



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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State Environmental Policy Act

Determination of Nonsignificance (DNS)

Date of issuance: February 5, 2018

Lead agency: Department of Ecology, Air Quality Program

Agency contact: Elena Guilfoil, elena.guilfoil@ecy.wa.gov, (360) 407-6855

Description of proposal:

The primary purpose of this revision is to align Chapter 173-400 WAC with federal court decisions and the Environmental Protection Agency's (EPA) SIP call that emission standards apply at all times, even during periods of startup, shutdown and malfunction (SSM), and without automatic or discretionary exemptions. These decisions require us to correct overly broad enforcement discretion and other provisions that would bar enforcement by EPA or other parties in federal court. The existing rule exempts exceedances of an emission standard during SSM, or allows avoidance of enforcement actions against a company for these emissions. We are also revising other provisions as noted below.

SSM related provisions:

- Remove exemptions for emissions and replace with opacity standards.
- Create a process to establish facility specific permit limits for existing sources that exceed an emissions standard in the SIP.
- Simplify the notification process related to excess emission events.
- Align unavoidable excess emission provisions with federal limitations, EPA policy, and the state law.

Other provisions:

- Require an agency to post notice of a public comment period and draft permits on its website. Exclude holidays from the public comment period.
- Outlaw existing and new wigwam and silo burners.
- Simplify application of nonroad engine requirements.
- Update the definition of volatile organic compounds (VOC) to reflect the current federal definition.

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- Correct typos and clarify rule language without changing its effect. This includes deleting redundant requirements for catalytic cracking units and sulfuric acid plants.
- Update adoption by reference of federal rules from January 1, 2016 to January 24, 2018.

Location of proposal: Statewide

Ecology has determined that this proposal will not have a probable significant adverse impact on the environment because the proposed rule language improves air quality.

An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2) (c). We made this decision after review of a completed environmental checklist and other information on file. This information is available to the public on request. Rulemaking materials are available at <http://www.ecy.wa.gov/programs/air/rules/wac173400/1507docs.htm>.

The comment period for this DNS corresponds with the comment period on the rulemaking to amend Chapters 173-400 and 173-401 WAC that ends on March 20, 2018.

Submit comments online to <http://ac.ecology.commentinput.com/?id=bfe7G>.

Staff contact for questions and concerns:

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Responsible official:

Stu Clark
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(360) 407-6823

Signature



Date 2/05/18



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A. Background

1. Name of proposed project, if applicable:

Ecology proposes to amend two rules:

- Chapter 173-400 WAC, General Regulations for Air Pollution Sources
- Chapter 173-401 WAC, Operating Permit Regulation

2. Name of applicant: Department of Ecology

3. Address and phone number of applicant and contact person:

Air Quality Program
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600
Contact: Elena Guilfoil (360) 407-6855

4. Date checklist prepared: January 2018

5. Agency requesting checklist: Department of Ecology

6. Proposed timing or schedule (including phasing, if applicable):

Rule development – completed schedule

- July 21, 2015 – began rulemaking
- May 20, 2015 – met with local air agencies
- July 7, 2015 – met with oil refineries
- August 25, 2015 – met with pulp and paper mills
- September 8, 2015 – rulemaking put on hold
- June 8, 2016 – met with representatives from Western States Petroleum Association
- October 31, 2016 – held conference call with staff from state/local air agencies
- November 17, 2016 – held stakeholder meeting on draft rule (posted on website) (in-person and call-in option)
- December 5, 2016 – held conference call with EPA
- December 6, 2016 – held stakeholder meeting on revised draft rule (posted on website)
- December 13, 2016 – met with representatives of the pulp and paper industry (in-person and on-phone)
- December 20, 2016 – held stakeholder meeting on revised draft rule (posted on website) (phone-in only)

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- January 4 and 9, 2017 – held stakeholder meeting on revised draft rule (posted on website)
- February 6, 2017 – held conference call with staff from state/local air agencies
- February 15, 2017 – held stakeholder meeting on revised draft rule (posted on website)
- February 22, 2017 – held stakeholder meeting on revised draft rule (posted on website)
- March 20, 2017 – held stakeholder meeting on revised draft rule (posted on website)
- March 22, 29, and April 4, 2017 – met with oil refineries to discuss SRU conditions
- June 28, 2017 – met with EPA over the sulfur dioxide modeling
- October 18, 2017 – held stakeholder meeting on revised draft rule (posted on website)
- November 29, 2017 – held stakeholder meeting on revised draft rule (posted on website)
- November 29, 2017 – met with EPA on the rulemaking and SIP progress

Rule proposal and adoption – anticipated schedule

- February 5, 2018 – public comment period on proposed rulemaking starts (file CR-102 form and materials)
- March 13, 2018 – hold a public hearing in person and a webinar
- March 20, 2018 – public comment period ends
- May 15, 2018 – rule adoption date
- June 15, 2017 – rule effective date (31 days after adoption)

7. Do you have any plans for future additions, expand, or further activity related to or connected with this proposal? If yes, explain.

Yes, we have further activity related to this proposal.

Submit SIP update to EPA

- We plan to submit rule changes to EPA in the winter 2018 as a revision to the Washington State Implementation Plan (SIP). The SIP demonstrates how the rule changes will not interfere with attaining and maintaining federal air quality standards in Washington. The public will have an opportunity to comment on our proposal during the 30-day public comment period on this action.
- EPA also directed the Southwest Clean Air Agency and the Energy Facility Site Evaluation Council to revise portions of their rules for consistency with the federal Clean Air Act. Both agencies have adopted rules that mirror Chapter 173-400 WAC. The agencies intend to revise their rules based on our final rule, and submit their new rules to EPA as a revision to the SIP.

Update three rules

We plan to update three sector-specific rules to align with the new alternative opacity standards in Chapter 173-400 WAC. Requirements in these rules supersede general emission standards in Chapter 173-400 WAC so we must revise these rules before the affected industries can use the new higher standards for opacity:

- Kraft Pulping Mills – Chapter 173-405 WAC
- Sulfite Pulping Mills – Chapter 173-410 WAC

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- Primary Aluminum Plants – Chapter 173-415 WAC

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

See Appendix B – Citation list.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

Not applicable.

10. List any government approvals or permits that will be needed for your proposal, if known.

Ecology must adopt the rule as required under the Administrative Procedures Act, Chapter 34.05 RCW and the Regulatory Fairness Act, Chapter 19.85 RCW. As part of the rulemaking process, Ecology must prepare a preliminary cost-benefit economic impact analysis on the proposed rule amendment. Ecology must prepare a final cost-benefit analysis on the adopted rule. Ecology has determined that where there was a cost impact as a result of the proposal, there were no small businesses impacted by those changes. Therefore, we are not required to complete a small business economic impact statement. See the draft Regulatory Analyses for details.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The primary purpose of this revision is to align Chapter 173-400 WAC with federal court decisions and the Environmental Protection Agency's (EPA) SIP call that emission standards apply at all times, even during periods of startup, shutdown and malfunction (SSM), and without automatic or discretionary exemptions. These decisions require us to correct overly broad enforcement discretion and other provisions that would bar enforcement by EPA or other parties in federal court. The existing rule exempts exceedances of an emission standard during SSM, or allows avoidance of enforcement actions against a company for these emissions. We are also revising other provisions as noted below.

SSM related provisions:

- Remove exemptions for emissions and replace with opacity standards.
- Create a process to establish facility specific permit limits for existing sources that exceed an emissions standard in the SIP.
- Simplify the notification process related to excess emission events.
- Align unavoidable excess emission provisions with federal limitations, EPA policy, and the state law.

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Other provisions:

- Require an agency to post on its website notice of a public comment period and draft permits. Exclude holidays from the public comment period.
- Outlaw existing and new wigwam and silo burners.
- Simplify application of nonroad engine requirements.
- Update the definition of volatile organic compounds (VOC) to reflect the current federal definition.
- Correct typos and clarify rule language without changing its effect. This includes deleting redundant requirements for catalytic cracking units and sulfuric acid plants.
- Update the adoption by reference of federal rules from January 1, 2016 to January 24, 2018.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

This rule applies statewide so there is no precise location for this proposal. In general, some of the regulated businesses affected by this rule include:

- Oil refinery
- Power plant
- Pulp and paper plant
- Lumber mill
- Orchard
- Wigwam burner
- Cement plant

These affected business types are located across the state, in varying environments, urban and rural, upland and waterfront.

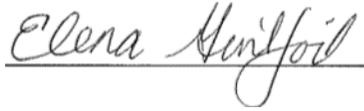
B. Environmental Elements

As specified in WAC 197-11-315(1)(e), Ecology has determined for this nonproject proposal that the questions in Part B do not aid in the review of the proposal. See the analysis in Part D and the Opacity Limitation Alternatives in Appendix A for additional information.

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C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

A handwritten signature in cursive script that reads "Elena Guilfoil". The signature is written in black ink and is positioned above a horizontal line.

Signature

Name of signee	Elena Guilfoil
Position and Agency	Environmental Planner Air Quality Program Department of Ecology
Date Submitted	January 11, 2018

D. Supplemental sheet for nonproject actions

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

The proposed rule changes are likely to decrease air emissions.

The changes focus on the General Regulations for Air Pollution Sources, the Operating Permit Regulation, and revising the State Implementation Plan (SIP). The primary purpose of this revision is to align Chapter 173-400 WAC with federal court decisions¹ that emission standards apply at all times, even during periods of startup, shutdown and malfunction (SSM), and without automatic or discretionary exemptions. These decisions and EPA's SIP call² require us to correct overly broad enforcement discretion and other provisions that would bar enforcement by EPA or other parties in federal court. Existing Ecology rules exempt exceedances of an emission standard during SSM, or allow avoidance of enforcement actions against a company for these emissions.

Since 1993, our air quality rules have exempted unavoidable emissions that exceed an emission standard or limitations from an enforcement action. These "excess emissions" normally occur during short-term modes of operation such as periods of startup, shutdown, maintenance, and malfunction. Specifically, EPA interprets WAC 173-400-107 to bar enforcement of excess emissions during periods of SSM under the federal Clean Air Act. Additionally, the state rule includes affirmative defense and director's discretion provisions, and automatic exemptions that violate the federal Clean Air Act. We must update our rules to comply with the federal court decisions and the SIP call. This rulemaking removes impermissible provisions, establishes new alternative standards for opacity during startup or shutdown, and proposes a process to establish facility specific permit limits for existing sources that exceed an emissions standard in the SIP.

Changing Startup, Shutdown, and Malfunction (SSM) Provisions

We are proposing to change our rules to:

- Remove automatic or impermissible discretionary exemptions that includes voiding WAC 173-400-107 when EPA removes it from the state implementation plan or SIP. We are proposing to remove exemptions from emission standards when EPA removes WAC 173-400-107 from the SIP.
- Set source category specific alternative emission limitations that apply during startup, shutdown, and alternative operating scenarios considered as "normal operation." Accordingly, we are proposing opacity emission standards for the following modes of operations:

¹ Natural Resources Defense Council v. EPA, 749 F.3d 1055 (D.C. Cir. 2014) and Sierra Club v. Johnson, 551 F.3d 1019 (D.C. Cir. 2008).

² 80 CR 33840 (June 12, 2015) and settlement agreement for Sierra Club et al. v. Jackson, No. 3:10-cv-04060-CRB (N.D. Cal.).

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- Soot blowing or grate cleaning of a hog-fuel or wood fired boiler (WAC 173-400-040(2)(a)(ii))
- Startup and shutdown of a hog-fuel or wood-fired boiler with dry particulate matter controls (WAC 173-400-040(2)(e))
- Startup of an orchard-heating device (WAC 173-400-070(3)(c))
- Startup to cure refractory (heat resistant cement) (WAC 173-400-040(2)(f))
- Establish the process for setting source specific alternative emission limitation for short-term modes of operations including startup and shutdown, if the source cannot meet an existing emission standard. (WAC 173-400-082)
- Clarify and simplify the notification process for excess emissions by removing the requirement that a facility must notify its permitting authority “as soon as possible” after discovering excess emissions. Under this proposal, a facility must simply report those emissions as part of its next monitoring report. The early notification provided no additional benefit. A facility must continue to report excess emissions that are a potential threat to human health or safety as soon as possible. (WAC 173-400-108)
- Align the state’s enforcement discretion authority in WAC 173-400-109 to excuse unavoidable excess emissions under RCW 70.94.431(8) with the current EPA policy and interpretation of the federal Clean Air Act. The rule states that emissions that are higher than a standard or permit limit violate the law but they may not be subject to a civil penalty if they are unavoidable. We also clarify that an enforcement action taken at the state level does not prevent EPA or citizens from exercising their own enforcement action in federal courts. (WAC 173-400-109)

Changing Public Notice Requirements

(WAC 173-400-171 and 740; WAC 173-401-800)

We are changing our public notification procedures based on a recent EPA rule³ that allows web posting of public notice of the start of a public comment period and draft permits in the Prevention of Significant Deterioration (PSD) and Air Operating Permit programs. We are requiring web posting for these programs and our small source pre-construction permitting program. We also propose to exclude Washington holidays from the day count in a 30-day public comment period.

Web posting of notice and documents would provide greater flexibility for agencies, quicker communication with the public, and make information more widely available. The benefits from electronic notice include:

- Significantly improve communication with the public on permit actions in comparison to a one-day newspaper notice
- Result in broader and better informed public participation
- Reduce costs and conserve air agency resources

³ 81 FR 71613 (October 18, 2016).

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- Improve public access by making permit actions immediately available through convenient and reliable electronic media outlets
- Improve communication with environmental justice communities and other target audiences
- Allow for information to be made available for an extended time period
- Provide flexibility for permitting authorities and sources by avoiding time delays associated with newspaper publication and allowing for faster correction of errors and rescheduling of events⁴

We also propose to require publishing notice in a newspaper until June 30, 2019, to address concerns that some communities still rely on the one-day newspaper notice. This rule does not prevent an agency from supplementing the required web notice with newspaper notice or other means to reach communities that do not have access to or use the Internet. EPA believes that using the Internet for notice will not disadvantage significant numbers of rural, the elderly, low-income and/or less educated Americans without Internet access because many have access through other means.⁵

Other Actions

We are proposing to change our rules to:

- Evaluate impacts from nonroad engines on a project-by-project basis rather than on a site basis. This addresses stakeholders' concerns about impacts from nonroad engines (hand-held gasoline equipment such as lawnmowers, small generators, and outdoor power tools) while providing ongoing environmental protection by evaluating impacts from nonroad engines on a project-by-project basis rather than on a site basis. The project basis is more representative of operations performed by non-road engines and our original intent for how the section would operate. (WAC 173-400-035)
- Update the adoption by reference of federal rules from January 1, 2016 to January 24, 2018. We need to ensure our rules are as current as possible as we can only enforce a federal rule, including rule changes, after we have adopted the rule by reference. (WAC 173-400-025)
- Update the definition of a volatile organic compound to reflect the current federal definition. (WAC 173-400-030)
- Outlaw wigwam burners in Washington after January 1, 2020. This will eliminate more emission of toxic and criteria air pollutants from the one permitted wigwam burner that is currently not operating. (WAC 173-400-070(1))
- Correct typos and clarify rule language without changing its effect so our rules are easier to understand. This includes deleting redundant requirements for catalytic cracking units

⁴ 81 FR 71620 (October 18, 2016).

⁵ 81 FR 71622 (October 18, 2016).

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and sulfuric acid plants. Mandatory federal requirements are either more stringent than or equal to the state standards.

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Plants, animals, fish and marine life may benefit from better air quality.

3. How would the proposal be likely to deplete energy or natural resources?

The proposal is not likely to deplete energy or natural resources.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

The proposed changes to Chapter 173-400 WAC are not likely to affect environmentally sensitive areas or areas designated for governmental protection. Chapter 173-400 WAC does not generally differentiate between environmentally sensitive areas except in WAC 173-400-118, Designation of Class I, II, and III areas. We did not amend this section as part of this rule making process. The protection of state, tribal and federal lands has not changed because of this rule amendment.

The proposed changes to Chapter 173-401 WAC are not likely to affect environmentally sensitive areas or areas designated for governmental protection.

Proposed measures to protect such resources or to avoid or reduce impacts are:

The proposed rules reduce air pollution by removing exemptions from emission standards. Ecology will continue to enforce the existing rule that protects Class I national parks, Indian reservations and wilderness areas, and Class II areas, wildlife refuges, primitive areas and national monuments.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

The proposal is not likely to affect land and shoreline use, nor does the proposal encourage incompatible land or shoreline uses.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

The proposal is not likely to increase demands on transportation or public services and utilities.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

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EPA is reviewing its decision in the SSM SIP call for possible modification or repeal as part of a lawsuit against its original decision.⁶ Until EPA revokes the “finding of substantial inadequacy,” the 2015 SIP call to submit corrective SIP revisions still applies. To address this uncertainty, the proposed SSM-related rule changes do not go into effect until EPA removes WAC 173-400-107 from the SIP. This rule design:

- Maintains the existing regulatory structure until EPA takes action (either on its own or resulting from a lawsuit for failure to take final action on the SIP call).
- Provides regulatory certainty while EPA is reviewing the SSM call.
- Avoids unnecessary use of resources preparing and processing source specific permit revisions by providing alternative emission standards for three key scenarios.

This rule design also ensures the state rule will be practical and enforceable if EPA loses a lawsuit for failure to comply with the SIP call. The most likely action out of this lawsuit would be removal of WAC 173-400-107 from the SIP.

⁶ Walter Coke, Inc., et al v. EPA, No. 15-1166 (D.C. Cir.), document #1671681. April 18, 2017.

Opacity Limitation Alternatives

The proposed amendments to Chapter 173-400 WAC to address the SSM SIP call include an alternative opacity limit that apply to specific modes of operation. The current rule allows some operations to exceed 20 percent opacity without any limitation. The alternative emission limitations for opacity apply during the following events:

- Soot blowing and grate cleaning
- Startup and shutdown of a wood fired boiler with a dry particulate emission control
- Initial startup and curing of new refractory materials installed in a boiler or lime kiln
- Startup of orchard heaters

Our current rule exempts soot blowing and grate cleaning, and startup of orchard heaters from all emission limitations for a specified time. The allowances of WAC 173-400-107 cover the curing of a boiler and kiln refractory and hog fuel (wood fired boiler) as an unavoidable excess emission.

Under terms of the SIP call, we need to establish a limit in our rule if we are to allow these operations to have a higher opacity limitation. This is not a limitation for an individual new source review permit to contain more restrictive opacity requirements, or allow higher limits, if approved as a source specific limitation contained in the Washington SIP.

We propose that the alternative emission limitation that applies to the operations listed above (except orchard heating) to be 40 percent opacity for no more than three minutes (cumulative time over the hour) in a one hour period. A visual emissions reader using Ecology Method 9A determines opacity. Hog fuel or wood fired boilers that use dry particulate controls may use clean fuel during startup and shutdown as an alternative limit.

Ecology is not proposing an alternative emission limitation for particulate matter (aka total suspended particulate or TSP)⁷ so the standards in WAC 173-400-050 govern. Contemporary Best Available Control Technology (BACT) decisions on boilers indicate that the particulate standards should be attainable during these four events.

Boiler startup

We relied on the experience of staff at local air agencies, familiar with these operations, to determine the level of opacity. Local air agency staff relate the emissions that they observe during inspections and through evaluating monitoring reports. The responses from industrial representatives with wood-fired boilers ranged from “this is not attainable,” to “this should not be a problem.” Several said they would evaluate their opacity monitoring data and submit information to us.

Boise Cascade submitted information for their Kettle Falls facility indicating that the plum opacity during startup (before starting their dry particulate control) will reach levels of 80

⁷ The particulate standard in the SIP is for particulate matter as measured by EPA Reference Method 5, front half only. This particulate size fraction is also the regulatory basis for particulate matter regulated under essentially all NSPS and NESHAP/MACT regulations.

Appendix A – Opacity Limitation Alternatives

percent opacity, even when using the good combustion practices mandated by EPA's rules⁸. We also reviewed the opacity data of two facilities during startups and shutdowns provided by the Southwest Clean Air Agency. The data shows that the opacity during startup and shutdown of their hog-fuel boilers will reach levels of up to 90 percent. Other industrial plants with wood-fired boilers said they would provide data to support a different alternative opacity standard to apply during boiler startup, but no one supplied this information.

Soot blowing and grate cleaning

The proposal for soot blowing and grate cleaning follows the longstanding allowance for these activities in the state rule. This is an activity done while all air pollution controls on a source are operating. There remain some wood-fired boilers with minimal controls in place where meeting the 40 percent standard would be a challenge.

Refractory curing

The proposal for refractory (heat resistant concrete) curing reflects information supplied by several companies using Wellons boilers. They supplied a copy of Wellons's refractory curing procedure. Refractory curing is a process of slowly removing the new refractory mortar and water absorbed into the refractory material from the refractory to prevent it from failing prematurely. Absorbed water in the refractory can turn to steam inside the refractory and cause it to "blow up," causing hot combustion conditions to impinge on the metal shell of the boiler, causing premature failure.

During curing, a small⁹ fire is started in the boiler and intentionally kept small for a number of hours before it is slowly enlarged to increase furnace temperature. The small fire and the slow buildup will result in less than optimum combustion conditions in the furnace conducive to making smoke. This smoke plus the water evaporation from the refractory registers high opacity values from an installed continuous opacity monitor until the flue gas temperature is above its dew point. The rule allows higher opacity values if the sole reason for the higher value is due to the presence of water evaporation. WAC 173-400-107 addressed excess opacity emissions during refractory curing as unavoidable excess emissions.

The proposal allows a 36 hour period (based on the Wellons curing procedure¹⁰) where opacity may exceed 40 percent for up to three minutes in an hour. This allows the necessary refractory curing prior to normal operation. The operators of the Kraft pulp mills asked Ecology to allow their lime kilns the same alternative opacity limit because they have the same issues during curing of their boilers. They did not propose an alternative time that might be appropriate for their kiln operations so kilns and boilers have the same 36-hour curing period.

⁸ 40 C.F.R. Part 63, Subpart DDDDD.

⁹ Small being in a relative sense to the normal scale of combustion in the unit during normal operations.

¹⁰ The 36-hour period is based on wood-fired units of 100 MMBtu/hr heat input or smaller. For comparison, the threshold size for the large MSW units is at least 250 MMBtu/hr, while process heaters and boilers at petroleum refineries are mostly under 100 MMBtu/hr, but may be as large as 800 – 1000 MMBtu/hr. It would be reasonable to expect different size units would require different curing times, but no additional information from the industries has been presented to support a longer time period than the proposed 36 hours.

Appendix A – Opacity Limitation Alternatives

As part of a 1979 document,¹¹ EPA evaluated the time it took for various units in various NSPS categories to perform refractory curing. Noting that our proposal only affects boilers and kilns, this document indicates that refractory curing at lime kilns associated with lime manufacturing and Kraft pulp mills would take 3 to 5 days, while for large municipal solid waste incinerators, curing would take 2 to 3 days and for petroleum refinery process heaters curing would take “a number of days.”

The time range in this 1979 document could support the proposed 36-hours for the smaller units covered in this rule or a longer period based on specific characteristics of individual units. The document did not present data, manufacturer’s operational procedures, or other information to support a different duration (other than the EPA document).

Orchard heaters

We propose to remove the exemption for orchard heaters from meeting the 20 percent opacity standard for the first 30 minutes after ignition. The state rule included this standard in the 1970’s when orchardists primarily heated orchards with open pots of fuel oil. In response to regulation by Yakima Regional Clean Air Agency and the Ecology Central Regional Office, combined with the rising cost of fuel oil, orchardists have replaced these heaters with a variety of non-combustion methods to protect flowering trees from frost. Newer methods include over-tree wind machines, sprinklers, and propane-fired heaters. Oil burning primarily occurs on the perimeters of orchards otherwise protected by over-tree wind machines. Based on the changes in orchard heating practices and the equipment used, this rule proposal does not require the development of an alternative opacity limitation for these units.

Behavioral changes

This section discusses anticipated behavioral changes with the new alternative opacity standards.

The biggest behavioral change from the proposed alternate opacity standards is to cause the owner/operator to pay more attention to the operation of their equipment. Anticipated behavioral changes include:

- Balancing firebox temperatures against overfire air and fuel feed rates.
- Keeping equipment tuned to maximize combustion efficiency.
- More frequent soot blowing and grate cleaning to reduce the load on the particulate control.

¹¹ EPA (1979), Instructional Manual for Clarification of Startup in Source Categories Affected by New Source Performance Standards, EPA-68-01-41-13.

Appendix B – Citation List

Citation List for Proposed Rulemaking Action

This citation list contains references for data, factual information, studies, or reports on which the agency relied in the adoption for this rule making (RCW 34.05.370(f)).

Code of Federal Regulations

40 C.F.R. Part 60 Subpart J - Standards of Performance for Petroleum Refineries.

40 C.F.R. Part 60, Subpart Ja - Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007.

40 C.F.R. 60.103a (h) and (j) – Design, equipment, work practice or operational standards (Subpart Ja).

40 C.F.R. Part 63, Subpart UUU – National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units.

40 C.F.R. Part 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

40 C.F.R. Part 63 Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.

40 C.F.R. 260.10 Hazardous Waste Management System: Definitions.

Other References

Bartocci, A. (2015, June 24). Refinery Sulfur Recovery Unit (SRU) SO₂ Scrubber for Startup, Shutdown and Malfunctions. Retrieved March 2017, from <http://www.envitechinc.com/air-pollution-control-innovations/refinery-sulfur-recovery-unit-sru-so2-scrubber-for-startup-shutdown-and-malfunctioning-post-title-here>

Ecology, NWCAA, PSCAA. (2013, November 25). Washington Oil Refinery RACT. Publication No. 13-02-031. Washington, USA. Retrieved March 2016, from <https://fortress.wa.gov/ecy/publications/SummaryPages/1302031.html>

Florida Department of Environmental Protection. (2016, October 23). 62-210.710. Emission Limits during Transient Modes of Operation. Retrieved October 2016, from <http://flrules.elaws.us/fac/62-210.710>

Georgia Environmental Protection Division. (2016, August 31). Proposed Ammendments to the Rules of the Department of Natural Resources Environmental Protection Division Air Quality Control. Georgia, USA. Retrieved Oct 2016, from https://epd.georgia.gov/sites/epd.georgia.gov/files/20160831ProposedAmendments_SSM.pdf

Appendix B – Citation List

Indiana Department of Environmental Management. (2016, December 30). Title 326 Air pollution Control Division Final Rule LSA Document# 15-326(F). Retrieved October 2016, from <http://www.in.gov/legislative/iac/20170125-IR-326150326FRA.xml.pdf>

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