlier "don't exceed a NAAQS or PSD increment" criterion.

Ecology proposes to delete this provision to mirror EPA's proposed action to remove 40 CFR 70.6(g). See [81 FR 38645](#), June 14, 2016.

**WAC 173-401-645 Emergency provision.**

[This section is no longer effective starting January 1, 2018.](#)

- (1) Definition. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
- (2) Effect of an emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of subsection (3) of this section are met.
- (3) Criteria. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (a) An emergency occurred and that the permittee can identify the cause(s) of the emergency;
  - (b) The permitted facility was at the time being properly operated;
  - (c) During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
  - (d) The permittee submitted notice of the emergency to the permitting authority within two working days of the time when emission limitations were exceeded due to the emergency or shorter periods of time specified in an applicable requirement. This notice fulfills the requirement of WAC 173-401-615 (3)(b) unless the excess emissions represent a potential threat to human health or safety. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- (4) Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (5) Relationship to other rules. This provision is in addition to any emergency or upset provision contained in any applicable requirement.