DEPARTMENT OF
ECOLOGY
State of Washington

Final Cost-Benefit and Least Burdensome Alternative Analyses

Chapter 173-400 WAC
General regulation for air pollution sources

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Executive Summary

The Department of Ecology's (Ecology) amendments to the General Regulation for Air Pollution Sources (Chapter 173-400 WAC) offer a net benefit to social and business welfare. The vast majority of the amendments are exempt from analysis because they are considered "housekeeping" amendments or the amendments are mandated by the Environmental Protection Agency (EPA). Therefore, Ecology concentrated this analysis on the requirements of the rule that cover:

- Non-road engines
- Relocation of portable sources
- Emergency engines

Due to the lack of reliable data on how many firms fall into each category, Ecology was not able to quantify the total benefits that come from the rule amendments. However, the benefits are greater than zero.

The rule amendments for non-road engines, relocation of portable sources, and emergency engines do not impose additional costs. Instead these amendments are expected to relieve some of the regulatory burden on users.

The rule creates benefits and does not create costs. Therefore, the net benefits of the rule are greater than zero.

I. Conclusion

Ecology determines the benefits of the rule are greater than the costs and the Washington State Department of Ecology (Ecology) is implementing the least burdensome alternative of the rule.

II. Purpose of Analysis

Ecology is amending Chapter 173-400 WAC. The Administrative Procedures Act (RCW 34.05.328(d)(e)) requires two types of analyses before adopting a significant legislative rule – a cost-benefit analysis and a least burdensome alternative analysis. This report provides the results of these analyses and shows the potential impacts associated with the rule.

III. Background

History of existing rule

Washington Clean Air Act Chapter 70.94 RCW

Washington's clean air act was first enacted by the state legislature in 1957. The Act has been periodically amended since that time. The most significant amendments occurred in 1965, 1971, and 1991.

The act directs Ecology to establish rules to implement the programs and requirements in the state Clean Air Act. These rules apply statewide, except where a local air pollution control authority has implemented its own rules that are at least as stringent as Ecology's rules. It is the intent of the act that the implementation of programs and rules to control air pollution shall be the primary responsibility of the local air pollution control authorities and Ecology.

General air pollution regulations and new source review

To protect air quality in the state, Washington's Clean Air Act and the rules developed to implement the requirements of the law require facilities that emit new and modified sources of air pollutants to be permitted through Ecology's New Source Review Program.

Six air pollutants are defined as "criteria air pollutants":

- Carbon monoxide
- Sulfur dioxide
- Ozone
- Nitrogen oxides
- Lead
- Particulate matter

These are the air pollutants the Environmental Protection Agency (EPA) has established as the National Ambient Air Quality Standards (NAAQS) to protect human health and welfare. There are many other air pollutants that are directly or indirectly hazardous to human health. These air pollutants include a number of toxic air pollutants and greenhouse gases. These other pollutants are not part of the NAAQS and therefore are not covered in this analysis.

Reason for this rule

Chapter 173-400 WAC is a substantial part of the framework of Washington's program to attain and maintain the NAAQS and protect air quality. The existing rule includes a number of programs, such as the new source review program for major and minor sources in attainment, unclassifiable and nonattainment areas. The amended rule contains new elements that regulate new sources and modifications for major sources in nonattainment areas. "Nonattainment areas" are delineated areas in the state where the air does not meet the standards set by EPA.

The amendments to Chapter 173-400 WAC:

- Bring the rule in line with the EPA's current new source review requirements.
- Support Ecology's revision to the State Implementation Plan (SIP).

Following rule adoption, the state will prepare a SIP submittal package and submit it to EPA for approval. For EPA to approve revisions to the Washington SIP, Ecology's rule must meet specific requirements of the Clean Air Act and EPA rules. This includes the rules adequate to attain and maintain the NAAQS. Once EPA approves a SIP, EPA and citizens may enforce the SIP rules, requirements, and commitments in Federal court. Ecology anticipates the SIP submittal package will include a number of local air pollution control authority rules.

IV. Scope of Analysis

The majority of the changes to WAC 173-400 fall into one of three revision categories:

- Federal (EPA) mandates
- State (Ecology) initiatives
- "Housekeeping

The Administrative Procedures Act (RCW 34.05.328) exempts, from this analysis, any rule change necessary to meet state and federal mandates. Others are mandated to keep the rule in compliance with court actions taken since the rule was enacted.

Other changes are considered "Housekeeping" and are also exempt from the analysis required in RCW 34.05.328. These "housekeeping" amendments are needed to align the rules with changes that have been made to other state rules that work with Chapter 173-400 WAC. Also included in the "housekeeping" amendments are references to updated supporting documents, renumbering of sections, and correcting spelling and grammar errors. A listing of these changes appears in Appendix A.

The amendments analyzed in this report are:

- Non-road engines
- Relocation of portable sources
- Emergency engines

V. Comparison of the Previous and Adopted Rules

The General Regulation for Air Pollution Sources (Chapter 173-400 WAC) contains many requirements that cover:

- New source review requirements
- Adoption of federal new source performance standards, emission guidelines, and national emission standards for hazardous air pollutants
- Unavoidable excess emissions
- Permitting of stationary sources of air pollution
- Stationary source permitting: Nonattainment new source review
- Permitting and operation of portable sources and non-road engines
- Relocation of portable sources
- Emergency engines

New source review requirements

The existing rule required permitting of new and modified sources of air pollution and defined levels of criteria air pollutants that were exempt from minor new source review requirements. Sources that emit below the levels were exempt from program requirements for criteria air pollutants. The existing rule contained exemption limits (essentially de minimis limits) for:

- Carbon monoxide
- Nitrogen oxides
- Sulfur dioxide
- Total suspended particulates
- Lead
- Fine particulate PM-10
- Volatile organic compounds

The amended rule adds leveled minimis emission rates for fine particulate PM-2.5. New sources are required to calculate emissions rates for emissions of criteria pollutants and compare them to the de minimis emission rates. If all emissions are below the de minimis rates, then the project is exempt from registration program requirements.

Greenhouse gas emissions are exempt from new source review requirements except to the extent required under WAC 173-400-720, prevention of significant deterioration for major stationary sources.

Washington's adopted greenhouse gas definition includes the following greenhouse gases:

- Carbon dioxide (CO2)
- Methane (CH4)

- Nitrous oxide (N2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF6)

In addition to adding de minimis emission rates, the amended rule also changes what section of the rule a source uses to determine which permitting requirements a project is subject to. The amended rule also separates the applicability requirements contained in WAC 173-400-110 from the permit application processing requirements now contained in that section to a new section WAC 173-400-111.

These changes are in response to EPA mandates and are exempt from the current analysis.

Adoption of new source performance standards, emission guidelines and national emission standards for hazardous air pollutants

The existing rule incorporated a large number of federal performance standards by reference. The amended rule updates the incorporation by reference date of these standards. An exception is for certain regulations covering hazardous air pollutants emitted by area sources of emissions. Ecology is not adopting most of these area source hazardous air pollutant emission standards. Those we are adopting are in response to EPA mandates and are exempt from this analysis.

Unavoidable excess emissions

In 1982 and 1999, EPA issued policy memos regarding excess emissions (those emissions greater than any applicable emission standard or limitation) that may occur during maintenance, startup, and shutdown activities. State law also includes a requirement to excuse certain occurrences of these excess emissions. The existing rule contains provisions that conform to the state law and the 1982 EPA guidance. In the amended rule, Ecology deletes the previous section on excess emissions(WAC 173-400-107) and replace it with two new sections that conform to the 1999 EPA guidance(WAC 173-400-108 and 109) to address EPA's concerns with the existing rule. The new sections do not come into effect until EPA adopts them into the SIP as a replacement for the existing section.

These changes are in response to EPA mandates and are exempt from this analysis.

Stationary source permitting: Prevention of significant deterioration and Title V greenhouse gas tailoring rule

The existing rule was based on the Federal Implementation Plan rule language effective in 2007 and adopted, by reference, some of the sections of the federal Prevention of Significant Deterioration (PSD) program.

The amended rule updates the adoption by reference date to specifically include the PSD program aspects of the "Tailoring Rule" and to include PSD increments.

EPA's greenhouse gas emission rate thresholds "tailor" the permit program's ability to limit which facilities would be required to obtain new source review and Title V permits and would cover nearly 70 percent of the national greenhouse gas emissions that come from stationary

sources, including those from the nation's largest emitters - power plants, refineries, and cement production facilities.

Ecology will submit the state PSD program rule sections to EPA for approval into the state implementation plan. Once the EPA grants authority of the PSD program to the state through a SIP under 40 CFR Part 51, that program will replace the existing PSD permitting program which is delegated under 40 CFR Part 52.21.

These changes are in response to EPA mandates and are exempt from the current analysis.

Stationary source permitting: Nonattainment new source review

The existing rule text in section WAC 173-400-112 covered permitting of sources located in nonattainment areas. The amended rule deletes most of this section and replaces it with sections WAC 173-400-800 – 860. The new sections conform with EPA program requirements.

When there were no nonattainment areas in Washington, there was no reason to update these nonattainment area permitting provisions. Since there is now the Wapato Hills nonattainment area, this amended rule is an important segment of the SIP that Ecology will submit to EPA.

These changes are in response to EPA mandates and are exempt from the current analysis.

Non-road engines

The existing rule addresses the approval to locate and operate non-road engines under the provisions for portable and temporary sources. The existing text in WAC 173-400-035 was replaced entirely with a new section to address the operations of non-road engines. This subsection does not change the definition of what a non-road engine is, but makes it clear that within Washington State, only certain types of non-road engines are regulated. It also clarifies that within Washington the regulatory authority over non-road engines is limited.

The purpose of this provision is twofold. First it brings the rule into compliance with the authority granted in state law to regulate emissions from sources as limited by the Federal Clean Air Act. Second, it eases the regulatory burden on applicants. Applicants are no longer required to notify air agencies of non-road engines with a cumulative brake horse power equal to or less than 500 BHP. For facilities with a cumulative brake horsepower between 500 and 2,000 BHP, notification and record keeping is required, but no permitting is needed.

For facilities with a cumulative brake horsepower of non-road engines greater than 2,000 BHP, the applicant needs to notify the local permitting authority of their intent to operate, but the review period and review criteria is limited.

Relocation of portable sources

WAC 173-400-036, Relocation of Portable Sources, is a new regulatory provision introduced in this rule. The purpose of this section is to allow stationary portable sources to move from the jurisdiction of one air agency to the jurisdiction of another air agency without having to acquire a new notice of construction.

Local permitting authorities are not required to participate in the relocation program and may continue to require a new permit or approval when a portable source operates in their jurisdiction. Likewise, applicants may always choose to obtain a new permit instead of transferring an existing permit to a new location.

The intent of this provision is to ease the regulatory burden on applicants while still protecting air quality. Relocation is allowed within fifteen days after the applicant gives notice. This can get a piece of equipment on the job weeks sooner than if a new permit was required.

Emergency engines

WAC 173-400-930, Emergency Engines, is a new regulatory provision introduced in this rule. It allows for unlimited use of certified emergency generators and engines during emergencies; however, the hours used to maintain and test each engine cannot exceed fifty hours per year.

This provision establishes an alternative to Second Tier Review for the installation of certified diesel-powered emergency generators. The purpose is to limit the health impacts of emergency generator emissions while reasonably assuring the protection of human health. If the requirements of this rule section do not fit a particular situation, the option of applying for a Second Tier Review would always be available.

If a facility meets the requirements of WAC 173-400-930 the time and cost to install the emergency engines is reduced. The standard review procedure for engines with toxic air pollutant emissions in excess of the Acceptable Source Impact Level (ASIL) is a site specific Second Tier Review, a process that can take several months and cost thousands of dollars to complete. Ecology has set parameters that allow for the installation of emergency engines without requiring a site specific Second Tier Review. These parameters assure the protection of human health and reduce the permitting burden on both sources and permitting agencies.

VI. Baseline for Analysis

The baseline for analysis of the rule amendments is the regulatory environment in the absence of any changes. Without the adoption of the amended rule, the prior requirements would remain in place.

VII. Analysis of Costs & Benefits

The current analysis will focus on only those costs and benefits generated by the rule amendments that are not exempt from analysis. These include:

- Non-road engines
- Relocation of portable sources
- Emergency engines

Costs

The amendments related to non-road engines, relocation of portable sources, and emergency engines do not impose additional costs, instead these changes are expected to relieve some of the regulatory burden on users.

Benefits

The benefits from the rule amendments that govern non-road engines, relocation of portable sources, and emergency engines will be dealt with individually.

Non-road engines

Non-road engines were previously subject to the rules governing portable and temporary sources, regardless of the size of the engine. By reducing the burden on smaller engines, benefits are created. These benefits include:

- No permit required for engines smaller than 2,000 BHP; and
- No notification requirement to air agencies for engines smaller than 500 BHP.

Currently, the data on how many permitted engines fall into these categories is unreliable. However, there are more than zero.

Relocation of portable sources

Previously, when relocating a portable source, a new notice of construction was required. The amended rule eliminates this burden for some, if not all, relocations. Because participation is optional for local permitting authorities, some may still be required to apply for a new permit. Though existing data does not allow quantification of how many relocations are affected, and the voluntary nature of the program adds further uncertainty, these amendments almost certainly create benefits for businesses that want to relocate their sources.

Emergency engines

The amended rule allows emergency engines to operate without Second Tier Review and creates benefits in the following ways:

- No longer being subject to a Second Tier Analysis, which involves a $10,000 filing fee, permit processing time for the source, public involvement, and potential delays in siting.
- Reduced permit processing time for the Agency.
- Increased health and safety due to the reduced siting time.

Given current data limitations, Ecology can not quantify the benefits from the adopted amendments related to emergency engines. However, they are greater than zero.

Net benefits

The amended rule creates benefits and does not create costs. Therefore, the net benefits of the rule are greater than zero.

VIII. Least Burdensome Analysis

RCW 34.05.328(1)(e) requires Ecology to "determine, after considering alternative versions of the rule and the analysis required under (b), (c), and (d) of this subsection, that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives stated under (a) of this subsection."

Conclusion

Based on research and analysis required by RCW 34.05.328(1)(e) the Department of Ecology determines:

There is sufficient evidence that the adopted rule is the least burdensome version of the rule for those who are required to comply, given the goals and objectives of the law for Ecology to adopt the rule.

Alternatives considered

There were three alternatives considered:

- Do nothing.
- Make only those changes necessary to bring the rule into EPA compliance.
- Adopt the rule as amended.

Alternative 1: Do nothing

If Ecology had not updated Chapter 173-400 WAC, our State Implementation Plan would have continued to be out of compliance with EPA requirements. There are many reasons why State Implementation Plans (SIPs) are necessary and important.

- **SIPs protect our air:** SIPs play a key role in attaining good air quality and protecting citizen's health.
- **SIPs are required by law:** The federal Clean Air Act requires states with counties that fail to meet national ambient air quality standards to produce a SIP.
- **Failure to produce a SIP has consequences:** If a state fails to submit or implement a SIP, or if it submits a SIP that is unacceptable to the EPA, the EPA has the power to impose a federal implementation plan with sanctions or other penalties. Typical sanctions include cutting off federal funds and setting more stringent pollution offsets for certain emitters. Offsets are the reduction of current emissions at a rate equal to or greater than the amount of emissions expected to be produced in a new project.
- **SIPs typically consist of the following elements:** A narrative, rules, and agreements. Chapter 173-400 WAC is one of the rules that supports Washington's SIP. If Ecology fails to amend the rule, the EPA will file a federal implementation plan against the state.

Alternative 2: Make only those updates required to meet EPA requirements

Ecology finds if the amendments had been limited to just those required to meet federal Clean Air Standards, that it would have missed several opportunities to reduce the compliance burden for Washington business.

Alternative 3: Adopt the rule as amended

Amendments other than the updates to meet federal Clean Air Act requirements were intended to make the rule less burdensome for those required to comply with it. The intent of these amendments was to improve the permitting process for both large and small business.

In particular, the following amendments were expected to reduce the burden of compliance with this rule:

Relocation program for portable sources

The existing rule was silent on the concept of allowing portable sources to move from the jurisdiction of one permitting authority to the jurisdiction of another permitting authority without applying for a notice of construction. Under the amended rule, a portable source has the option of relocating across the state without applying for a new notice of construction permit. This was intended to save businesses several weeks of time that would have been spent in permit review, as well as the costs for preparing and submitting the application.

Non-road engines

Rule amendments related to non-road engines were not required by federal rule. The amendments create a regulatory de minimis level for non-road engines and an easy to execute notification process for engines between 500 and 2,000 brake horsepower. This will benefit Washington business and regulators.

Emergency engines

Under the amended rules specifications for emergency engine operation, Ecology expects that permit applicants could reduce regulatory compliance costs, while still complying with emissions standards for human health in the area.

Housekeeping

The rule amendments:

- Update definitions.
- Standardizes terms used throughout the rule.
- Corrects references to other WACs.
- Deletes outdated language and tables.

All of these housekeeping" edits were intended to increase readability and implementation consistency.

Ecology expected this to reduce the degree of effort and expenditure necessary for the business community to comply with the law.