

Appendix F: Response to Comments

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I. Overview of Appendix F

This Appendix contains three sections. Section I is a brief overview of the organizational structure of the Appendix. Section II contains Ecology's responses to the written and oral comments received during the public comment period and public hearing on the proposal to include revised Chapter 173-400 WAC, *General Air Quality Regulations for Air Pollution Sources*, in Washington's State Implementation Plan (SIP). Ecology accepted comments between August 9, 2013 and September 20, 2013. The public hearing was held on September 11, 2013. The comments from individuals and organizations are grouped and listed in the following order:

- Comments from individuals
- Comments from environmental groups
- Comments from the Environmental Protection Agency
- Comments from industry

Copies of all written comments and a transcript of the testimony are in section III. Attachments A and B contain copies of the letters to EPA referenced in the responses to comments.

II. Response to Comments

II. A. Comments from individuals

II. A. i. Comments from Danna Dal Porto

Comment A.i.1

"I am a resident of Quincy, Washington and for the past three years I have been deeply interested in air quality in and around my region. I am disappointed in some actions by Ecology. Our community has 141 permitted industrial sized diesel generators without emission controls within our UGA. We do not have a local air authority so our community has no protections. We have repeatedly requested air monitoring for detailed emission information from the data centers, truck traffic, train traffic and other air quality sources but our requests have been denied. We have repeatedly requested a method to check if industry is in compliance with their permit and that has been denied. I want the SIP to strengthen protections for state residents and I want regulations to be clear and focused on citizen health. I have the following observations and comments on the proposed SIP document. I believe that everything that is a state requirement needs to be included in the SIP and that all regulations be federally enforceable."

Ecology Response:

The purpose of the SIP is to demonstrate that the state has the basic air quality management program components in place to implement a new or revised National Ambient Air Quality

Standards (NAAQS) and to identify the rules the state will rely upon to attain and/or maintain the primary and secondary NAAQS. SIP-approved state rules are enforceable in federal court by citizens and EPA. The requirement for states to propose for adoption into the federally enforceable SIP regulations that identify how the state will attain and/or maintain the NAAQS is one of the key provisions of the federal Clean Air Act. However, the federal Clean Air Act and EPA's regulations do not require all state regulations to be included in the SIP. EPA and Ecology staff worked together to identify those sections of Chapter 173-400 WAC that are required to be in the SIP. We also identified sections that are eligible to be in the SIP, but not required. Other sections were identified as not eligible or appropriate to be included in the SIP. The scope of this SIP submittal reflects Ecology's position to only include those regulations in the SIP that are required for meeting and maintaining NAAQS.

Comment A.i.2

"I looked at the "overview chart" that had columns indicating those items were "revised", "new" or "removed". None of those items had dates to indicate when those changes were made. Did these changes go through any kind of process? Was the public invited to comment on these changes? The lack of information regarding the current status of these provisions is disturbing."

Ecology Response:

The overview table in Appendix A does not show dates of the rule revisions. The intent of the table is to show how each regulatory provision that has already been adopted in the SIP is affected by this proposal. Some sections of the rule have not changed since they were adopted in the SIP; others have been revised, or have been removed from, or added to the state rule. Appendix B of the SIP submittal provides a strikeout version of the rule that shows the differences between the language of the regulatory provisions in Washington's current SIP and the language of the regulatory provisions now being proposed for inclusion in the SIP. After each regulatory provision are references to statutory authority and history for the past revisions for this provision.

This submittal proposed to incorporate those revisions to the SIP-approved Chapter 173-400 WAC that took place between 1993 and 2012. All changes to the rule during this almost 20-year period were subject to public review under the state's Administrative Procedure Act rule-making requirements¹. Ecology's web site² has more information about the rulemaking activities and associated public comment opportunities that took place between 2007 and the present. The links below provide some of the documentation related to the listed rule-makings. To see the rule files for all the rule makings on Chapter 173-400 WAC between 1994 and 2012 you may contact Ecology's public records coordinator at PublicRecordsOfficer@ecy.wa.gov.

- [Chapter 173-400 WAC - General regulation for air pollution sources](#) - Adopted 11/28/12

¹ Chapter 34.05 RCW

² <http://www.ecy.wa.gov/laws-rules/>

- [Chapter 173-400 WAC - General regulation for air pollution sources](#) - Adopted 8/10/11
- [Chapter 173-400 WAC - General regulation for air pollution sources](#) - Adopted 3/1/11
- [Chapter 173-400 WAC - General regulation for air pollution sources](#) - Adopted 5/20/09
- [Chapter 173-400 WAC - General regulation for air pollution sources](#) - Adopted 9/6/07
- [Chapter 173-400 WAC - General regulation for air pollution sources](#) - Adopted 5/8/07

Comment A.i.3

“I want to have the State of Washington toxic air pollutant rules approved and adopted by the EPA under Section 112(l). Our state laws are more stringent than EPA minimums and I want them adopted by EPA so they are federally enforceable.”

Ecology Response:

SIP requirements are contained in Section 110 of the Clean Air Act. This section requires states to develop implementation plans to meet and maintain the National Ambient Air Quality Standards for criteria pollutants set by EPA. This purpose of this SIP proposal is to meet the requirements of Section 110 of the Clean Air Act. To further clarify this intent, Ecology added the following sentence to the Executive Summary: “The purpose of the SIP revision is to meet Federal Clean Air Act requirements of Title I – Air Pollution Prevention and Control, Part A – Section 110, Part C, and Part D. “

Section 112 of the Clean Air Act requires EPA to regulate emissions of the chemicals and chemical groups listed in Section 112, which are known as Hazardous Air Pollutants. Section 112 includes a process where certain state programs can request EPA-approval to implement their rules to meet the requirements of specific parts of Section 112. This SIP proposal does not propose any program for the implementation or enforcement of emission standards found in Section 112. At this time, Ecology does not intend to make the state air toxics rule, Chapter 173-460 WAC, federally enforceable.

Comment A.i.4

“Why is Ecology leaving material out of the SIP? For example, I disagree that the “Definition” can be eliminated from the SIP. Removing WAC 173-400-030 (definitions) removes the state’s more stringent definitions from federal enforceability. For example, this would leave out the requirement for allowable emissions (-030(5)) that require new sources to meet future emissions limitations. This would equate to the use of Tier 4 vs the Tier 2 in Quincy. Also, the “emission rate of a source [is] calculated using the maximum rated capacity” unless it is under a federally enforceable permit limit. This would not be in the SIP and therefore not federally enforceable.

I am requesting that Ecology include all the regulations in the SIP so that the state’s more stringent provisions are indirectly included through -110, -112, -113, and -171.”

Ecology Response:

Ecology does not propose to eliminate WAC 173-400-030 “Definitions” from the SIP. Ecology proposes to update the definition provisions in the SIP with the versions of the definitions that are currently adopted by the state. The “Allowable emissions” definition in WAC 173-400-030(5) was revised in the state rule to reference additional federal requirements and is proposed to be included in the SIP. This definition is for use in the state minor New Source Review permitting program, for issuing “synthetic minor” orders under WAC 173-400-091 and for nonattainment area New Source Review permitting. The federal Prevention of Significant Deterioration definition of “allowable emissions” is adopted by reference in WAC 173-400-720(4) and is used within that program.

The sections of Chapter 173-400 WAC that address the permitting of new sources and stationary sources are included in this SIP proposal.

Ecology carefully considered the comments that ask Ecology to include the entire Chapter 173-400 WAC in the SIP proposal. Ecology believes including the entire state rule in the SIP is not appropriate. Also, there are rules that EPA would likely disapprove, as it did in its 1995 disapprovals of certain parts of Chapter 173-400 WAC.

In developing this proposal, Ecology consulted with EPA to identify which portions of Chapter 173-400 WAC are required to be in the SIP and which are not. Ecology only proposes to include in the SIP those portions of the rule that are required to ensure attainment and maintenance of the National Ambient Air Quality Standards for criteria pollutants. Ecology does not propose to include in the SIP any parts of Chapter 173-460 WAC whether they are directly or indirectly referenced in any section of the rule, including sections -110, -112, -113, and -171.

Comment A.i.5

“I remind Ecology that the emergency engine rule under 173-400-930 is not supported by statute, which requires BACT on all pollutions sources. Ecology is not submitting -930 regarding emergency engines because it would be found to be inconsistent with state statute.

State statute does not distinguish between major and area (non-major) sources. State statute recognizes (23) “Stationary source” meaning any building, structure, facility or installation that emits or may emit any air contaminant. Ecology has created a new section. Permitting of major stationary sources and major modifications to major stationary sources 700-930. This new section impermissibly includes exemptions for emergency engines (>500hp but less than 2000hp) for the NOC application process: exempts area (non-major) sources from PSD requirements.”

Ecology Response:

WAC 173-400-930 “Emergency Engines” was added to Chapter 173-400 WAC in 2011 and revised in 2012. The rule was subject to public review and comment during both rulemaking

efforts. This rule is not required to be included in the SIP and Ecology chose not to propose it for SIP submittal. You may petition Ecology separately from this SIP proposal to re-open this rule for revisions and subsequent adoption in the SIP.

Comment A.i.6

“Ecology has not included any provisions regarding precursors to ozone or PM2.5 except in non-attainment areas. This is contrary to EPA’s directive.”

Ecology Response:

Ecology’s minor new source review program addresses precursors to PM2.5 and ozone on a case-by-case basis during the review of individual permit applications.

When Ecology opened Chapter 173-400 WAC for revision in 2010, EPA provided comments addressing criteria pollutant precursors. Ecology responded to EPA’s comments. Ecology’s responses and EPA comments are available in the Concise Explanatory Statement³, under Comments #2, 29, and 66.

As explained in the Concise Explanatory Statement, the PSD permitting program separately includes requirements for PM2.5 and ozone precursors. These requirements are included in the sections of 40 CFR 51.21 that have been adopted by reference into the state rule.

Comment A.i.7

“By reducing the air quality requirements, while upholding clean air authorities rights to retain their more stringent standards, the state has subjected areas of the state without clean air authorities to less stringent standards. Areas subject immediately to the less stringent standards are rural Washington State with high poverty and minority populations.

No state, or state agency is allowed to reduce emission limitations already in a SIP.

42 USC 7416 (2) This anti-backsliding provision is intended to protect our air quality and deter industry influence on those charged with protecting our health. ”

Ecology Response:

The structure and responsibilities of the clean air agencies in Washington State were established by the Washington Clean Air Act, RCW 70.94 (the Act). There are seven local clean air agencies and two state agencies with air quality responsibilities in the state. The Act requires that regulations adopted by local clean air agencies and Energy Facilities Evaluation Council (EFSEC) be at least as stringent as Ecology’s regulations. The Act does not prevent local clean air agencies and EFSEC from adopting more stringent regulations. This SIP revision implements the Act. Contacting your county counsel to reinstitute a local air pollution authority and contacting your legislative representative to request changes to the Act are potential avenues for

³ <https://fortress.wa.gov/ecy/publications/publications/1102010.pdf>

addressing your concerns regarding the ability of local air agencies to adopt stricter standards than Ecology.

The proposed SIP revision does not reduce Ecology's ability to meet and maintain the national ambient air quality standards. The submittal provides details on how the revisions meet EPA's requirements, including the anti-backsliding provisions. EPA will make the final decision on whether the revisions meet the anti-backsliding requirements.

Comment A.i.8

"Ecology has applied a "community wide approach" to the permitting process in Quincy. I have looked at the state guidelines and I cannot find the basis for this procedure in statute. I have asked for background on the adoption of the rule and have received no response. Is "community wide" part of the state's regulatory guidelines or was it invented to be applied to Quincy in order to allow multiple data centers inside this city?"

Ecology Response:

Comment noted. The comment is not applicable to the SIP submittal because Chapter 173-400 WAC does not contain provisions to implement a community wide approach to a permitting process. You may contact Ecology's Eastern Regional Office Air Quality Program for more information on the intent and scope of this approach.

Comment A.i.9

"I want the state guidelines to allow for citizen requests for air monitoring to provide accurate emission information from toxic air sources. I am requesting air monitoring for Quincy so we can have accurate real-time data not modeling for our permits."

Ecology Response:

Comment noted. A citizen may request a permitting authority to monitor ambient air quality in any area. Quincy is located in Ecology's Eastern Region. The comments have been forwarded to Ecology's Eastern Regional Office Air Quality Program for consideration.

Comment A.i.10

"Throughout the permitting process in Quincy for this flock of data centers, citizens have requested data on compliance with permits once the data center is up and running. We have had multiple power outages in our area from storms, electrical malfunctioning of equipment and human error. We have witnessed the dark diesel emissions from the stacks of the generators and we know those engines are running. The data centers have specific hourly limits on generator operation yet there is no way for local residents to know if the data center is within their permit limits. I would like language in the SIP to allow for citizens to know the operational hours of the data centers."

Ecology Response:

Any action to respond to this comment would require a change to Ecology's rules, and therefore the comment does not raise an issue that can be addressed by this SIP submittal. Individual permits have specific requirements for the maintenance of emissions records, emissions monitoring, and emissions reporting. You may request to review the agency records pertaining to a specific facility's compliance with their air quality permit limits. Agency records for Quincy-area sources can be requested from Ecology's Eastern Regional Office Air Quality Program. You may petition Ecology separately from this SIP proposal to re-open Chapter 173-400 WAC for revisions and subsequent adoption in the SIP.

Comment A.i.11

"I appreciate this opportunity to be involved in the SIP revision. I have made my comments based on the July 2, 2013 paperwork because I did not receive any documents and I had this information forwarded to me. Today I learned there is a newer document but I do not have time to review this paperwork at this time. I am on an Ecology emailing list but I did not receive any notification or documents for comments on the SIP. Since I have been actively involved in air quality issues since 2009, I do not understand why I was excluded from notification. I have tried to read and understand the many aspects of the air quality permitting process but I do not believe the regulations are designed to be understood by the general public."

Ecology Response:

Ecology appreciates the information about only reviewing the preliminary drafts of the proposal. Those drafts were distributed to the stakeholders who expressed interest in the SIP submittal for early review and input. Ecology added your email address to the project's email distribution listserv before the start of the public review comment period upon a request from one of the stakeholders. You should have received the notification about the start of the public comment period and the availability of public review drafts that was distributed to the list's recipients on August 9, 2013. No emails were returned to Ecology as non-deliverable. While this does not definitively mean that the email was successfully delivered to all the addresses on the listserv, Ecology has no information to the contrary. Please confirm your email address with Ecology. You might also provide an alternative email address or request Ecology staff to mail the documents to you via regular mail. This way we can ensure you have access to the appropriate documents.

Please also be advised that Ecology posted the public review drafts of the SIP submittal on Ecology's web site. The link to the web site was included in the Public Hearing Notice, published in the Daily Journal of Commerce on August 9, 2013; in Ecology's news release that went out on August 9, 2013; and on Ecology's Online Public Involvement Calendar. We understand how complicated this project is and it was our goal to provide easy access to the materials. Our staff has also been available to answer questions and provide presentations on the project.

Comment A.i.12

“The specific part of the regulations that needs repair and attention is there are no regulations that allow the public to see, read and understand if an industry, that receives an air operations permit, is operating within the limits of that permit. I was present at the Microsoft presentation before the Pollution Control Hearings Board and the operator of the Quincy Microsoft facility told the Board that the Microsoft facility would operate their diesel engines as long as necessary to keep the facility operational in the event of a widespread power outage. I believe each and every one of the Quincy data centers would operate their 141 diesel engines as long as necessary in the event of a power outage. Electrical power is not perfect and I believe that a widespread outage is inevitable in Quincy. When those diesel engines operate without emission controls, my community is at risk. Right now there is a haze over my community and I believe that haze is man made and is composed of diesel particulates. That haze is avoidable and regulations should have been imposed to keep the air clean.”

Ecology Response:

Ecology does not agree with a number of the statements in Comment # 12. In addition, this comment asks for a revision of Ecology’s rules, and therefore does not raise an issue that can be addressed by this SIP submittal. Please note that, pursuant to WAC 173-400-175 and RCW 42.56.070, any citizen may request to review the agency records for a permitted facility.

II. A. ii. Comments from Patricia Martin

Comment A.ii.1

Ms. Martin requests that certain air quality permits be adopted in the SIP. Ms. Martin explains: “There are currently six (6) data centers located in Quincy, WA that have been permitted to install and operate a total of 158 locomotive sized diesel engines. Each of these data centers – Microsoft, Dell, Intuit, Yahoo!, Sabey-Intergate and Vantage – has requested to voluntarily limit their emissions. Regulatory orders that limit a source’s potential to emit must be federally enforceable and adopted into the State Implementation Plan (SIP). 40 CFR 52.2495

Attached please find a copy of each of these permits – except Intuit’s -- for inclusion in the SIP. Intuit’s Approval Order is not available online for the public, but I request that it and other facilities operating under regulatory orders that limit their potential to emit be included in the SIP. Others may be found at: http://www.ecy.wa.gov/programs/air/tier2/Tier2_final.html.

Celite, also located in Quincy, operates under a voluntary emission cap and its permit must also be federally enforceable. Please see that it is also included in the SIP application to the EPA.”

Ecology Response:

Commenter is correct that regulatory orders issued pursuant to WAC 173-400-091 are included in the SIP. However, there is no additional adoption process for the permits to be included in the SIP. According to the Federal Register notice in which EPA approved WAC 173-400-091 in the

SIP (Volume 60, June 2, 1995, Page 28727), orders issued pursuant to WAC 173-400-091 become part of the Washington SIP and are federally enforceable upon issuance by Ecology or a local authority without further action by EPA. The Federal Register notice states that the submittal of such orders to EPA is required at least annually and encouraged within 30 days of issuance, so EPA has a record of all elements of the SIP.

Ecology will evaluate the referenced permits and determine whether they must be submitted to EPA pursuant to 40 CFR 52.2495 and WAC 173-400-091. Ecology will also review other regulatory orders issued under the authority of WAC 173-400-091 for facilities in Ecology's jurisdiction to make sure a copy of each was sent to EPA. Please note that 40 C.F.R. § 52.2495 is applicable only to orders containing voluntary limits on emissions issued pursuant to WAC 173-400-091. A regulatory order containing emission limits that are not voluntary is not issued pursuant to WAC 173-400-091 and need not be submitted to EPA for inclusion in the SIP.

Comment A.ii.2

“Washington’s air quality statutes, intended by our legislature to be more protective than federal minimums, are only as good as their implementation and enforcement. Because Ecology has a reputation of ignoring, undermining and preempting this authority, the citizens of Washington State need the state’s more stringent regulations adopted into the SIP for federal enforceability. Accomplishing this provides the citizens with additional EPA oversight, enforcement, and a citizen suit provision provided by the federal Clean Air Act. 42 USC 7401, et seq.

Maintaining the state’s more stringent air quality regulations, which is the state’s prerogative under 42 USC 7416, requires retaining existing language currently in the SIP providing for regulation of other air pollutants and establishing more stringent emission limitations than required by federal law. EPA’s and Ecology’s claim that SIPs can only contain the criteria pollutants, is not supported by the Congressional record. 95th Congress, 1st session, H.R. 95-294, p 68¹ (see attached)⁴

Washington’s air quality will only be as good as the implementation and enforcement of its regulations. For this reason, all of Washington State’s clean air regulations, WAC 173-400, -460 and others, must be adopted into the SIP to become federally enforceable. Ecology relies on a 1985 letter (Appendix C) that suggests that Ecology is prohibited from submitting its more stringent regulations into the SIP because they are “non-criteria pollutants”. Reliance on this document is inappropriate. The Clean Air Act Amendments of 1990², which supersedes this interpretation, specifically allow for the adoption of a state’s more stringent air quality regulations. Read in conjunction with the earlier interpretation of Bleicher and 42 USC 7416 providing for the state’s prerogative to set more stringent standards, the statute clearly provides states the rights to set standards that are more stringent than the NAAQS and adopt them into the SIP for federal enforceability.

⁴ See Section III, Comments submitted by Patricia Martin from September 16, 2013, “SIP comments part 2”.

¹ Bleicher, Samuel A., "Economic and Technical Feasibility in Clean Air Enforcement Against Stationary Sources," 89 Harv. L. Rev. 316-354 (December 1975)"

² S. 1630, 101st CONGRESS, 2d Session. (1) State Programs- (1) Each State may develop and submit to the Administrator for approval a program for the implementation and enforcement ... of emission standards and other requirements for air pollutants subject to this section. 42 USC 7412(l)"

Ecology Response:

Thank you for your concerns about maintaining the quality of the air in Washington. There are nine agencies in Washington State that are charged with responsibility to protect air quality in Washington: two state agencies (Ecology and the Energy Facility Site Evaluation Council) and seven local agencies. Under the authority of Washington’s air quality statutes, the agencies develop, implement, and enforce air quality regulations. The efforts of the agencies have ensured that the air quality in Washington has improved. For example, the following table shows that all areas, with one exception (the PM nonattainment area in Tacoma), that were in nonattainment in the past and are now in attainment status.

NAAQS for which an area was designated nonattainment (year the standard was set)	Geographic Area	Date of Redesignation to Attainment	Federal Register Notice / Date
Carbon Monoxide (1971)	Puget Sound	10/11/1996	61 FR 53323 10/11/1996
	Spokane	8/29/2005	70 FR 37269 06/29/2005
	Vancouver	10/21/1996	61 FR 54560 10/21/1996
	Yakima	12/31/2002	67 FR 66555 11/1/2002
Ozone 1 hour (1979)	Seattle-Tacoma	11/25/1996	61 FR 50438 9/26/1996
	Vancouver	6/18/1997	62 FR 27204 5/19/1997
PM ₁₀ (1987)	Kent	5/14/2001	66 FR 14492 3/13/2001
	Seattle	5/14/2001	66 FR 14492 3/13/2001
	Spokane	8/30/2005	70 FR 38029 07/1/2005
	Tacoma	5/14/2001	66 FR 14492 05/14/2001
	Thurston County	12/4/2000	65 FR 59128

			10/04/2000
	Wallula	9/26/2005	70 FR 50212 08/26/2005
	Yakima	3/10/2005	70 FR 6591 2/8/2005
PM _{2.5} (2006)	Tacoma, Pierce County		Clean Data Determination 77 FR 53772 9/4/2012

The commenter is correct that the federal Clean Air Act authorizes states to adopt standards that are stricter than the national standards, and Ecology and the local air agencies have adopted some standards that are stricter than federal standards, as well as adopting standards that apply to a broader array of pollutants than required by the federal Clean Air Act. In the Public Review Draft of the SIP submittal, Ecology included an EPA letter from 1985⁵, which is referred to by the commenter. It was included to show the historical guidance on the scope of the SIP Ecology has received from EPA in the past. Ecology does not rely on that letter to support its request to remove WAC 173-400-050(2), which regulates carbonyls, from the SIP. Ecology has revised the submittal and removed the referenced letter from the final submittal.

Requesting removal of WAC 173-400-050(2) from the SIP is consistent with the purpose of this SIP action which is to update the EPA-approved regulations for permitting of stationary sources of air pollutants in Washington to comply with the national ambient air quality standards as required by Section 110 of the federal Clean Air Act. Please see Ecology Response to Comment A.i.1, Comment A.i.2, and Comment A.i.4 for additional information.

Comment A.ii.3

“Additionally, 42 USC 7416(2) prevents backsliding under the CAA:

“...if an emission standard or limitation is in effect under an applicable implementation plan ..., such State or political subdivision may not adopt or enforce any emission standard or limitation which is less stringent than the standard or limitation under such plan or section.”

Ecology lacks statutory authority to weaken the state’s SIP.”

Ecology Response:

Ecology believes this SIP revision meets the requirements of federal Clean Air Act. Under the federal Clean Air Act⁶, revisions to a state implementation plan must not interfere with any applicable requirement concerning attainment of the national ambient air quality standards. While Ecology is proposing to add the permitting exemptions listed in WAC 173-400-110, the

⁵ EPA Comment letter to Ecology from Gary L. O’Neil, Director, Air and Toxics Division, EPA Region 10 to Linda Brothers, Assistant Director, Office of Hazardous Substances and Air Quality Control, Department of Ecology, Dated June 28, 1985.

⁶ 42 USC 7410(l)

SIP submittal document explains that these exemptions will not compromise Washington's ability to attain and maintain compliance with the NAAQS.

Comment A.ii.4

“Ecology also lacks authority to adopt the diesel engine rule found under WAC 173-400-930. Ecology is not attempting to adopt this exemption into the SIP, because the agency knows they do not have statutory authority to do so. Instead, the agency intends to keep this as a state only rule: not enforceable in federal court and blocking EPA's ability to intercede for Washington residents. This kind of manipulation is typical of Ecology. Washington statute provides no exemption from the requirement to employ BACT on all sources requiring a notice of construction. RCW 70.94.152(10)”

Ecology Response:

Please see Ecology Response to Comment A.i.5.

Comment A.ii.5

“Ecology has been reminded by EPA that minor NSR must account for precursors of PM2.5 and ozone. Rather than do so, the state intends to remove the minor NSR from the SIP by combining -110, -112 and -113 into one permitting process that is limited to major sources. These revisions should not be adopted. The existing rule in the SIP is more stringent because it applies to both minor and major sources, and sets a more stringent increment in areas that are in attainment or unclassifiable. Being more stringent and in the existing SIP, it cannot be weakened. 42 USC 7416(2)

The minor NSR requires precursors to be PM2.5 and ozone to be considered, but I do not find this accounting in the rule changes.”

Ecology Response:

Ecology's minor new source review program addresses precursors to PM2.5 and ozone on a case-by-case basis during the review of individual permit applications.

Contrary to the statement in this comment, WAC 173-400-110, -112, and -113 apply to minor sources of air pollution in Washington as well as major sources. All sources that have emissions above the de minimis emission rates in WAC 173-400-110(5) and not specifically exempted from permitting in WAC 173-400-110(4) are required to get a state Notice of Construction approval. If annual emissions are above specified thresholds, then either or both of the major source New Source Review programs must also be complied with.

Comment A.ii.6

“I am requesting that Ecology retain all the sections of WAC 173-400 that are proposed for removal from the SIP, and that Ecology include the state's original air toxics regulations (pre-2009) for adoption under Section 112(l) authority into the SIP as was originally planned in 1995.

It was not the people of the State of Washington who objected to the inclusion of the state toxic air regulations; it was a couple of industries.”

Ecology Response:

The only provisions Ecology is proposing to remove from the SIP are WAC 173-400-050(2) and WAC 173-400-100. These provisions are outdated or not required to be in the SIP. They do not impact the state’s ability to meet and maintain national ambient air quality standards.

- WAC 173-400-050(2) regulates emissions of total carbonyls, which are not criteria pollutants regulated under Section 110 of the federal Clean Air Act. This subsection dates back to a time when small incinerators at grocery stores, apartment building, etc., were common. These incinerators produced dense smoke and odors resulting from poor combustion. Ecology’s SIP submittal documentation provides additional details about this rule. Ecology plans to remove this provision from the rule once EPA has approved its removal from the SIP.
- WAC 173-400-100 provides a list of air contaminant sources that must register with Ecology. Washington’s registration program is a state-only procedural program that is not linked to the state’s New Source Review program. The registration program does not impose control requirements on sources and does not enforce or implement federal air quality standards. As such, it is not required to be included in the SIP. Ecology is therefore asking EPA to remove this outdated provision related to the registration program from the SIP.

Ecology never asked EPA to approve the state’s air toxic regulations into the SIP. Ecology did ask EPA to approve the state toxics regulations under Section 112 of the federal Clean Air Act. Ecology’s September 29, 1994 request to EPA that the state air toxics rule be federally enforceable under Section 112(g) was in response to an August 18, 1994 Federal Register notice that identified deficits in the state request for EPA approval of our Title V Program. Since EPA had not yet adopted air toxics rules implementing Section 112(g) of the federal Clean Air Act, EPA determined that Washington’s Title V Program delegation request was inadequate because it lacked a federally enforceable mechanism for issuing permits to major sources of hazardous air pollutants. With EPA’s proposed finding on February 22, 1995 that the orders issued under WAC 173-400-091 would be federally enforceable under Section 112(l), Washington had a mechanism to limit emissions of hazardous air pollutants that did not rely on Chapter 173-460 WAC. Consequently, Ecology withdrew its request to use Chapter 173-460 WAC as the interim mechanism for implementing the section 112(g) program. On June 2, 1995, EPA approved WAC 173-400-091 as the federally enforceable mechanism under Section 112(l). More information is found in 59 FR 42556-57, 60 FR 9802-9810, and 60 FR 28726-28729. Ecology did not request that Chapter 173-460 WAC be included in the SIP. Ecology does not intend to make the state air toxics rule, Chapter 173-460 WAC, federally enforceable.

Comment A.ii.7

“The WAC 173-460, while not directly adopted into the SIP, was indirectly adopted through definition. Definitions that Ecology is now attempting to remove (173-400-030(91) and 173-400-030(3)(b)(i)) to weaken the SIP and relegate it to criteria pollutants only. Re-defining “air contaminant” to limit its applicability to criteria pollutants (173-400-030(3)(b)(i)) and removing reference to “toxic air pollutant” removes the requirement to comply with the WAC 173-460s. This is back sliding and is prohibited. 42 USC 7416(2)”

Ecology Response:

Chapter 173-460 WAC is not in Washington’s SIP. WAC 173-400-030(91) defines the term, “toxic air pollutant (TAP).” Contrary to the statement in Comment A.ii.7, the current SIP does not include a definition of “toxic air pollutant (TAP).” Ecology does not propose to include this definition in the SIP as it is not related to implementation of NAAQS requirements. Also contrary to Comment A.ii.7, there is no WAC 173-400-030(3)(b)(i). Although Ecology proposed adopting WAC 173-400-030(3)(b)(i) during the 2012 Chapter 173-400 WAC rule revision, Ecology did not include this provision in the final rule. You may petition Ecology separately from this SIP proposal to re-open Chapter 173-400 WAC to request revisions to the rule for subsequent adoption in the SIP.

Comment A.ii.8

“Clean air is the right of all people to enjoy, and the responsibility of all industry doing business in Washington State to protect. Please incorporate our WAC 173-460 air quality regulations into the SIP so we can hold Ecology accountable for properly implementing and enforcing the legislatures mandate to protect air quality for future generations.”

Ecology Response:

As noted above, the purpose of this SIP submittal is to provide regulations for inclusion in the SIP that ensure attainment and maintenance of the national ambient air quality standards. At this time Ecology does not intend to submit Chapter 173-460 WAC for EPA approval pursuant to Section 112 of the Clean Air Act. See Ecology Response to Comment A.i.3 and Comment A.ii.6 for additional information.

Comment A.ii.9

“Please do not adopt any of the revisions that are less stringent than the existing SIP and do not remove any of the regulations currently in the SIP. We will all breathe easier with more options to ensure the air quality laws are properly implemented and enforced.”

Ecology Response:

Ecology believes this SIP revision does not make the SIP less stringent. While Ecology is proposing to add the permitting exemptions listed in WAC 173-400-110, the SIP submittal document explains that these exemptions will not compromise Washington’s attainment and maintenance of the NAAQS.

Please also see Ecology's response to Comment A.ii.6.

Comment A.ii.10

Ms. Martin commented on section 173-400-260, Conflict of Interest. This section incorporates by reference federal regulations in 40 CFR 103(d). Ms. Martin points out that this citation is incorrect.

Ecology Response:

The commenter is correct. Thank you for bringing this outdated citation to our attention. This citation needs to be revised in the state rule before it can be updated in the SIP. Ecology's staff added this revision to the list of issues to be addressed when the rule is opened for revision in the future. Once Ecology revises this section of the state rule, it will be submitted to EPA to replace the version in the SIP.

II. A. iii. Comments from Patricia Davis

Comment A.iii.1

Ms. Davis brings up a question about how commercial restaurant wood smoke is regulated. Ms. Davis states that there are no regulations or enforcement mechanisms to mitigate commercial restaurant wood smoke. Ms. Davis advocates for requiring commercial wood burning/ BBQ/ food trucks/ mobile catering/ etc to have at least the same standards as required of homeowners: to have a certified wood burning device that reduces emissions. Below is a representative statement of Ms. Davis's comments on this subject:

“I think there are a few CORE problems. per my email sent to margo thompson 9/9/2013 there is considerable difficulty getting assistance to people suffering under outrageous levels of COMMERCIAL - RESTAURANT wood smoke. Multiple agencies 'pass the buck' and the result is that these wood burning pizza places, wood burning BBQ places, and restaurants that use charcoal are creating excessive smoke that without a doubt hinders public health and is certainly a nuisance beyond that. As you likely know: 1,000 Washington residents will die prematurely from exposure to wood smoke particulate. Additionally, that the American Lung Assoc determined that wood smoke enters neighboring property with all the windows and doors closed. Also wood smoke is clearly a carcinogenic and health hazard and that is well documented for decades via valid and replicated research. (check burning issues website for citations) and of course we all know the EPA, 1991: wood smoke is 12 times more toxic than a cigarette (actually 2nd hand smoke - so therefore even more lethal) Also that the American heart assoc. found CAUSALITY between air pollution and heart disease. Wood smoke is most certainly a prevalent air pollutant.

We need to do a better job of requiring commercial wood burning/BBQ/food trucks/ mobile catering/ etc and require of them the same standards that are required of regular homeowners (to have a CERTIFIED wood burning device to greatly reduce emissions) Why in the world would a

wood burning restaurant (note: when I use the term restaurant I am referring to ALL commercial and licensed food generating businesses) - which involves massive numbers of hours and day after day, year after year have no air filtration requirements? it seems it slipped through the cracks. Or perhaps it was lobbying by the BBQ industry that managed to get the Fire Dept memo for intervention in this arena to specific exclude BBQ and have no possible intervention for people being choked to death with smoke on and on? (see the email that I wrote to PSCA, DPD, on this) UTTERLY AMAZING !! UNFAIR!

We need to require that all food businesses/restaurants have at least the emission standards of a home owner. This needs to take place on multiple levels and in particular relative to licensing and mechanical permits. And that license can be withdrawn if not in compliance.”

Ecology Response:

Although Washington’s SIP includes Ecology’s regulations pertaining to solid fuel burning devices (WAC 173-433), those regulations do not include provisions specifically addressing wood smoke from restaurant cooking. Therefore, your concern about wood smoke from restaurant cooking, which has been voiced by others, will need to be addressed through rulemaking before it can be addressed in the SIP.

Comment A.iii.2

Ms. Davis expresses concerns with nuisance laws and wood smoke food businesses. The quotes below are representative of the concern:

“This is a serious issue and one that is an increasing problem: we are getting more and more commercial pizza and BBQ places that emit unrelenting, excessive, choking amounts of smoke with ZERO regulations. Given the known health hazards of smoke this is ridiculous. Additionally, it is required that residential wood stoves, for example, be certified and yet we have no effective regulation of commercial entities that indeed can be generating smoke - NON STOP HOUR AFTER HOUR and there is no remedy

That is a reason I have been adamant about ECY keeping the reference to Nuisance Laws and also getting Legislation in place that gives a regular citizen half a chance to prevail in court. This poor woman who owns the apt. building directly downwind of Jones BBQ here in West Seattle has lost tenants, has made complaints to the Fire Dept. and Puget Sound Clean Air - only to have the 'buck passed' (read Diane Davis, DPD letter below) and find she has no pathway to impact the smoke. She suffers under (as do many living by these wood burning commercial food entities) from massive smoke exposure, impact on her business (people move away from the apartment to get away from breathing in smoke day after day.....on and on.

Seriously, there NEEDS to be a way for people to have remedy in these situations. They are being forced to breathe UNFILTERED smoke - for 40 or more hours per week - every single week. Week after week, and year after year with NO REGULATION. That is pitiful that a

homeowner needs a certified wood burning device (and likely most homeowners do not burn continuously for 40 or more hours per week) and a commercial entity does not.

RESTAURANTS are required to filter their cook smoke - why in the world is that not required - and at an even higher level - for a WOOD BURNING restaurant ? They generate more smoke than a 'normal' restaurant and simply put up a steel flu and they are 'good to go'.....all in compliance while people and children suffer with breathing and perhaps an end point cancer.

“...4) We MUST be able to set up a legal process that takes wood smoke seriously (reminder: Seattle VOTED not to allow smoking in public places that speaks volumes: people are getting smart about their health and becoming more educated as a public. Regretfully most people do not truly understand the toxicity of wood burning smoke) Anyway: There must be a route for some remedy than can be relied on. Nuisance laws were written to intervene on people who are suffering in their own homes. It states (which used to be in the ECY bulletin) that any odor or smoke that interferes with the health or enjoyment of property is illegal. Ok, that is step one (get that back into the handout and educate the public they do not have to endless suffer or perhaps die later so some commercial entity can make \$ and poison their air with no consequence whatsoever) Next there MUST MUST MUST be some laws written that assist a person to prevail in court if they go so far as to hire a private attorney and pursue choking on smoke (day after day) in court. Nuisance Laws are there for a reason. And more laws needs to be written to protect the public. We have a RIGHT TO BREATHE. I understand this woman's absolute frustration: she hits wall after all after wall.....and she is breathing smoke that I actually thought was a flat out fire when I drove by. No recourse. That is heartbreaking and also irresponsible by those parties that are supposed to help protect the air.

Again: we NEED

1) Legislation that REQUIRES at least as much smoke filtering as a homeowner, and I think even more stringent standards: such as no smell or smoke

2) As ECY, EPA and PSCA address non-compliance it is also necessary to take into account COMMERCIAL WOOD BURNING and 1) above

3) We need to educate the public about the toxicity of wood smoke (12 times more toxic than a cigarette, EPA, 1991 gets through to the average person no matter what their education level/ability to comprehend complex issues)”

Ecology Response:

Ecology's regulations include several requirements that could be considered nuisance laws: WAC 173-400-040(3) prohibits emissions of particulate matter that deposit beyond the property line, WAC 173-400-040(5) prohibits odors that unreasonably interfere with the use and enjoyment of another owner's property, and WAC 173-400-040(6) is a general nuisance provision that prohibits emissions that are detrimental to health, safety or welfare or that cause

damage to property or business. Washington’s current SIP includes the general nuisance provision (WAC 173-400-040(6)), but does not include the provisions concerning odors or the deposition of particulate matter. Ecology’s SIP proposal retains this arrangement, proposing to include the general nuisance provision (WAC 173-400-040(6)), but not the odor or deposition provisions. The odor and deposition provisions remain enforceable as state law. Please also see Ecology’s response to Comment A.iii.1.

II. A. iv. Comments from Helen M. Zenon

Comment A.iv.1

“I know this is late, but I’d still like to be heard.

I’m really against people being allowed to use burn barrels within city limits, at least. If a person nearby opens their window for fresh air or goes outside in their yard they have to breathe the fumes. This is especially troublesome in Summer. I’m also against wood heat being allowed (also wood fire places) for the same reason in the city.

Thank you for listening.”

Ecology Response:

Thank you for voicing your concerns. Outdoor burning is banned in all urban growth areas in Washington. Burn barrels are illegal everywhere in Washington, and have been for many years. Chapter 70.94 RCW, *Washington Clean Air Act*, and Chapter 173-425 WAC specifically address outdoor burning. You can report violators to your local clean air authority (<http://www.ecy.wa.gov/programs/air/local.html>).

Chapter 173-400 WAC does not regulate residential wood heating. Ecology’s regulations addressing wood heating can be found in Chapter 173-433 WAC. Wood heating devices are known sources of air pollution; their emissions can be detrimental to air quality and public health. Ecology and local clean air agencies have regulations to control their use. Some jurisdictions have also adopted strategies for encouraging alternative sources of heat to mitigate air quality impacts. For specific regulations in your area and to suggest how to improve those regulations, please contact your jurisdictional clean air agency.

II. A. v. Comments from Monte R. Robinson

Comment A.v.1

“I would like to see more air prevention measures taken with industrial dust created by moving vehicles and equipment on unpaved or gravel roads. I live near such a problem and very often affected by the dust created into the air. I have worked as an Environmental Health and Safety Professional with a local University working to keep our environment clean and healthy. I have also studied the effects of dust pollution in Arizona that is very toxic to humans, called valley

fever. The dust created by farming and vehicles near residential areas in our state contains toxics from weed sprays and numerous organic materials including silica. Some of this can be prevented by reasonable measures and should be implemented in best management practices.

My neighbors are renting from the local farm and afraid to complain to the owners for fear of some reprisal. They get a daily dose of dust that covers their house every dry day. Please include dust pollution in your proposal.”

Ecology Response:

The commenter is correct that with reasonable measures and best management practices fugitive dust emissions can be minimized. Fugitive dust is addressed in WAC 173-400-110(9). This section was revised after the last approval in the SIP and we propose to include the revised version in the SIP in this submittal to EPA. If you are located outside of Ecology’s jurisdiction, please check with your local clean air agency for their specific regulations with regard to fugitive dust. You may also consider contacting your jurisdictional clean air agency to obtain information and educational resources to share with your neighbors and the farm.

II. A. vi. Comments from Doris Deamud

Comment A.vi.1

The commenter is concerned with the impacts of the proposed coal terminal and impacts of increased number of trains on the community and the environment. Here is a representative quote from the comment letter: “In Mount Vernon, the number of coal and oil tanker trains heading to Bellingham and Canada destinations have already increased significantly which has caused out air quality to diminish significantly.

Both coal and oil are considered high carbon risk in air pollution and very dangerous for the lungs are the diesel particulates released into the air for the entire route these trains take from start to destination. The effects are felt through all cities and the country side along the way in air pollution and traffic congestion.”

Ecology Response:

Thank you for submitting your comment letter. Your comments are outside the scope of this proposal. No changes were made to this SIP submittal in response to the comments. However, a copy of your letter was shared with Ecology staff working on the Gateway pacific Terminal Project and the Millennium Bulk Terminals-Longview coal export proposals. For more information on these proposals, use the following links:

- Gateway Pacific Terminal - <http://www.eisgatewaypacificwa.gov/>
- Millennium Bulk Terminals-Longview - <http://www.millenniumbulkeiswa.gov/>

II. B. Comments from environmental groups

II. B. i. Comment from Gretchen Brewer, Port Townsend Air Watchers

Comment B.i.1

“As an individual and on behalf of PT AirWatchers, I respectfully request a two-week extension to respond to the proposed revised Ch173-400WAC SIP.

Although the public comment period opened on August 9, many of us in the environmental community only learned of it in the week of September 9. In addition to learning of it a full month after the comment period opened, my agenda has been full enough to preclude giving the revisions any review, much less the review that they merit.

Others that I've communicated with express the same concern about learning of the period at this late date, and because the State's Implementation Plan directly affects work that we are involved in, want time to look more closely at the proposed plan.

At the very least, I would like to weigh in upon first scan, some of the revisions seem to unnecessarily weaken laws that should be strengthened, and look for stronger protections for the benefit of all.”

Ecology Response:

EPA requires the state to hold a public comment period for 30 days. The comment period from August 9 through September 20, 2013 was 43 days – longer than required. The commenter’s request was the only formal request for extension received during the comment period. After careful consideration, Ecology decided not to extend the comment period.

There will be another opportunity to comment on the proposed SIP revisions after Ecology submits them to EPA for review and decision. EPA will provide at least 30 days for public review and comment on their analysis of Ecology’s submittal and EPA’s proposed action (decision) on the submittal. EPA’s proposed action will be available at www.regulations.gov.

Ecology believes the regulations proposed for inclusion in the SIP will continue to ensure compliance with the national ambient air quality standards and conform to current state and federal regulatory requirements.

Comment B.i.2

“As requested earlier, the material in Ecology's proposed amendments to the Washington State Implementation Plan (SIP) is extensive, and time has been short. Thus a two-week extension is requested and would be greatly appreciated in order to read and comment more closely.

At the very least, please accept this comment and add it to the voices that you have heard: I have read and concur with the comments and conclusions offered by Patty Martin of Quincy WA in her letter of September 16, 2013.

In particular, to quote: "Please do not adopt any of the revisions that are less stringent than the existing SIP and do not remove any of the regulations currently in the SIP. We will all breathe easier with more options to ensure the air quality laws are properly implemented and enforced."

Ecology Response:

Please see Ecology Response to Comment A.ii.3 and Comment B.i.1.

II. C. Comments from the Environmental Protection Agency

II. C. i. Comments from Donna Deneen, Office of Air, Waste and Toxics, EPA Region 10

Comment C.i.1

“For the reasons that are discussed on pages 33-35 in the proposed document entitled “SIP Revision: Including Revised CH. 173-400 WAC in the Washington SIP” (August 2013 Public Review Draft), relating to Significant Impact Levels, we recommend that you not submit the second sentence of Section 173-400-113(3) WAC as a part of the SIP or in some other way demonstrate that the regulations the Department of Ecology is proposing to included in the SP are consistent with the court ruling discussed in the proposed submittal.

Please note that EPA’s final determination on Ecology’s SIP submittal will be reached only through notice and comment rulemaking once it is submitted to EPA for approval as a SIP revision.”

Ecology Response:

Ecology thanks EPA for the comment. Ecology has updated the SIP submittal accordingly.

II. D. Comments from industry

II. D. i. Testimony by Kathryn VanNatta, Government and Regulatory Affairs, Northwest Pulp and Paper Association

Comment D.i.1

“For the record, Kathryn VanNatta, director of Government and Regulatory Affairs for the Northwest Pulp and Paper Association, a position that I’ve held for the last 18 years. I, on behalf of Northwest Pulp and Paper, thank the department for all of their work on this rule, a lot of work went into this. And the documents and the outreach that the agency has taken upon themselves, we very much appreciate that, and especially the time that the department has spent with me, chatting with me about this issue.

The Northwest Pulp and Paper Association is a regional technical trade association composed of pulp and/or paper facilities in the states of Washington, Oregon, and Idaho. We're about 58 years old and we work in the intersection of environmental, regulatory, legislative issues that affect mill operations. The Northwest Pulp and Paper Association will be submitting written comments on the SIP revision for the Washington Administrative Code 173-400 division and for the State Implementation Plan.

We sincerely thank the department for the opportunity to testify today and the hard work on the presentation. And we welcome the opportunity, after the submittal of our comments, if you have any questions, please reach out to us and we'll try to explain our positions and our concerns better. By the 20th, we will be submitting our comments for your consideration.

Ecology Response:

Ecology thanks the commenter for attending the public hearing on this proposal and providing the comments.

II. D. ii. Comments from Frank Holmes, Northwest Region, Western States Petroleum Association, and Christian McCabe, Northwest Pulp and Paper Association

Comment D.ii.1

“WSPA is a non-profit trade organization representing 26 companies that explore for, produce, refine and market petroleum, petroleum products, natural gas and other energy products in Washington and five other western states. WSPA members own and operate each of Washington's five petroleum refineries.

NWPPA is a non-profit trade association representing 13 member companies and 17 pulp and paper mills in Washington, Oregon and Idaho. Nine of these 17 mills are located in Washington State. NWPPA members produce approximately 8 million tons of various paper products per year. NWPPA members own and operate each of Washington's nine member mills.

For clarity, we refer to the package of WAC ch. 173-400 amendments proposed for SIP incorporation together with Ecology's explanatory statement as the “2013 SIP Update Proposal” or just “the Proposal.” WSPA and NWPPA support Ecology's broad objectives underlying the Proposal: to secure a SIP-authorized PSD program, to secure SIP authorization for the rules required to permit major new sources and major modifications in a nonattainment area, and to remove obsolete provisions from the SIP. Moreover, WSPA and NWPPA appreciate the care with which Ecology selected provisions of ch. 173-400 for SIP incorporation, while omitting other provisions that are not part of the State's program to attain and maintain the National Ambient Air Quality Standards.

Several elements of the 2013 SIP Update Proposal reflect Ecology's commitment to limit the SIP to NAAQS attainment measures. These include:

- the statement in the Executive Summary that “Ecology is proposing to include in the SIP the portions of the revised Chapter 173-400 that are necessary to ensure Washington complies with the federal Clean Air Act;”⁷
- the statement in which Ecology asks EPA to “Remove currently SIP-approved rules that are not related to the criteria pollutants regulated under the SIP or not essential for meeting and maintaining the National Ambient Air Quality Standards (NAAQS);”⁸
- The omission from the Proposal of all subsections of WAC ch. 173-400 that reference the requirements of ch. 173-460, the new source air toxics rules; and
- The inclusion as Appendix D of EPA’s 1985 letter affirming that measures regulating non-criteria pollutants cannot be part of the SIP.

While these elements of the Proposal leave no doubt as to Ecology’s intent, WSPA and NWPPA recommend that Ecology revise the Proposal in one additional way to ensure that the approved SIP implements state policy. In the narrative portion of the Proposal or in an accompanying transmittal letter Ecology should include the following statement, or analogous language to the same effect:

Ecology seeks to limit the scope of the Washington SIP to attainment and maintenance of the NAAQS, and to implementation of the PSD program. Toward this end, Ecology drafted the current Washington SIP to regulate only criteria pollutants, consistent with guidance Ecology has received from EPA over the years. See, e.g. the 1985 letter attached as Appendix D to this submittal. The current Proposal limits the SIP to control measures that target criteria pollutants, except as specified in the EPA PSD rules. Ecology asks EPA to apply this limitation in its approval of the Proposal.

This clarification would be valuable in resolving ambiguities brought to light by recent litigation over the scope of Washington SIP. In addition, it would foreclose difficult legal issues about whether the Clean Air Act limits the scope of any SIP to attainment and maintenance of the NAAQS as a matter of law. Ecology recently presented a persuasive case to the United States Court of Appeals for the Ninth Circuit that the Clean Air Act precludes SIP regulation of non-criteria pollutants.⁹ It would be unnecessary to reach that issue, however, if Ecology clarifies, as it did for the Ninth Circuit,¹⁰ that Washington intends to limit the scope of the SIP to regulation of criteria pollutants to achieve and maintain the NAAQS.”

⁷ Proposal at viii.

⁸ Proposal at 8.

⁹ *Washington Environmental Council v. Bellon*, Nos. 12-35323 et seq., Opening Cross Appeal Brief of Defendants-Appellants Theodore Sturdevant, Mark Asmundson and Craig Kenworthy, Section C at 19-41 (filed Sept. 4, 2012).

¹⁰ *Id.* at 36-38.

Ecology Response:

Thank you for your support for the proposal. After consideration, Ecology has added the following sentence to the Executive Summary: “The purpose of the SIP revision is to meet Federal Clean Air Act requirements of Title I – Air Pollution Prevention and Control, Part A – Section 110, Part C, and Part D.”

Comment D.ii.2

“WSPA and NWPPA also recommend that Ecology omit from the rules proposed for SIP incorporation paragraphs (i) through (v) of subsection (4) of WAC 173-400-720. WAC 173-400-720 was first adopted in 2005,¹¹ and amended most recently in 2012. It has never been proposed for SIP incorporation. The stated purpose of WAC 173-400-720(4) is to specify the content of PSD permits. In the 2012 amendments Ecology revised subsection (4) to state:

(4) Applicable requirements.

(a) A PSD permit must assure compliance with the following requirements:

(i) WAC 173-400-113 (~~((3) and)~~) (1) through (4) ;

(ii) WAC 173-400-117 – Special protection requirements for federal Class I areas;

(iii) (~~((The proposed major new source or major modification will comply with all applicable new source performance standards (40 CFR Part 60), National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61), and emission standards adopted under chapter 70.94 RCW that have been incorporated into the Washington state implementation plan))~~) WAC 173-400-200;

(iv) WAC 173-400-205;

(v) Allowable emission limits established under WAC 173-400-081 must also meet the criteria of 40 CFR 52.21(k)(1) and 52.21(p)(1) through (4); and

~~((iv))~~ (vi) The following subparts of 40 C.F.R. 52.21, in effect on ~~((July 20, 2011))~~ August 13, 2012, which are adopted by reference. Exceptions are listed in (b)(i), (ii), ~~((and))~~ (iii), and (iv) of this subsection:

[list of 40 CFR 52.21 subsections follows]

Through a series of small deviations from the template of EPA’s PSD rules,¹² this subsection as drafted could be construed to require Ecology to include as permit conditions in a PSD permit all

¹¹ WSR 05-03-33, filed 01/10/05.

¹² This comment cites EPA PSD rules to 40 CFR 52.21. The same requirements appear in 40 CFR 51.166 for SIP-approved state PSD programs.

RCW ch. 70.94 requirements (whether or not SIP approved), all local air authority emission standards, all applicable NSPS, Part 61 NESHAP and Part 63 MACT requirements.

- Subsection (4) begins by stating: “A PSD permit *must assure compliance with* all the following requirements . . .” No parallel provision appears in 40 CFR 52.21. The analogous EPA rule could be satisfied by findings of fact in a permit or a technical support document stating that a particular project will comply with NSPS and SIP requirements, or that those requirements will be applied to the source in a Title V permit.¹³
- The 2012 amendments add to the list of requirements for which a PSD permit must assure compliance the elements of WAC 173-400-113(1) and (2). WAC 173-400-113(1) lists all applicable NSPS, NESHAPs, MACT standards, emission standards adopted under Ch. 70.94, and emission standards adopted by a local air authority. Prior to the 2012 amendments, the old subsection 720(4)(a)(iii) (now deleted) omitted MACT standards, limited state and local standards to those that are SIP-approved, and limited the applicability of these requirements to “the proposed major new source or major modification”;
- WAC 173-400-113(2) states (emphasis added):
The proposed new source or modification will employ BACT *for all pollutants not previously emitted or whose emissions would increase as a result of the new source or modification.*

Prior to 2012, WAC 173-400-720(4) did not reference the minor NSR BACT requirement. WAC 173-400-113(2) does not by its terms limit the BACT requirement to pollutants for which a project causes a significant net emissions increase, nor does the term “pollutant” in WAC 173-400-113 refer only to the EPA term “regulated NSR pollutant.” To the contrary, WAC 173-400-030(3) states that “‘air pollutant’ means the same as ‘air contaminant.’”

- Subsection (4) is titled, “Applicable requirements.” This term has no defined meaning in the PSD program, but the Title V rules use the term “applicable requirements” to mean substantive requirements that must be applied to a source through a Title V permit. By using the same term in 720(4) Ecology reinforces the impression that a PSD permit must contain all of the federal, state and local provisions of law that regulate a source.

WSPA and NWPPA believe that it would be inappropriate for Ecology to seek SIP approval for a rule that could be read to require that a PSD permit contain all of the applicable requirements that belong in a Title V permit, especially when every source that receives a PSD permit will also receive a Title V permit.¹⁴ We do not assume that Ecology will interpret the language of

¹³ The closest parallel to WAC 173-400-720(4) in EPA’s PSD rules is 40 CFR 52.21(a)(2)(iii), which states that no new major stationary source of major modification to which PSD requirements apply shall begin actual construction without a permit stating that the major stationary source or major modification will meet the requirements of paragraphs (j) through (r)(5) of the PSD rules.

¹⁴ See WAC 173-401-300(1)(a)(i) (every “major source” requires a Title V permit) and WAC 173-401-200(19)(b) (“major source” includes every PSD source).

Subsection (4) in this manner, but the wording of the rule is susceptible to the interpretation outlined above.

One problem with including all federal, state and local applicable requirements in a PSD permit is that the PSD permit would either supplant or duplicate the content of the facility's Title V permit. The PSD permit also would supplant or duplicate the minor NSR approval order that Washington permitting authorities issue today in conjunction with a PSD permit. There would be no point in issuing an approval order for a project if the PSD permit included minor NSR BACT determinations and all other "applicable requirements" for the project.

In addition to specifying that a PSD permit must "assure compliance" with all of the federal, state and local requirements referenced in WAC 173-400-113(1) through (4), WAC 173-400-720 includes four more paragraphs that cross reference to various provisions of WAC ch. 173-400, none of which specifically regulate major NSR permitting. For instance, WAC 173-400-205, referenced in paragraph 720(4)(a)(iv), prohibits intermittent operation of controls based on atmospheric conditions. Paragraph (v) is especially problematic. It reads: "Allowable emission limits established under WAC 173-400-081 must also meet the criteria of 40 CFR 52.21(k)(1) and 52.21(p)(1) through (4);" WAC 173-400-081 authorizes permitting authorities to set less stringent BACT limits for startup and shutdown conditions than those imposed for steady state operations. Most such limits appear in minor NSR approval orders, not PSD permits. Paragraphs (i) and (v), taken together, arguably would require Ecology, when issuing a PSD permit, to include minor NSR BACT limits for pollutants for which the project is not major, and to show that those limits would protect the NAAQS and "air quality related values," including visibility.

Nothing in the PSD rules demands special analysis for startup or shutdown limits, especially not limits imposed through the minor NSR process. The EPA PSD rules incorporated by reference in paragraph (vi) contain everything that a SIP-approved PSD program must satisfy for protection of the NAAQS and Class I areas. By incorporating those provisions in WAC 173-400-720(a)(vi), Ecology's PSD program by definition satisfies all applicable SIP approval requirements.

Ecology intends to reopen WAC ch. 173-400 in the near future to address discrete deficiencies caused by recent federal court decisions.¹⁵ At that time, Ecology could refine WAC 173-400-720(4) to clarify the provisions of federal, state and local rules that must be imposed through the conditions of a PSD permit. For now, WSPA and NWPPA recommend that Ecology omit from its SIP submittal WAC 173-400-720(a)(i) through (v). The omission of these paragraphs should not delay SIP approval of the Washington PSD program, because the EPA PSD rules that

¹⁵ E-mail of August 8, 2013 from Nancy Pritchett to Matt Cohen (copy attached) (Ecology anticipates opening ch. 173-400 for revision "within the next few months").

Ecology proposes to incorporate in paragraph (vi) contain all of the elements that mandate the content of a PSD permit. Specifically:

- Ecology proposes to incorporate 40 CFR 52.21(j), the PSD BACT requirement;
- Ecology proposes to incorporate 40 CFR 52.21(k), the requirement that a project must not cause or contribute to pollution in violation of NAAQS or increments; and
- Ecology proposes to incorporate 40 CFR 52.21(p)(1) through (4), the requirements for projects impacting federal Class I areas.

These provisions prescribe most of the content of a PSD permit. While certain other features of the PSD rules occasionally influence permit content, paragraph (vi) of WAC 173-400-720(4)(a) incorporates those provisions as well.

A program based entirely on the PSD rules incorporated into paragraph (vi) meets the minimum requirements for SIP approval. WSPA and NWPPA support Ecology filling in certain details through its own rules, but the omission from the Proposal of paragraphs (i) through (v) should not delay SIP approval of the Washington PSD program.

In summary, WSPA and NWPPA support Ecology's plan to submit the Proposal for SIP incorporation, with two caveats. First, we recommend that Ecology include language in its support document further clarifying Ecology's intent that EPA limit the SIP to regulation of criteria pollutants to achieve and maintain the NAAQS. Second, we urge Ecology to omit from the proposal WAC 173-400-720(4)(a)(i) through (v), until Ecology has a chance to revise these provisions to limit the scope of the Clean Air Act requirements that must be enforced through PSD permit conditions."

Ecology Response:

Ecology has revised the SIP proposal to not include WAC 173-400-720(4)(a)(i) through (iv). Ecology intends to amend WAC 173-400-720(a)(i)-(iv) in the near future to clarify the meaning of the language, and will submit the revised provisions for inclusion in the SIP once they have been finalized. Ecology notes that other provisions proposed for inclusion in the SIP ensure that each of the requirements listed in WAC 173-400-720(4)(a)(i) through (iv) must be addressed in the process to issue a PSD permit, regardless of whether the requirements are listed in WAC 173-400-720(4)(a)(i) through (iv). For more information, please see Attachment B: Ecology's letter to EPA from November 1, 2013.

Comment D.ii.3

"Thank you for considering these comments. We respectfully request you to urge EPA to expedite review of the SIP submittal according to the schedule provided in Section 110(k) of the CAA."

Ecology Response:

Comment noted. Ecology intends to request EPA to review and approve this SIP proposal in conformance with the requirements of the federal Clean Air Act.

II. D. iii. Comments from Terry Mutter, Enterprise Strategy and Global EHS, Boeing

Comment D.iii.1

“The Boeing Company employs approximately 85,000 people in Washington State at numerous facilities, manufacturing commercial and military aircraft, as well as other aerospace components and related products. Our facilities are subject to various provisions of Chapter 173-400 including the major new source review provisions.

The Boeing Company has reviewed the public comments submitted by other business groups, and the Association of Washington Business (AWB). We recognize a consistent message from the regulated community, consistent with the positions we provided in our August 21 meeting with the Department. We continue to endorse those recommendations.

We wish to underscore our support for Ecology's position that the State Implementation Plan is intended to include only those requirements necessary to achieve and maintain state and national Ambient Air Quality Standards, or to secure approval of Ecology's PSD program. Ecology has a long and consistent history of enacting regulations protecting Washington State's environmental legacy. At the same time, we recognize that many of these rules do not address air contaminants for which an ambient standard has been established, and therefore are not appropriate for inclusion in a federal program designed to protect those standards, or as required under EPA's PSD program approval regulations. Therefore we fully support continuing to limit the SIP to only those provisions necessary to assure attainment of the ambient standards and satisfy PSD.

We also suggest the addition of a narrative statement in the SIP transmittal reinforcing that for the purposes of the plan the rules are intended to apply only to criteria contaminants or as necessary to implement PSD. We look forward to working with the Department to provide further clarification in future rulemaking.

On a related front, we ask that Washington requirements that are not part of the federal PSD program and are not necessary to achieving the objectives thereof, not be included in the SIP package. Minor NSR requirements and/or rules that would be included as "applicable requirements" in Title V operating permits, but are not relevant to the emission increase triggering PSD review, are not appropriate for inclusion in PSD permits. Clearly, these requirements must be complied with by the source. However, specifically articulating each one as conditions to a PSD permit, or stipulating in the permit the means of assuring compliance with these extraneous requirements, is redundant and does not advance attainment I maintenance of ambient air quality

standards. We ask that Ecology not submit WAC 173-400-720(4)(a)(i) through (v) in this SIP package until that rule is revised.”

Ecology Response

Comment noted. Please see Ecology Responses Comment D.ii.1 and Comment D.ii.2.

II. D. iv. Comments from Michael Ennis, Government Affairs, Association of Washington Businesses

Comment D.iv.1

“The Association of Washington Business (AWB) is providing comments on a Department of Ecology (ECY) proposal to submit portions of Chapter 173-400 Washington Administrative Code for incorporation into the Washington State Implementation Plan (SIP).

Formed in 1904, the AWB is Washington’s oldest and largest statewide business association, with more than 8,100 members, including the Western States Petroleum Association (WSPA) and the Northwest Pulp & Paper Association (NWPPA). AWB serves as both the state’s chamber of commerce and the manufacturing and technology association.

AWB has reviewed the public comments submitted by WSPA and NWPPA and fully agrees with their positions.

More specifically, AWB recognizes and generally supports ECY’s effort to update the rule and its application to the Environmental Protection Agency (EPA) for inclusion in the SIP. AWB also appreciates ECY’s intent to omit several provisions “that are not related to criteria pollutants regulated under the SIP or not essential for meeting and maintaining the National Ambient Air Quality Standards (NAAQS),” and for ECY’s overall support of the notion that non-criteria pollutant regulations cannot be part of the SIP.

Given recent court challenges over the SIP, AWB encourages Ecology officials to further clarify their intent by adding language that definitively limits the scope of the SIP to criteria pollutants. Confusion may continue to exist on whether non-criteria pollutants are regulated through the SIP.”

Ecology Response

Comment noted. Please see Ecology’s Response to Comment D.ii.2.0

Comment D.iv.2

“AWB also requests that ECY officials limit the scope of the Prevention of Significant Deterioration (PSD) permit requirements by omitting the rules proposed for SIP incorporation paragraphs (i) through (v) of subsection (4) (a) of WAC 173-400-720. This section could be interpreted to expand PSD permit conditions beyond what has been approved in the SIP.”

Ecology Response

Comment noted. Please see Ecology Response to Comment D.ii.2.

III. Copies of all written comments and a transcript of oral testimony

1. Danna Dal Porto “SIP final”
2. Patricia Martin “SIP comment part 1 – request for permits to be added to SIP”
3. Patricia Martin “SIP comments part 2”
4. Patricia Martin “SIP early comment”
5. Patricia Davis “wood smoke issues”
6. Helen Zenon
7. Monte Robinson “pollution prevention”
8. Doris Deamud
9. Port Townsend Air Watchers “Ch173-400WAC SIP Revision, comments”
10. Port Townsend Air Watchers “Request for Extension re Ch173-400WAC SIP Revision”
11. Environmental Protection Agency, Region 10 “EPA comments to Ecology 9-20-13”
12. Association of Washington Businesses “AWB SIP revision comments Final”
13. Boeing “Boeing Comments 2013-09-19”
14. Western States Petroleum Association and Northwest Pulp and Paper Association
“WSPA and NWPPA Comments on Washington SIP”
15. SIP Hearing Transcript

September 17, 2013

Comments regarding the Washington State SIP

I am a resident of Quincy, Washington and for the past three years I have been deeply interested in air quality in and around my region. I am disappointed in some actions by Ecology. Our community has 141 permitted industrial sized diesel generators without emission controls within our UGA. We do not have a local air authority so our community has no protections. We have repeatedly requested air monitoring for detailed emission information from the data centers, truck traffic, train traffic and other air quality sources but our requests have been denied. We have repeatedly requested a method to check if industry is in compliance with their permit and that has been denied. I want the SIP to strengthen protections for state residents and I want regulations to be clear and focused on citizen health. I have the following observations and comments on the proposed SIP document. I believe that everything that is a state requirement needs to be included in the SIP and that all regulations be federally enforceable.

I looked at the “overview chart” that had columns indicating those items were “revised”, “new” or “removed”. None of those items had dates to indicate when those changes were made. Did these changes go through any kind of process? Was the public invited to comment on these changes? The lack of information regarding the current status of these provisions is disturbing.

I want to have the State of Washington toxic air pollutant rules approved and adopted by the EPA under Section 112(l). Our state laws are more stringent than EPA minimums and I want them adopted by EPA so they are federally enforceable.

Why is Ecology leaving material out of the SIP? For example, I disagree that the “Definition” can be eliminated from the SIP. Removing WAC 173-400-030 (definitions) removes the state’s more stringent definitions from federal enforceability. For example, this would leave out the requirement for allowable emissions (-030(5)) that require new sources to meet future emissions limitations. This would equate to the use of Tier 4 vs the Tier 2 in Quincy. Also, the “emission rate of a source [is] calculated using the maximum rated capacity” unless it is under a federally enforceable permit limit. This would not be in the SIP and therefore not federally enforceable.

I am requesting that Ecology include all the regulations in the SIP so that the state’s more stringent provisions are indirectly included through -110, -112, -113, and -171.

I remind Ecology that the emergency engine rule under 173-400-930 is not supported by statute, which requires BACT on all pollution sources. Ecology is not submitting -930 regarding emergency engines because it would be found to be inconsistent with state statute.

State statute does not distinguish between major and area (non-major) sources. State statute recognizes (23) “Stationary source” meaning any building, structure, facility or

installation that emits or may emit any air contaminant. Ecology has created a new section. Permitting of major stationary sources and major modifications to major stationary sources 700-930. This new section impermissibly includes exemptions for emergency engines (>500hp but less than 2000hp) for the NOC application process: exempts area (non-major) sources from PSD requirements.

Ecology has not included any provisions regarding precursors to ozone or PM2.5 except in non-attainment areas. This is contrary to EPA's directive.

By reducing the air quality requirements, while upholding clean air authorities rights to retain their more stringent standards, the state has subjected areas of the state without clean air authorities to less stringent standards. Areas subject immediately to the less stringent standards are rural Washington State with high poverty and minority populations.

No state, or state agency is allowed to reduce emission limitations already in a SIP. 42 USC 7416 (2) This anti-backsliding provision is intended to protect our air quality and deter industry influence on those charged with protecting our health.

Ecology has applied a "community wide approach" to the permitting process in Quincy. I have looked at the state guidelines and I cannot find the basis for this procedure in statute. I have asked for background on the adoption of the rule and have received no response. Is "community wide" part of the state's regulatory guidelines or was it invented to be applied to Quincy in order to allow multiple data centers inside this city?

I want the state guidelines to allow for citizen requests for air monitoring to provide accurate emission information from toxic air sources. I am requesting air monitoring for Quincy so we can have accurate real-time data not modeling for our permits.

Throughout the permitting process in Quincy for this flock of data centers, citizens have requested data on compliance with permits once the data center is up and running. We have had multiple power outages in our area from storms, electrical malfunctioning of equipment and human error. We have witnessed the dark diesel emissions from the stacks of the generators and we know those engines are running. The data centers have specific hourly limits on generator operation yet there is no way for local residents to know if the data center is within their permit limits. I would like language in the SIP to allow for citizens to know the operational hours of the data centers.

I appreciate this opportunity to be involved in the SIP revision. I have made my comments based on the July 2, 2013 paperwork because I did not receive any documents and I had this information forwarded to me. Today I learned there is a newer document but I do not have time to review this paperwork at this time. I am on an Ecology emailing list but I did not receive any notification or documents for comments on the SIP. Since I have been actively involved in air quality issues since 2009, I do not understand why I was excluded from notification. I have tried to read and understand the many

aspects of the air quality permitting process but I do not believe the regulations are designed to be understood by the general public.

The specific part of the regulations that needs repair and attention is there are no regulations that allow the public to see, read and understand if an industry, that receives an air operations permit, is operating within the limits of that permit. I was present at the Microsoft presentation before the Pollution Control Hearings Board and the operator of the Quincy Microsoft facility told the Board that the Microsoft facility would operate their diesel engines as long as necessary to keep the facility operational in the event of a widespread power outage. I believe each and every one of the Quincy data centers would operate their 141 diesel engines as long as necessary in the event of a power outage. Electrical power is not perfect and I believe that a widespread outage is inevitable in Quincy. When those diesel engines operate without emission controls, my community is at risk. Right now there is a haze over my community and I believe that haze is man made and is composed of diesel particulates. That haze is avoidable and regulations should have been imposed to keep the air clean.

Sincerely,

Danna Dal Porto
16651 Road 3 NW
Quincy, WA 98848

September 19, 2013

Department of Ecology
ATTN: Anya Caudill
PO Box 47600
Olympia, WA 98504-7600

RE: Air Quality Permits for adoption into SIP

Dear Ms. Caudill:

There are currently six (6) data centers located in Quincy, WA that have been permitted to install and operate a total of 158 locomotive sized diesel engines. Each of these data centers – Microsoft, Dell, Intuit, Yahoo!, Sabey-Intergate and Vantage – has requested to voluntarily limit their emissions. Regulatory orders that limit a source's potential to emit must be federally enforceable and adopted into the State Implementation Plan (SIP). 40 CFR 52.2495

Attached please find a copy of each of these permits – except Intuit's -- for inclusion in the SIP. Intuit's Approval Order is not available online for the public, but I request that it and other facilities operating under regulatory orders that limit their potential to emit be included in the SIP. Others may be found at: http://www.ecy.wa.gov/programs/air/tier2/Tier2_final.html.

Celite, also located in Quincy, operates under a voluntary emission cap and its permit must also be federally enforceable. Please see that it is also included in the SIP application to the EPA.

Thank you.

Patricia Anne Martin
617 H St. SW
Quincy, WA 98848
(509) 787-4275

Attachments:

Yahoo! Approval Order 11AQ-E399
Microsoft Approval Order 10AQ-E374
Dell Approval Order 11AQ-E421
Sabey Intergate Approval Order 11AQ-E424
Vantage Approval Order 12AQ-E450
Celite 10AQ-E339



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

March 16, 2010

Mr. John Moritz, Plant Manager
Celite Corporation - Quincy Operations
P.O. Box 636
Quincy, WA 98848-0636

Re: Ecology Approval of Voluntary Emissions Limitations Approval Order No. 10AQ-E339

Dear Mr. Moritz:

The Department of Ecology Air Quality Program (AQP) has approved the Celite project to voluntarily limit emissions and avoid the Federal Major Source status associated with unlimited operation of the Celite Quincy Plant. Ecology's approval is based on the Notice of Construction application submitted on December 22, 2008, and supplements provided on May 28, June 30, and July 17, 2008 and completed in February 2010. The preliminary determination of approval was made available to the public for 30 days and no comments other than Celite's were received. Please review the conditions of approval in the order carefully. The Approval Conditions will be critical in future compliance evaluations for the facility.

Please note that Approval Condition 31.4 requires that Celite maintains a legible copy of this Order and the O&M manual on-site for access by employees operating the equipment, and for Ecology during inspections.

Ted Sturdevant, Director of the Department of Ecology, is committed to streamlining our permitting procedures and to maintaining a high level of staff responsiveness and assistance to permit applicants. Enclosed in this correspondence is a Permit Feedback Questionnaire card. Please complete and return the Permit Feedback Questionnaire card to Ted to help us provide better service to you and our other clients. If you have any question, please contact me at: rkos461@ecy.wa.gov or 509-329-3493.

Sincerely,

Robert W. Koster, P.E.
Commercial/Industrial Unit
Regional Air Quality Program

RWK:bc

Enclosures: Approval Order Number 10AQ-E339
Permit Questionnaire Card

By certified mail 7009 0080 0000 8680 2761

FILE COPY





Your Opinion of our Permitting Service is Important to Us

Please tell us how we did on permit 10AQ-E339

Service Being Rated	Rating	Rating Score
Ecology staff were helpful.		1= Strongly disagree 2= Disagree 3= Agree 4= Strongly Agree 5= Does Not Apply
Ecology staff were courteous.		
Ecology staff worked with me to find innovative ways to solve problems.		
Ecology staff informed me about what was needed to submit a complete application.		
Ecology staff informed me about how long it would take to get a permit decision.		
The permit forms were easy to use.		
The permit application guidance was clear.		
The permit decision was timely.		
Comments/How can we improve?		
Date: _____ Would you like us to contact you about your comments?		
Name (optional): _____		Phone: _____

Thank You! *Jay Manning, Director, Department of Ecology*
 TED STURDEVANT

v407 7 11

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF APPROVING VOLUNTARY)
 LIMITATIONS FOR CELITE CORPORATION'S) **APPROVAL ORDER No. 10AQ-E339**
 QUINCY DIATOMACEOUS EARTH PROCESSING)
 PLANT)

To: Celite Corporation
 16419 Road 10.5 N.W.
 Quincy, WA 98848

The equipment evaluated for this approval order consists of the following:

Process Equipment and ID	Control Device and ID	Manufacturer, Model	Specifications
Screen G-307	M-337	Mikro-Pul	10,600 acfm, 0.010
Screens G-308 A & B	Fabric	1965-10-20	gr/dscf
Overflow from BH	Filter		
M-316			
Soda Ash Silo	M-315	Mikro-Pul	1650 acfm, 0.010
	Fabric	31-8-220	gr/dscf
	Filter		
Bulk Rail Car Filling;	M-316	Mikro-Pul	12000 acfm, 0.010
Course Packers/filter	Fabric	320-STRH-	gr/dscf
aid (bagging); M-311	Filter	10-20	
cyclone			
F-303 Waste Bin;	M-331A	Mikro-Pul	20,000 acfm,
Crude Building Truck	Fabric	2215-10-20-	combined stack,
Unload, 50 # bag	Filter	TRH	0.010 gr/dscf
press in Packaging	M-331B	Mikro-Pul	
Building	Fabric	2215-10-20-	
	Filter	TRH	
(2) Haver Fines	M-416	Mikro-Pul	10,600 acfm,
Packers, Main Tower	Fabric	320S-8-35	0.010 gr/dscf
	Filter		
F-315 Recycle Bin;	M-320	Mikro-Pul	9000 acfm, 0.010
G301 Hammermill;	Fabric	1445-8-20-	gr/dscf
G303 shaker screen;	Filter	TRH	
Bottom Vents from 3-			
50# Packers (South			
End)			

APPROVAL ORDER No. 10AQ-E339

Celite Corporation - Quincy

March 16, 2010

Page 2

F-507 Recycle Bin-Coarse	M-503 Fabric Filter	Mikro-Pul S25S-4-30	2200 acfm, Combined Stack, 0.005 gr/dscf
F-509 Storage Bin-Fines	M-504 Fabric Filter	Mikro-Pul S36S-4-30	
3-50# Baggers: 2-Ultra-fine, 1-A Bin Fines; Natural Bin	M-510 Fabric Filter	Mikro-Pul 42-8-65C	2000 acfm, 0.005 gr/dscf
Stationary Vacuum (NSR Exempt)	M-511 Fabric Filter	Mikro-Pul 55-10-220C	1050 acfm, 0.010 gr/dscf
Portable Vacuum (NSR exempt)	Portable Vacuum Fabric Filter	Hi-Vac 320 Portable	350 acfm, 0.010 gr/dscf
F507 Fill Spout: Semi-bulk Packaging; Coarse Bagging	M533 Fabric Filter	Mikro-Pul 36-4BR	800 acfm, Combined Stack, 0.005 gr/dscf
F-509 Fill Spout Semi-bulk Packaging; Fines Bagging	M-534 Fabric Filter	Mikro-Pul 36-4BR	
B301 Kiln and B303 Pre-heater and wet end classifiers and delumper	Wet Cylone, Venturi, Knockout Vessel	ASM, S&K 7015, ASM	39000 dscfm, PM: 0.040 gr/dscf, & 13.37 lb/hr CO: 17.5 lb/hr, & <300ppmvd@7%O2, NOx:10 lb/hr, & <100ppmvd@7%O2

In relation to the above, the Notice of Construction application submitted on December 22, 2008, supplemented on May 28, June 30, July 17, and with information collected on October 29, 2009, and February 2010, the Department of Ecology, State of Washington, pursuant to RCW 70.94.152, and WAC 173-400-091, and WAC 173-400-113, following the evaluation outlined in the associated Technical Support Document dated March 2010, makes the following determinations:

1. The proposed project, if constructed and operated as herein required, will be in accordance with applicable rules and regulations as set forth in Chapter 173-400 and Chapter 173-460 and Chapter 173-401 of the Washington Administrative Code, and the operation of the equipment listed above, at the location proposed, will not result in ambient air quality standards being exceeded.
2. The proposed project, if constructed and operated as herein required, will provide all known available and reasonable methods of emission control.

THEREFORE, IT IS ORDERED that the project described in said Notice of Construction application and more specifically detailed in plans, specifications and other information submitted to the Department of Ecology in reference thereto, is approved for construction, installation, and operation, provided the following conditions are met:

APPROVAL CONDITIONS:

1. Administrative Condition: Upon issuance of this approval order, Grant County Approvals dated August 13, 1985, and October 24, 1990, and Ecology Approval Orders Nos. DE 96AQ-E105, DE 96AQ-E105 Amendment 1, DE96AQ-E108, DE97AQ-E120, DE 97AQ-E147, DE 97AQ-E148, DE 97AQ-E148 Amendment 1, DE 97AQ-E126, 03AQER-5295, 01AQER-3266 and 01AQER-3266 Amendment 1, are hereby rescinded and replaced by the approval conditions of this Order.

Facility-wide:

2. Facility production is limited to 104,832 tons on a rolling 12-month basis.
3. Ore processing activities are limited to 7488 hours in any 12-month period.
4. Total natural gas utilized at this facility shall be no more than 521.9 million cubic feet in any 12 month period.
5. No process equipment shall be operated unless it is vented through control equipment maintained and operated in accordance with this approval and the facility operations and maintenance plan.

Equipment Specific:

6. There shall be no visible emissions (zero opacity) from the kiln pre-heat by-pass stack when the kiln feed conveyor is operating.
7. Fuel (natural gas) flow to the kiln shall not exceed 9,804 cubic feet per hour (10mmBTU/hr) at any time the kiln pre-heat bypass stack is in use.
8. There shall be no natural gas flow to the pre-heater burner at any time that there is gas flow out of the kiln pre-heat bypass stack.
9. The temperature controller set-point at the inlet to Cyclone M-303 shall not exceed 300 degrees Fahrenheit, except during periods of start-up, shut-down, and malfunctions (SSM). During these periods, not to exceed 30 minutes for any event, the temperature may be manually adjusted but such operation shall be described fully in the facility operation and maintenance plan. Ore flow to the wet-end shall be halted during these periods.

Fabric Filters:

10. All fabric filters except the portable Hi-Vac 320 vacuum at this facility shall be equipped with manufacturer's recommended filter failure instrumentation. The instrumentation shall produce an audible or visual alarm in a location where operators are normally present (e.g. the control room). The O&M manual required in Condition 26 shall include a corrective action plan and procedures to remove the process equipment from service as soon as possible in the event of filter failure. The O&M manual shall also include procedures to be followed to maintain all monitoring equipment, including monitors for filter failure and pressure drop, in good condition.
11. Fabric filter M-315 shall not exceed a total (filterable and condensable) particulate matter emission rate of 0.11 lb/hour nor a total (filterable and condensable) particulate concentration of 0.010 grains per dry standard cubic foot, measured on the frequency in Condition 25.7, measured in accordance with condition 25.9.2. Visible emissions from this fabric filter shall not exceed 10% opacity measured in accordance with condition 25.9.1.
12. Fabric Filter M-316 shall not exceed a total (filterable and condensable) particulate matter emission rate of 0.83 lb/hour nor a total (filterable and condensable) particulate concentration of 0.010 grains per dry standard cubic foot measured on the frequency in Condition 25.7, and in accordance with Condition 25.9.2. Visible emissions from this fabric filter shall not exceed 10% opacity measured in accordance with Condition 25.9.1.
13. Fabric Filter M-320 shall not exceed a total (filterable and condensable) particulate matter emission rate of 0.76 lb/hour nor a total (filterable and condensable) particulate concentration of 0.010 grains per dry standard cubic foot measured on the frequency in Condition 25.7, and in accordance with Condition 25.9.2. Visible emissions from this fabric filter shall not exceed 10% opacity measured in accordance with Condition 25.9.1.
14. Fabric Filter M-331A shall not exceed a total (filterable and condensable) particulate matter emission rate of 0.80 lb/hour nor a total (filterable and condensable) particulate concentration of 0.010 grains per dry standard cubic foot measured on the frequency in Condition 25.7, and in accordance with Condition 25.9.2. Visible emissions from this fabric filter shall not exceed 10% opacity measured in accordance with Condition 25.9.1.
15. Fabric Filter M-331B shall not exceed a total (filterable and condensable) particulate matter emission rate of 0.80 lb/hour nor a total (filterable and condensable) particulate concentration of 0.010 grains per dry standard cubic foot measured on the frequency in Condition 25.7, and in accordance with Condition 25.9.2. Visible emissions from this fabric filter shall not exceed 10% opacity measured in accordance with condition 25.9.1.
16. Fabric Filter M-337 shall not exceed a total (filterable and condensable) particulate matter emission rate of 0.85 lb/hour nor a total (filterable and condensable) particulate concentration of 0.010 grains per dry standard cubic foot measured on the frequency in Condition 25.7, and in accordance with Condition 25.9.2. Visible emissions from this fabric filter shall not exceed 10% opacity measured in accordance with Condition 25.9.1.
17. Fabric Filter M-416 shall not exceed a total (filterable and condensable) particulate matter emission rate of 0.85 lb/hour nor a total (filterable and condensable) particulate concentration of 0.010 grains per dry standard cubic foot measured on the frequency in Condition 25.7, and in accordance with

- Condition 25.9.2. Visible emissions from this fabric filter shall not exceed 10% opacity measured in accordance with Condition 25.9.1.
18. Fabric Filter M-503 shall not exceed a total (filterable and condensable) particulate matter emission rate of 0.10 lb/hour nor a total (filterable and condensable) particulate concentration of 0.005 grains per dry standard cubic foot measured on the frequency in Condition 25.7, and in accordance with Condition 25.9.2. Visible emissions from this fabric filter shall not exceed 5% opacity measured in accordance with Condition 25.9.1.
 19. Fabric Filter M-504 shall not exceed a total (filterable and condensable) particulate matter emission rate of 0.10 lb/hour nor a total (filterable and condensable) particulate concentration of 0.005 grains per dry standard cubic foot measured on the frequency in Condition 25.7, and in accordance with Condition 25.9.2. Visible emissions from this fabric filter shall not exceed 5% opacity measured in accordance with Condition 25.9.1.
 20. Fabric Filter M-510 shall not exceed a total (filterable and condensable) particulate matter emission rate of 0.09 lb/hour nor a total (filterable and condensable) particulate concentration of 0.005 grains per dry standard cubic foot measured on the frequency in Condition 25.7, and in accordance with Condition 25.9.2. Visible emissions from this fabric filter shall not exceed 5% opacity measured in accordance with Condition 25.9.1.
 21. Fabric Filter M-533 shall not exceed a total (filterable and condensable) particulate matter emission rate of 0.03 lb/hour nor a total (filterable and condensable) particulate concentration of 0.005 grains per dry standard cubic foot measured on the frequency in Condition 25.7, and in accordance with Condition 25.9.2. Visible emissions from this fabric filter shall not exceed 5% opacity measured in accordance with Condition 25.9.1.
 22. Fabric Filter M-534 shall not exceed a total (filterable and condensable) particulate matter emission rate of 0.03 lb/hour nor a total (filterable and condensable) particulate concentration of 0.005 grains per dry standard cubic foot measured on the frequency in Condition 25.7, and in accordance with Condition 25.9.2. Visible emissions from this fabric filter shall not exceed 5% opacity measured in accordance with Condition 25.9.1.

Kiln Preheat Bypass and Kiln Scrubber:

23. The exhaust through the kiln preheat bypass stack (operated only during pre-heating and start-up and shut-down of the kiln) shall not exceed any of the following, measured on the frequency in Condition 25.8, in accordance with Conditions 25.9.2, 25.9.3 and 25.9.4:
 - 23.1. Total (filterable and condensable) Particulate Matter: 0.075 pounds per hour and a concentration of 0.006 grains per dry standard cubic foot.
 - 23.2. Carbon Monoxide (CO): 0.13 pounds per hour and a concentration of 20 ppmvd corrected to 7% oxygen.
 - 23.3. Nitrogen Oxides (NOx): 1.04 pounds per hour and a concentration of 100 ppmvd corrected to 7% oxygen.
 - 23.4. Visible Emission in the exhaust from the kiln bypass stack shall not exceed 10% opacity measured in accordance with Condition 25.9.1.

24. The exhaust of the wet cyclone/venturi/knock-out vessel shall not exceed any of the following, measured on the frequency in Condition 27.8, in accordance with Conditions 25.9.2, 25.9.3 and 25.9.4:
- 24.1. Total (filterable and condensable) Particulate Matter: 13.37 pounds per hour and a concentration of 0.040 grains per dry standard cubic foot.
 - 24.2. Carbon Monoxide (CO): 17.5 pounds per hour and a concentration of 300 ppmvd corrected to 7% oxygen.
 - 24.3. Nitrogen Oxides (NO_x): 10 pounds per hour and a concentration of 100 ppmvd corrected to 7% oxygen.
 - 24.4. Visible Emission in the exhaust from the wet cyclone/venturi/knockout vessel shall not exceed 10% opacity measured in accordance with Condition 25.9.1.

25. TESTING REQUIREMENTS

- 25.1. Testing Logistics - The permittee shall provide sampling ports satisfying the criteria for the sampling methods approved by Ecology, safe access to sampling points and ports, and utilities for sampling and testing.
- 1.1. Number of Test Runs - Number of Test Runs - Performance or compliance testing of each piece of pollution control equipment shall consist of three separate runs of at least the length of the averaging period that the controlled-process equipment production-rate data is collected, but no less than 60-minutes each (e.g. for production data collected per eight-hour shift, triplicate eight hour test runs are required).
- 25.2. Throughput during Testing - During testing, the process equipment controlled by the device(s) tested shall be operated at a minimum of ninety percent (90%) of rated capacity for equipment with less than 12 months operating history, or 90 to 110% of the maximum process rate recorded during the preceding 12 month period for equipment operated for 12 months or more. Operation of the process during testing outside of the specified range may be proposed, but may result in an operational restriction to the throughput measured during the test.
- 25.3. Submittal of Performance Test Plan - A written test protocol that includes a description of the equipment to be tested, the process and control device operating information to be collected during the test, and the sampling and analytical method(s) proposed, shall be submitted to Ecology at least 30 calendar days prior to the start of any performance test.
- 25.4. Notification of Inability to Conduct Performance Test - If the permittee is unable to conduct any performance test as scheduled, Ecology shall be notified at least 24-hours before the test at the address under "Reporting", Condition 22, or via telephone at 509-329-3400.
- 25.5. Plant Operator during Testing - The plant process equipment shall be operated and controlled by normal plant operators during the period when the performance testers are on-site to conduct testing and during actual testing.
- 25.6. Performance or Compliance Testing Results - The results of all initial performance testing and all other periodic performance testing shall be sent to the address at APPROVAL CONDITION 27. One copy of the completed test report shall be submitted no later than 60-days after the last day of the testing.
- 25.7. An initial compliance test shall be conducted on Fabric Filters M315, M331A, M331B, and M337 to determine compliance with Conditions 11, 14, 15, and 16 respectively

- within 180 days of issuance of this approval. Within one year following the first compliance test but no sooner than 6 months after, a second compliance test shall be performed on Fabric Filters M315, M331A, M331B, and M337 to determine compliance with Conditions 11, 14, 15, and 16 respectively. Fabric filters not identified in this condition shall be tested for compliance upon reconfiguration of air handling or process equipment exhausting to the filter, or as requested by Ecology in accordance with WAC 173-400-105(4).
- 25.8. Kiln Scrubber "main stack" and by-pass stack Performance/Compliance testing for CO, NOx, PM, and visible emissions shall be performed initially before June 15, 2010, and then once in every 12 month period thereafter.
- 25.9. Performance and compliance testing shall utilize the following test methods unless an alternative method is requested by the permittee and approved by Ecology in writing:
- 25.9.1. Visual determination of the opacity emissions from stationary sources per Title 40 Code of Federal Regulations, Part 60, Appendix A, Method 9. (referenced as Method 9)
 - 25.9.2. Filterable Particulate Matter per 40 CFR 60, Appendix A, Method 5 and Condensable Particulate Matter per 40 CFR 51, Appendix M, Method 202
 - 25.9.3. NOx per 40 CFR 60, Appendix A, Method 7E
 - 25.9.4. CO per 40 CFR 60, Appendix A, Method 10
 - 25.9.5. Plant surveys for the presence of opacity from control devices shall be performed using the techniques and procedures in 40 CFR 60, Appendix A, Method 22.

26. OPERATION & MAINTENANCE (O&M) MANUAL

A site-specific O&M manual for each dust collector, each filter failure indicator, the kiln, preheater and scrubber system, and the data acquisition and management system shall be developed within 90 days of the effective date of this Order, and followed. Manufacturer's instructions may be referenced. A facility fugitive dust control plan shall be prepared and incorporated into the facility O&M manual. The O&M manual shall be reviewed annually and updated to reflect any modifications to the equipment or its operating procedures. The O&M manual for the equipment shall at a minimum include a description of:

- 26.1. normal operating parameters (initially including the parameter ranges specified in Approval Order No. 01AQER-3266, Amendment 1),
- 26.2. instrumentation to monitor operating parameters,
- 26.3. instrument and data quality assurance practices in accordance with 40 CFR 60.674 for bag leak detection systems and for the parametric monitoring instrumentation,
- 26.4. a maintenance schedule including kiln and preheater burner tuning frequency,
- 26.5. monitoring and recordkeeping requirements, and
- 26.6. actions the facility will take in the event of abnormal equipment (process or pollution control) operation.

27. NOTIFICATIONS & SUBMITTALS

Any notifications and submittals required by the approval conditions of this Order shall be sent to:

Washington State Department of Ecology
Regional Air Quality Section
4601 N. Monroe
Spokane, WA 99205-1295

Or to ciairreporting@ecy.wa.gov if requested electronically.

28. Monitoring: The following monitoring equipment shall be installed, maintained, and operated at any time the process or control equipment operates:

- 28.1. Pressure differential monitoring instrumentation across each fabric filter and each scrubber, including specific instrumentation across the venturi throat. The instrumentation must be certified by the manufacturer to within 1 inch water gauge pressure and calibrated annually in accordance with manufacturer's instructions.
- 28.2. Filter failure instrumentation on all fabric filters. The failure indication shall produce an audible alarm in a place where operators are normally present (e.g. the control room). Bag leak detection systems shall be certified by the manufacturer to detect concentrations of Particulate Matter of 0.00044 grains per dscf or less.
- 28.3. Wet scrubber water flow and water inlet line pressure.
- 28.4. Kiln preheat bypass stack gas flow.
- 28.5. In-line preheater combustion chamber recording temperature instrumentation. The instrument shall be accurate to within +/- 5 degrees Fahrenheit, properly maintained and operated at all times that there is fuel flow to the preheater burner.
- 28.6. Kiln outlet recording temperature instrumentation. The instrument shall be accurate to within +/- 5 degrees Fahrenheit, properly maintained and operated at all times that there is fuel flow to the kiln burner.
- 28.7. Totalizing fuel meters on the kiln fuel supply and separately on the preheater burner fuel supply.

29. Recordkeeping

The following data shall be recorded and maintained in files readily accessible to representatives of Ecology. The records shall be kept for no less than 60 months.

- 29.1. Wet Cyclone and Venturi Scrubber Water flow and inlet water line pressure shall be recorded every 24 hours.
- 29.2. Differential pressure across the venturi throat and across the filter in each baghouse shall be recorded every 24 hours.
- 29.3. Kiln outlet temperature and the M303 Cyclone inlet temperature shall be recorded at least every 24 hours.
- 29.4. Records of any filter failure alarms including date, time, corrective action(s) taken, and time to return the filter to service shall be maintained.
- 29.5. Monthly records of the hours of operation of all equipment on-site shall be maintained.
- 29.6. Daily and monthly records of facility production shall be maintained.

- 29.7. Daily and monthly records of fuel utilized by the kiln and separately, the preheater shall be maintained.
- 29.8. Records of any maintenance activities shall be maintained. These shall include the device or process maintained, and the actions performed. Burner (kiln, preheater, or other) tuning activities shall be recorded and shall include date and condition at start and end of any periodic tuning.

30. Reporting

- 30.1. The permittee shall provide the notification of physical or operational change required by 40 CFR 60.7(4) to the address in Condition 27, above. The notification shall provide the information required by 40 CFR 60.7(4) for each change at the facility that (resulted or) results in applicability of 40 CFR 60 Subpart UUU to any portion of the facility.
- 30.2. Annually, hours of operation of control devices, production, and other operational details will be requested by Ecology to prepare a facility emission inventory. The request will specify content and format of that submittal.

31. GENERAL CONDITIONS

- 31.1. **Visible Emissions** - No visible emissions shall be allowed beyond the property line, as determined by opacity readings.
- 31.2. **Commencing/Discontinuing Construction and/or Operations** - This Approval Order shall become void if construction of the equipment described in the NOC application is not commenced within eighteen (18) months after receipt of the Approval Order, or if construction or operation of the equipment described in the NOC application is discontinued for a period of eighteen (18) months.
- 31.3. **Compliance Assurance Access** - Access to the source by EPA or Ecology shall be allowed for the purposes of compliance assurance inspections. Failure to allow access is grounds for revocation of the Approval Order for this project.
- 31.4. **Availability of Approval Order and O&M Manual** - Legible copies of this Approval Order and the O&M manual(s) shall be readily available to employees in direct operation of the equipment described in the NOC application and shall be available for review upon request by Ecology.
- 31.5. **Equipment Operation** - Operation of the equipment identified in this Approval Order shall be conducted in compliance with all data and specifications submitted as part of the NOC application and in accordance with the O&M manual, unless otherwise approved in writing by Ecology.

Emissions that result from failure to follow the requirements of the O&M manual or manufacturer's instructions may be considered proof that the equipment was not properly operated, maintained and tested.
- 31.6. **Outdoor Burning** - As provided in WAC 173-425, no open burning is allowed on this site unless authorized by Ecology.

- 31.7. **Modification to Facility or Operating Procedures** - Any modification to the equipment described in the NOC application or its operating procedures, contrary to information in the NOC application, shall be reported to Ecology at least 30 days before such modification. Such modification may require a new or amended Approval Order.
- 31.8. **Activities Inconsistent with this Approval Order** - Any activity undertaken by the permittee or others, in a manner that is inconsistent with the NOC application and this Approval Order shall be subject to Ecology enforcement under applicable regulations.
- 31.9. **Obligations under Other Laws or Regulations** - Nothing in this Approval Order shall be construed to relieve the permittee of its obligations under any local, state or federal laws or regulations.
- 31.10. **Fees** - Per WAC 173-400-116, this Approval Order and related regulatory requirements have a fee associated for review and issuance.

All plans, specifications, and other information submitted to the Department of Ecology relative to this project and further documents and any further authorizations or approvals or denials in relation thereto shall be kept at the Eastern Regional Office of the Department of Ecology in the "Air Quality Controlled Sources" files and by such action shall be incorporated herein and made a part hereof.

Nothing in this approval order shall be construed as obviating compliance with any requirement of law other than those imposed pursuant to the Washington Clean Air Act and rules and regulations thereunder.

A two (2) month testing and break-in period is allowed, after any part or portion of this project becomes operational, to make any changes or adjustments required to comply with applicable rules and regulations pertaining to air quality and conditions of operation imposed herein. Thereafter, any violation of such rules and regulations or of the terms of this approval shall be subject to the sanctions provided in Chapter 70.94 RCW.

Authorization may be modified, suspended, or revoked in whole or part for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this authorization;
2. Obtaining this authorization by misrepresentation or failure to disclose fully all relevant facts.

The provisions of this approval order are severable and, if any provision of this authorization, or application of any provisions of this authorization to any circumstance, is held invalid, the application of such provision to their circumstances, and the remainder of this authorization, shall not be affected thereby.

You have a right to appeal this Approval Order. To appeal this you must:

- File your appeal with the Pollution Control Hearings Board within 30 days of the "date of receipt" of this document. Filing means actual receipt by the Board during regular office hours

- Serve your appeal on the Department of Ecology within 30 days of the "date of receipt" of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). "Date of receipt" is defined at RCW 43.21B.001 (2).

Be sure to do the following:

- Include a copy of (1) the permit you are appealing and (2) the application for the permit.
- Serve and file your appeal in paper form; electronic copies are not accepted.

1. To file your appeal with the Pollution Control Hearings Board

Mail appeal to:

The Pollution Control Hearings Board
PO Box 40903
Olympia WA 98504-0903

Deliver your appeal in person to:

The Pollution Control Hearings Board
4224 - 6th Ave SE Rowe Six, Bldg 2
Lacey, WA 98503

2. To serve your appeal on the Department of Ecology

Mail appeal to:

The Department of Ecology
Appeals Coordinator
P.O. Box 47608
Olympia, WA 98504-7608

OR

Deliver your appeal in person to:

The Department of Ecology
Appeals Coordinator
300 Desmond Dr SE
Lacey, WA 98503

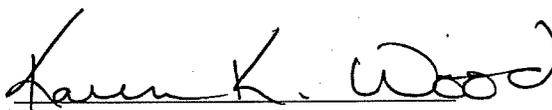
3. And send a copy of your appeal to:

Karen Wood
Department of Ecology
Eastern Regional Office
4601 N. Monroe Street
Spokane, WA 99205-1295

DATED at Spokane, Washington, the 16th day of March, 2010.


Robert Koster, P.E.
Regional Air Quality Section
Eastern Regional Office
Department of Ecology
State of Washington




Karen K. Wood, Section Manager
Regional Air Quality Section
Eastern Regional Office
Department of Ecology
State of Washington

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF APPROVING A NEW
CONTAMINANT SOURCE FOR CELITE
CORPORATIONS QUINCY DIATOMACEOUS
EARTH PROCESSING PLANT

) **2009 Synthetic Minor**
) **Technical Support Document**
) **November 20, 2009**
)

PERMITTING HISTORY

Celite Corporation operates a diatomaceous earth (DE) processing facility at 16149 Road 10.5 N.W., Quincy, Washington. A legal description of this location is the NE ½ of the SE ¼ of Section 8, Township 20 N, Range 24 E, Willamette Meridian.

The original permitting of this facility was under the authority of the Grant County Clean Air Authority (GCCAA). Ecology was able to locate approvals issued in August of 1985 (to Witco Chemical Corporation) and October of 1990 (also to Witco).

In 1993, GCCAA ceased operations and the Washington Department of Ecology (Ecology) assumed responsibility for air quality permitting in January of that year.

By the end of 1995, Celite Corporation had purchased the facility from Witco and initiated a succession of control device permit applications as they modified the facility. Ecology wrote individual permits for baghouses on February 26, 1996 (DE 96AQ-E108), on April 25, 1996 (DE96AQ-E105, 1st Amendment), on October 9, 1997 (DE 97AQ-E147), and on February 3, 2003 (03AQER-5295). On June 9, 1997 a hammermill and additional process and separation equipment with a baghouse was permitted (DE 97AQ-E126). On December 9, 1997, a permit was issued approving replacement of the burner in the calciner kiln (DE 97AQ-E148, 1st Amendment 1). The kiln burner replacement was done in part to allow increasing facility production. In turn, this increased production increased emissions and triggered applicability of the NSPS for non-metallic mineral processing plants (40 CFR 60 Subpart 000).

The applicability of 40 CFR 60.730-737 (Subpart UUU), which is triggered for specified equipment constructed after April 23, 1986, applies to the wet-end processes at this facility. The wet-end processing scrubber was tested in 2008 and did not satisfy the particulate matter limits for wet scrubbers in the NSPS. The limits in this Approval Order are those of the NSPS.

On December 27, 2001, a voluntary limitation order was issued to Celite (01AQER-3266) to limit particulate matter emissions from the facility to less than 100 tons per year. Ecology consolidated requirements for 16 fabric filters, and the wet-end processing venturi scrubber into this approval. Ecology understood that particulate matter was the sole pollutant for which Celite's potential to emit might exceed thresholds as a major source. On February 28, 2003, Order 01AQER-3266, Amendment 1 was issued to add parametric ranges and recordkeeping requirements to the original approval. In 2007, the main stack following the venturi scrubber was tested. The facility potential to emit was determined to be greater than 100 tons per year for both CO and PM based on this testing, and a notice of violation was issued on March 4, 2008 (No. 5469). The violation was of the requirement to apply for a Title V air operating permit within one year of exceeding the emissions thresholds requiring this type of permit. Celite claimed the test data were anomalously high, but failed to provide information to confirm lower potential emissions.

2009 REVISIONS

This permit revision is done to consolidate the various air quality permits in which the facility is regulated and to incorporate federally enforceable permit conditions to limit facility potential emissions below levels that would require a Title V Air Operating Permit (AOP).

ADDITIONAL FINDINGS:

1. LAWS AND REGULATIONS

Celite Corporation (“the permittee”) shall comply with all requirements as specified in:

- Chapter 70.94 Revised Code of Washington (RCW) {Washington Clean Air Act}
- Chapter 173-400 Washington Administrative Code (WAC) {General Regulations for Air Pollution Sources}
- Chapter 173-460 WAC {Controls for New Sources of Toxic Air Pollutants}

Specifically, the handling and drying equipment within the facility qualify as sources of air contaminants as allowed under:

- WAC 173-400-113,
- WAC 173-460-040,
- RCW 70.94.152

Further, the Notice of Construction Application is processed under authorities and requirements of WAC 173-400-091, Voluntary Limits on Emissions.

All state and federal laws, statutes, and regulations cited in this approval shall be the versions that are current on the date the final approval order is signed and issued.

2. EMISSIONS

2.1 The permittee has requested limits on emissions from all its control devices, including 14 fabric filters and the main wet end processing scrubber. The limits requested by Celite are, for some devices, too low to be sustainable (fabric filters with requested limits less than 0.005 grains per dscf) and for others, high enough to violate applicable regulations (the scrubber at 0.06 grains per dscf is nearly 50% higher than the NSPS limit of 0.040 grains/dscf). Emission rates in the following table are estimated with the scrubber particulate matter concentration at 0.040 grains per dscf; the fabric filters at either 0.010 gr/dscf (older filters without test data) or 0.005 gr/dscf (filters with test data or new filters). Facility production is limited in this approval to 104,832 tons per rolling 12 month period. Wet end ore processing is limited to 7488 hours per year, and fuel use is limited to ensure the following emissions are not exceeded.

2.2 Emissions estimated for the facility:

	Potential
Criteria Pollutants	Tons/yr
2.4.1 Nitrogen Oxides (NO _x)	38
2.4.2 Carbon Monoxide (CO)	66

2.4.3 Sulfur Oxides (SO _x)	0.2
2.4.4 Particulate Matter < 10 ug (PM ₁₀)	69.47
2.4.5 Volatile Organic Compounds (VOC)	2.8
2.4.6 Toxic Air Pollutants (TAPS)	
Key Toxic Pollutants (TAPs)	Pounds/yr
Benzene	1.03
Formaldehyde	37
Arsenic	0.1
Chromium(total)	0.7

3. ADDITIONAL FINDINGS

- 3.1 The proposed project, when operated in accordance with conditions of this Approval Order, will operate without exceeding the State of Washington Air Quality Standards.
- 3.2 The proposed project, when operated in accordance with conditions of this Approval Order, will operate without exceeding the public health criteria in WAC 173-460.

4. FOCUSED APPLICABILITY FOR NSPS 40 CFR 60 SUBPART UUU

In 1992 the preheater dryer was replaced with a larger one (9mmBTU/hr up to 15 mmBTU/hr), triggering applicability of 40 CFR 60, Subpart OOO, which contains limits for emissions from the wet end scrubber at this facility. Celite was unaware of the requirements of the NSPS and has operated at an emission concentration of about 150% of the limit since the NSPS was triggered.

The scrubber controlling emissions from the kiln and the rest of the wet end equipment was defined to handle a 35,000 cfm maximum airflow in the 1997 burner replacement application. The scrubber now appears to handle up to 62,000 cfm. Application materials and the February 12, 2010, supplement indicate Celite believes the limit on this scrubber should be based on the average flow from recent source tests: 39,000 dscf/min. This value and the NSPS particulate concentration limit are made limits in the synthetic minor Order.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF APPROVING A NEW) Notice of Construction Approval
AIR CONTAMINANT SOURCE FOR) ORDER No. 11AQ-E421
DELL MARKETING LP)
DELL MARKETING DATA CENTER)

TO: Dane Parker, Executive Director, Facilities
Dell Marketing, LP
One Dell Way
Round Rock, Texas 78682-7000

PROJECT SUMMARY

The Ecology Air Quality Program (AQP) received a Notice of Construction (NOC) application from Dell Marketing, LP, hereafter referred to as Dell, for the Dell Data Center in Quincy on January 24, 2011. The Dell Data Center consists of phased construction of 3 buildings, i.e., Phase 1, Phase 2, and Phase 3. Phase 1 construction of a 100,866 square foot building will commence during 2011, and includes fourteen (14) 3.0 Megawatt (MWe) electric generators each powered by 4423 brake horse power Caterpillar Model C175-16 engines. Phase 2 and Phase 3 construction will occur as server demand dictates, and will include a total of fourteen (14) additional electric generators.

EQUIPMENT

The equipment that was evaluated for the Dell Data Center order of approval consists of twenty-eight (28) 3.0 MWe Caterpillar diesel fired generators with a total capacity of 84 MWe upon final build out of the three Phases. Dell has asked to restrict annual diesel fuel usage at the Dell Data Center to 175,031 gallons of road specification diesel fuel with annual generator operation time of 1497 hours. There was no other project equipment that required review under the state and federal air quality requirements.

Table 1: 3.0 MWe Caterpillar Engine & Generator Serial Numbers					
Project	Unit ID	Capacity	Engine SN	Generator SN	Build date
Phase 1	DE111202	3.0 MWe	WYB000458	G8F00106	5/23/2011
"	DE111203	3.0 MWe	WYB00459	G8F00107	5/23/2011
"	DE111204	3.0 MWe	WYB00461	G8F00108	5/25/2011
"	DE111205	3.0 MWe	WYB00462	G8F00109	5/25/2011
"	DE111206	3.0 MWe	WYB00457	G8F00104	5/20/2011
"	P1-6	3.0 MWe			
"	P1c-1	3.0 MWe			
"	P1c-2	3.0 MWe			
"	P1abc-1	3.0 MWe			
"	P1abc-2	3.0 MWe			
"	P1abc-3	3.0 MWe			
"	P1abc-4	3.0 MWe			
"	P1abc-5	3.0 MWe			

“	P1abc-6	3.0 MWe			
Phase 2	P2-1	3.0 MWe			
“	P2-2	3.0 MWe			
“	P2-3	3.0 MWe			
“	P2-4	3.0 MWe			
“	P2-5	3.0 MWe			
“	P2-6	3.0 MWe			
“	P2-7	3.0 MWe			
Phase 3	P3-1	3.0 MWe			
“	P3-2	3.0 MWe			
“	P3-3	3.0 MWe			
“	P3-4	3.0 MWe			
“	P3-5	3.0 MWe			
“	P3-6	3.0 MWe			
“	P3-7	3.0 MWe			
Total	28	84.0 MWe			

Air contaminant emissions from the Dell Data Center project have been calculated based entirely on operation of the 28 emergency generator engines. Table 2a contains criteria pollutant potential to emit for the Dell Data Center project. Table 2b contains toxic air pollutant potential to emit for the Dell Data Center project.

Table 2a: Criteria Pollutant Potential to Emit for the Dell Data Center			
Pollutant	Emission Factor (EF) Reference	Emission Factors	Facility Emissions
Criteria Pollutant		g/kWm-hr	tons/yr
2.1.1 NOx Total			19.87
2.1.1a NOx 10% load (idle)	EPA Tier 2	6.12	na
2.1.1b NOx 70% load	Caterpillar	7.16	na
2.1.1c NOx 95% load	Caterpillar	8.23	na
2.1.2 CO			10.46
2.1.2a CO 10% load (idle)	Caterpillar	6.30	na
2.1.2b CO >10% load	EPA Tier 2	3.50	na
2.1.3 SO ₂	Mass Balance	na	0.0185
2.1.4 PM _{2.5} /DEEP Total	EPA Tier 2	0.20	0.71
2.1.4a DEEP 10% load (idle)	Caterpillar	0.59	na
2.1.4b DEEP 70% load	EPA Tier 2	0.20	na
2.1.4c DEEP 95% load	EPA Tier 2	0.20	na
2.1.5 VOC	EPA Tier 2	0.282	1.47

Table 2b: Toxic Air Pollutant Potential to Emit for the Dell Data Center		
Pollutant	AP-42 Section 3.4 EF	Facility Emissions
Organic Toxic Air Pollutants	Lbs/MMBtu	tons/yr
2.1.6 Propylene	2.79E-03	3.35E-02
2.1.7 Acrolein	7.88E-06	9.45E-05
2.1.8 Benzene	7.76E-04	9.30E-03
2.1.9 Toluene	2.81E-04	3.37E-03
2.1.10 Xylenes	1.93E-04	2.31E-03
2.1.11 Napthalene	1.30E-04	1.56E-03
2.1.12 1,3 Butadiene	1.96E-05	2.34E-04
2.1.13 Formaldehyde	7.89E-05	9.46E-04
2.1.14 Acetaldehyde	2.52E-05	3.02E-04
2.1.15 Benzo(a)Pyrene	1.29E-07	1.54E-06
2.1.16 Benzo(a)anthracene	6.22E-07	7.46E-06
2.1.17 Chrysene	1.53E-06	1.83E-05
2.1.18 Benzo(b)fluoranthene	1.11E-06	1.33E-05
2.1.19 Benzo(k)fluoranthene	1.09E-07	1.31E-06
2.1.20 Dibenz(a,h)anthracene	1.73E-07	2.07E-06
2.1.21 Ideno(1,2,3-cd)pyrene	2.07E-07	2.48E-06
2.1.22 PAH (no TEF)	3.88E-06	4.65E-05
2.1.23 PAH (apply TEF)	4.98E-07	5.97E-06
State Criteria Pollutant Air Toxics		
2.1.24 DEEP/PM _{2.5}	EPA Tier 2	0.71
2.1.25 Carbon monoxide	EPA Tier 2	10.46
2.1.26 Sulfur dioxide	Mass Balance	0.0185
2.1.27 Primary NO ₂ *	10% total NOx	1.987

*Assumed to be equal to 10% of the total NOx emitted.

The Dell Data Center relies on cooling systems to dissipate heat from electronic equipment at the facility. It was determined during review of the application that the cooling system has no air contaminant emissions, and does not require approval under state and federal air quality requirements. Additional cooling systems will be added to the facility as necessary to meet the cooling needs of tenants.

DETERMINATIONS

In relation to this project, the State of Washington Department of Ecology (Ecology), pursuant to Revised Code of Washington (RCW) 70.94.152, Washington Administrative Code (WAC) 173-460-040, and WAC 173-400-110, makes the following determinations:

1. The project, if constructed and operated as herein required, will be in accordance with applicable rules and regulations, as set forth in Chapter 173-400 WAC, and Chapter 173-460

WAC, and the operation thereof, at the location proposed, will not emit pollutants in concentrations that will endanger public health.

2. The proposed project, if constructed and operated as herein required, will utilize best available control technology (BACT) as defined below:

Table 3: Best Available Control Technology Requirements	
Pollutant(s)	BACT Determination
Particulate matter (PM), carbon monoxide and volatile organic compounds	<ul style="list-style-type: none"> a. Use of good combustion practices; b. Use of EPA Tier 2 certified engines if the engines are installed and operated as emergency engines, as defined at 40 CFR§60.4219; or applicable emission standards found in 40 CFR Part 89.112 Table 1 and 40 CFR Part 1039.102 Tables 6 and 7 if Model Year 2011 or later engines are installed and operated as non-emergency engines; and c. Compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart III.
Nitrogen oxides (NOx)	<ul style="list-style-type: none"> a. Use of good combustion practices; b. Use of an engine design that incorporates fuel injection timing retard, turbocharger and a low-temperature aftercooler; c. Use of EPA Tier 2 certified engines if the engines are installed and operated as emergency engines, as defined at 40 CFR§60.4219; or applicable emission standards found in 40 CFR Part 89.112 Table 1 and 40 CFR Part 1039.102 Tables 6 and 7 if Model Year 2011 or later engines are installed and operated as non-emergency engines; and d. Compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart III.
Sulfur dioxide	Use of ultra-low sulfur diesel fuel containing no more than 15 parts per million by weight of sulfur.

3. The proposed project, if constructed and operated as herein required, will utilize best available control technology for toxic air pollutants (tBACT) as defined below:

Table 4 Best Available Control Technology for Toxics Requirements	
Toxic Air Pollutant(s)	tBACT Determination
Acetaldehyde, carbon monoxide, acrolein, benzene, benzo(a)pyrene, 1,3-butadiene, diesel engine exhaust particulate, formaldehyde, propylene, toluene, total PAHs, xylenes	Compliance with the VOC BACT requirement.
Nitrogen dioxide	Compliance with the NOx BACT requirement.
Sulfur dioxide	Compliance with the SO ₂ BACT requirement.

4. The modeled ambient concentrations of one toxic air pollutant – diesel engine exhaust particulate matter – exceed the Acceptable Source Impact Levels (ASILs) as defined in Chapter 173-460 WAC. Ecology has evaluated the health risks associated with diesel engine exhaust particulate from the proposed project, in accordance with WAC 173-460-090. Ecology has concluded that the health risks from the project are acceptable as defined in WAC 173-460-090(7). The technical analysis supporting this determination is hereby incorporated into this Notice of Construction Approval Order.

THEREFORE, IT IS ORDERED that the project as described in the Notice of Construction application and more specifically detailed in plans, specifications, and other information submitted to Ecology is approved for construction and operation, provided the following are met:

APPROVAL CONDITIONS

1. ADMINISTRATIVE CONDITION

- 1.1 Dell shall schedule a meeting with Mountain View Elementary School administrators and Quincy School District officials by no later than July 15, 2011. The purpose of the meeting will be to both communicate, and better understand, any potential concerns or complaints that the Mountain View Elementary School administrators and the Quincy School District officials may have regarding emergency generator maintenance testing and operation. In addition, Dell will provide school officials and administrators with the telephone number for the Dell Data Center and a 24 hour contact number for a Dell Data Center manager. The school officials and administrators shall also be provided a maintenance testing schedule as developed by Dell. The Dell Data Center will notify the Mountain View Elementary School administrators whenever (Ecology) approved changes occur in the maintenance testing schedule. As decided by the school officials and administrators and the Dell Data Center, an ongoing relationship shall be established to facilitate future communications.
- 1.2 Dell shall make available information on diesel engine exhaust health risks and emergency generator operations to existing residents, and commercial and industrial facilities within 0.25 miles of the Dell Data Center property boundaries. Information on diesel exhaust health risks and emergency generator operations shall be provided to the City of Quincy Building and Planning Department for distribution to new homeowners and businesses that locate on undeveloped parcels within 0.25 miles of the Dell Data Center property boundary. The health risk information may be, or should be similar to, Ecology Focus on Diesel Exhaust Health Risks dated February 2011, Publication Number 11-02-005. A copy of the materials to be used to comply with this condition shall be provided to Ecology for review, and distributed prior to starting Phase 1 operations.

2. EQUIPMENT RESTRICTIONS

- 2.1. The twenty-eight (28) Caterpillar Model C175-16 engines used to power the 3.0 MWe electrical generators shall be certified by the manufacturer to meet 40 CFR 89 Tier II emission levels or other specifications as required by the EPA at the time the engines are installed. Each engine to be installed must be permanently labeled by the manufacturer as an emergency engine in accordance with 40 CFR § 60.4210(f). Each engine approved in this Order must operate as an emergency engine as defined at WAC 173-400-930(3).

- 2.2. The only Caterpillar Model C175-16 engines and electrical generating units approved for operation at the Dell Data Center are those listed by serial number in Table 1 above.
- 2.3. Replacement of failed engines with identical engines (same manufacturer and model) requires notification prior to installation but will not require new source review unless there is an emission rate or modeled impact increase. The installation of any engines after July 1, 2013 will require engine manufacturer's specification sheets along with the notification. Ecology will decide whether new source review is required based on whether the new engines will have either an increased emission rate or emission concentration that will increase community impacts over those evaluated for this approval Order.
- 2.4. The twenty-eight (28) Caterpillar Model C175-16 engines exhaust stack heights shall be greater than or equal to 58 feet above ground level and will be no more than 20 inches in diameter.
- 2.5. Manufacture and installation of the first fourteen (14) of the engine/generator sets proposed for Phase 1 of the project shall occur by July 1, 2013. The manufacture and installation of the final fourteen (14) engine/generator sets proposed for Phase 2 and Phase 3 of the project shall occur by January 1, 2017.
- 2.6. This Order only applies to the twenty-eight (28) Caterpillar Model C175-16 engines, each with a rated full standby capacity of 4423 hp that were evaluated in the Notice of Construction application and second tier review.

3. OPERATING LIMITATIONS

- 3.1. The fuel consumption at the Dell Data Center facility shall be limited to a total of 175,031 gallons per year of diesel fuel equivalent to on-road specification No. 2 distillate fuel oil (less than 0.00150 weight percent sulfur). Total annual fuel consumption by the facility may be averaged over a three (3) year period using monthly rolling totals.
- 3.2. Except as provided in Condition 3.5, the twenty-eight (28) Dell Data Center engines are limited to the following average annual hours of operation, fuel limits and number of engines operating concurrently:

Operating Activity	Average hours/year, monthly 3-year rolling annual average	Approximate Operating Load (%)	Diesel Fuel Gallons/year, monthly 3-year rolling annual average	Engines Operating Concurrently
Weekly Testing	20	10%		1
Monthly Testing	12.5	70%		8
Semi-Annual Testing	1.5	70%		8
Annual Testing	4.75	95%		8
Maintenance	8	70%		1
Power Outage	4-8	70%		28
Total	Average 53.5 ¹		175,031	

¹ range of 50.75 to 54.75 annual hours of operation

- 3.3. A load bank or the building load will be used for electrical energy dissipation whenever prescheduled maintenance testing, corrective testing or annual load bank testing occurs above idle.
- 3.4. The twenty-eight (28) Caterpillar Model C175-16 engines at the Dell Data Center require periodic scheduled operation. To mitigate engine emission impacts, the Dell Data Center engines will perform all maintenance testing, scheduled bypass operations, and load testing during daylight hours. The Dell Data Center shall develop a testing schedule prior to starting operating that is coordinated with the Microsoft Columbia Data Center testing schedule. The Dell Data Center testing schedule shall be available for review by Ecology upon request. Changes to the testing schedule will not trigger revision or amendment of this Order as long as the number of engines operating concurrently do not exceed the restrictions contained in Table 3.2.
- 3.5. Initial start-up (commissioning) testing of each of the twenty-eight (28) Caterpillar Model C175-16 engines at the Dell Data Center is restricted to 48 hours per generator and no more than 7469 gallons of fuel per generator, averaged over all generators installed during any consecutive 3 year period. The commissioning operating load for individual engines will vary between 10% and 100%. Site integrated system testing with multiple engines will average 70% load.
 - 3.5.1 Except during site integration system testing as specified below, only one engine shall be operated at any one time during initial start-up testing.
 - 3.5.2 During a site integration test, no more than eight (8) generator engines may operate concurrently for up to 32 hours at a load of 70%.
 - 3.5.3 All initial startup and commissioning testing shall be conducted during daylight hours.
 - 3.5.4 Total fuel use limits contained in Approval Condition 3.1 and emission limits contained in Approval Condition 5, remain in effect during initial start-up testing and commissioning.

4. GENERAL TESTING AND MAINTENANCE REQUIREMENTS

- 4.1. The Dell Data Center will follow engine-manufacturer's recommended diagnostic testing and maintenance procedures to ensure that each of the twenty-eight (28) Caterpillar Model C175-16 engines will conform to 40 CFR 89 emission specifications throughout the life of each engine.
- 4.2. Within 12 months of installation of any new engine approved in this Order, the Dell Data Center shall measure concentrations of nitric oxide (NO), nitrogen dioxide (NO₂), total nitrogen oxides (NO_x), carbon monoxide (CO), and oxygen (O₂) leaving that engine's exhaust stack in accordance with Approval Condition 4.3. This testing will serve to demonstrate compliance with the emission limits contained in Approval Conditions 5.2, 5.3, 5.4, and 5.8. Additional periodic testing will be conducted at the conclusion of the manufacturer's warranty term for each engine, or every 60 months from engine delivery date, or 3,000 hours of operation, whichever occurs first. Dell

may request relaxation of periodic testing if the manufacturer's emissions warranty is extended and as long as manufacturer's maintenance procedures are followed.

- 4.3 The following procedures shall be used for nitric oxide, nitrogen dioxide, total nitrogen oxides (NO_x), and carbon monoxide exhaust stack testing of new engines required by Approval Condition 4.2. After initial performance testing to verify compliance with Approval Conditions 5.2, 5.3, and 5.4, Dell may request alternative test methods. The alternative test methods must be approved in writing by Ecology prior to the testing.
 - 4.3.1 Initial emissions testing should be combined with start-up and commissioning testing. Subsequent periodic emissions testing shall be combined with pre-scheduled maintenance and annual load bank engine testing. Additional operation of the engines for the purpose of emissions testing, beyond the operating hours contained in this Order, may be allowed by Ecology upon request.
 - 4.3.2 Total nitrogen oxides, NO₂, and CO emissions measurement shall be conducted at each of the proposed average engine loads of 10% (idle), 70%, and 100% that correspond to scheduled engine operating scenarios in Approval Condition 3.2. Initial performance testing for nitric oxide, nitrogen dioxide, total nitrogen oxides (NO_x), and carbon monoxide from no fewer than two engines to be chosen by Ecology shall be conducted using EPA 40 CFR 60 Reference Methods 7E and 10.
 - 4.3.3 A portable emissions instrument analyzer may be requested as an alternative test method after compliance verification of the two engines. The analyzer model and calibration procedures must be approved in writing by Ecology prior to being used as an alternative test method. The analyzer shall be calibrated using EPA Protocol 1 gases according to the procedures for drift and bias limits outlined in EPA Methods 7E and Method 10, or as approved in advance by Ecology.
 - 4.3.4 Three runs shall be conducted for each engine tested with a portable emissions instrument analyzer. Each run must last at least 15 minutes. Analyzer data shall be recorded at least once every minute during the test. Fuel usage and operational time shall be recorded at the beginning of, and end of, each test for each engine.
 - 4.3.5 The F-factor method, as described in EPA Method 19, may be used to calculate exhaust flow rate through the exhaust stack. The fuel meter and operating time data, as measured according to Approval Conditions 4.4 and 4.5, shall be included in the test report, along with the emissions calculations.
 - 4.3.6 If the measured nitrogen oxides, NO₂ and CO emission rates from the first eight (8) Phase 1 engines are found to be consistent and less than the emission limits contained in this order, the Dell Data Center may request approval from Ecology to discontinue emission testing for the remainder of the twenty (20) engines.

- 4.3.7 Ecology will use discretion to grant testing requirement relaxation that can include when and where the engines are manufactured, and design modifications that may affect emissions. Approval to relax exhaust stack engine testing will not require revision of this Order, or a Notice of Construction application.
- 4.4 Each engine shall be equipped with a properly installed and maintained non-resettable meter that records total operating hours.
- 4.5 Each engine shall be connected to a properly installed and maintained fuel flow monitoring system that records the amount of fuel consumed by that engine during each operation.

5 EMISSION LIMITS

The twenty-eight (28) Caterpillar Model C175-16 engines shall meet the emission rate limitations contained in this section. If required to demonstrate compliance with the g/kW-hr EPA Tier 2 average emission limits through stack testing, the Dell Data Center shall average emission rates for 5 individual operating loads (10%, 25%, 50%, 75% and 100%) according to 40 CFR §89.410 and Table 2 of Appendix B to 40 CFR Part 89, Subpart E.

- 5.1 Each engine shall not exceed average NO_x emissions of 6.12 g/kWm-hr. Engine nitrogen oxide emissions shall comply with 40 CFR Part 60, Subpart IIII, or any other applicable EPA requirement, in effect at the time the engines are manufactured and installed.
- 5.2 Nitrogen oxide (NO_x) emissions from each of the twenty-eight (28) Caterpillar Model C175-16 engines shall not exceed the following emission rates at the stated loads, based on emission factors provided by the engine manufacturer:

	Operating Scenario	Operating Load	Emissions Limit per engine in g/kWm-hr	Emissions Limit per engine in lb/hr
5.2.1	Weekly Testing	10% (idle)	6.12	6.15
5.2.2	Monthly Testing	70%	7.16	37.12
5.2.3	Semi-Annual Testing	70%	7.16	37.12
5.2.3	Annual Testing	100%	8.34	60.09
5.2.4	Maintenance	70%	7.16	37.12
5.2.5	Power Outages	70%	7.16	37.12

- 5.3 Nitrogen dioxide (NO₂) emissions from each of the twenty-eight (28) Caterpillar Model C175-16 engines shall not exceed the following emission rates at the stated loads, based on emission factors provided by the engine manufacturer:

Table 5.3: Nitrogen dioxide emission rate limits				
	Operating Scenario	Operating Load	Emissions Limit per engine in g/kWm-hr	Emissions Limit per engine in lb/hr
5.3.1	Weekly Testing	10% (idle)	0.612	0.615
5.3.2	Monthly Testing	70%	0.716	3.712
5.3.3	Semi-Annual Testing	70%	0.716	3.712
5.3.3	Annual Testing	100%	0.834	6.009
5.3.4	Maintenance	70%	0.716	3.712
5.3.5	Power Outages	70%	0.716	3.712

- 5.4 Carbon monoxide (CO) emissions from each of the twenty-eight (28) Caterpillar Model C175-16 engines shall not exceed the following emission rates at the stated loads, based on emission factors provided by the engine manufacturer:

Table 5.4: Carbon monoxide emission rate limits				
	Operating Scenario	Operating Load	Emissions Limit per engine in g/kWm-hr	Emissions Limit per engine in lb/hr
5.4.1	Weekly Testing	10% (idle)	6.30	6.33
5.4.2	Monthly Testing	70%	3.50	18.14
5.4.3	Semi-Annual Testing	70%	3.50	18.14
5.4.3	Annual Testing	100%	3.50	25.45
5.4.4	Maintenance	70%	3.50	18.14
5.4.5	Power Outages	70%	3.50	18.14

- 5.5 Total engine carbon monoxide emissions shall not exceed 10.46 tons/year and shall comply with 40 CFR Part 60, Subpart IIII, or any other applicable EPA requirement, in effect at the time the engines are installed.
- 5.6 Engine particulate matter emissions shall comply with 40 CFR Part 60, Subpart IIII, or any other applicable EPA requirement, in effect at the time the engines are installed. All PM emissions shall be considered diesel engine exhaust particulate and PM_{2.5} emissions.
- 5.7 Particulate matter emissions from all 28 engines combined shall not exceed 0.71 tons/yr. All PM emissions from the engines shall be considered diesel engine exhaust particulate (DEEP) and PM_{2.5} emissions.
- 5.8 Nitrogen dioxide (NO₂) emissions from all 28 engines combined shall not exceed 76 lb/hr and 1.987 tons/year.
- 5.9 Total engine volatile organic compound emissions shall not exceed 1.47 tons/year and shall comply with 40 CFR Part 60, Subpart IIII, or any other applicable EPA requirement, in effect at the time the engines are installed.

- 5.10 Visual emissions from each diesel electric generator exhaust stack shall be no more than 5 percent, with the exception of a one (1) minute period after unit start-up. Visual emissions shall be measured by using the procedures contained in 40 CFR 60, Appendix A, Method 9.
- 5.11 Sulfur dioxide emissions from all 28 engines combined shall not exceed 0.018 tons/yr (36 lbs/yr).

6 OPERATION AND MAINTENANCE MANUALS

A site-specific O&M manual for the Dell Data Center facility equipment shall be developed and followed. Manufacturers' operating instructions and design specifications for the engines, generators, and associated equipment shall be included in the manual. The O&M manual shall be updated to reflect any modifications of the equipment or its operating procedures. Emissions that result from failure to follow the operating procedures contained in the O&M manual or manufacturer's operating instructions may be considered proof that the equipment was not properly installed, operated, and/or maintained. The O&M manual for the diesel engines and associated equipment shall at a minimum include:

- 6.1 Manufacturer's testing and maintenance procedures that will ensure that each individual engine will conform to the EPA Tiered Emission Standards appropriate for that engine throughout the life of the engine.
- 6.2 Normal operating parameters and design specifications.
- 6.3 Operating maintenance and testing schedule.

7 SUBMITTALS

All notifications, reports, and other submittals shall be sent to:

Washington State Department of Ecology
Air Quality Program
4601 N. Monroe Street
Spokane, WA 99205-1295

8 RECORDKEEPING

All records required under this Order shall be organized in a readily accessible manner and cover a minimum of the most recent 60-month period. The following records are required to be collected and maintained. Any records required to be kept under the provisions of this Order shall be provided within 30 days to Ecology upon request.

- 8.1 Fuel receipts with amount of diesel and sulfur content for each delivery to the facility.
- 8.2 Monthly and annual hours of operation for each diesel engine.
- 8.3 Purpose, electrical load and runtime duration for each engine start-up.
- 8.4 Annual gross power generated by all generators at the facility.
- 8.5 Upset condition log for each engine and generator that includes date, time, duration of upset, cause, and corrective action.
- 8.6 Any recordkeeping required by 40 CFR Part 60 Subpart III.

- 8.7 Air quality complaints received from the public or other entity, and the affected emissions units.

9 REPORTING

- 9.1 At least 30 business days before installation of a new engine/generator set listed in Equipment Table 1.1 above, the Dell Data Center will submit the serial number, manufacturer make and model, standby capacity, and date of manufacture of each new engine to Ecology.
- 9.2 The following information will be submitted to the AQP by January 31 of each calendar year. This information may be submitted along with any other annual emissions information requested by the AQP.
- 9.2.1 Monthly rolling annual total summary of air contaminant emissions.
 - 9.2.2 Monthly rolling hours of operation with annual total.
 - 9.2.3 Monthly rolling gross power generation with annual total.
 - 9.2.4 A listing of each start-up of each diesel engine that shows the purpose, fuel usage, load, and duration for each runtime operation.
- 9.3 Any air quality complaints resulting from operation of the engines shall be promptly assessed and addressed. A record shall be maintained of the action taken to investigate the validity of the complaint and what, if any, corrective action was taken in response to the complaint. Ecology shall be notified within three (3) days of receipt of any such complaint by e-mail.
- 9.4 The Dell Data Center shall notify Ecology by e-mail or in writing within 24 hours of any engine operation of greater than 60 minutes if such engine operation occurs as the result of a power outage. This notification does not alleviate Dell from annual reporting of operations contained in any other section of Approval Condition 9.

10 GENERAL CONDITIONS

- 10.1 **Commencing/Discontinuing Construction and/or Operations:** This approval shall become void if construction of the facility is not begun within 18 months of permit issuance or if facility operation is discontinued for a period of eighteen (18) months or more. In accordance with WAC 173-400-111(7)(c), each phase must commence construction within 18 months of the projected and approved commence construction date.
- 10.2 **Compliance Assurance Access:** Access to the source by representatives of Ecology or the EPA shall be permitted upon request. Failure to allow such access is grounds for enforcement action under the federal Clean Air Act or the Washington State Clean Air Act, and may result in revocation of this Approval Order.
- 10.3 **Availability of Order:** Legible copies of this Order shall be available to employees in direct operation of the diesel electric generators, and be available for review upon request by Ecology.
- 10.4 **Equipment Operation:** Operation of the 28 Caterpillar Model C175-16 diesel engines used to power emergency electrical generators and related equipment shall be conducted in compliance with all data and specifications submitted as part of the NOC application unless otherwise approved in writing by Ecology.
- 10.5 **Modifications:** Any modification to the generators, engines, or cooling towers and their related equipment's operating or maintenance procedures, contrary to

information in the NOC application, shall be reported to Ecology at least 60 days before such modification. Such modification may require a new or amended NOC Approval Order.

- 10.6 **Activities Inconsistent with the NOC Application and this Approval Order:** Any activity undertaken by the permittee or others, in a manner that is inconsistent with the NOC application and this determination, shall be subject to Ecology enforcement under applicable regulations.
- 10.7 **Obligations under Other Laws or Regulations:** Nothing in this Approval Order shall be construed to relieve the permittee of its obligations under any local, state or federal laws or regulations.

All plans, specifications, and other information submitted to the Department of Ecology relative to this project and further documents and any authorizations or approvals or denials in relation thereto shall be kept at the Eastern Regional Office of the Department of Ecology in the "Air Quality Controlled Sources" files, and by such action shall be incorporated herein and made a part thereof.

Nothing in this approval shall be construed as obviating compliance with any requirement of law other than those imposed pursuant to the Washington Clean Air Act and rules and regulations thereunder.

Authorization may be modified, suspended or revoked in whole or part for cause including, but not limited to the following:

- a. Violation of any terms or conditions of this authorization;
- b. Obtaining this authorization by misrepresentation or failure to disclose fully all relevant fact.

The provisions of this authorization are severable and, if any provision of this authorization, or application of any provision to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this authorization, shall not be affected thereby.

YOUR RIGHT TO APPEAL

You have a right to appeal this Approval Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Approval Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of this Approval Order:

- File your appeal and a copy of this Approval Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Approval Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

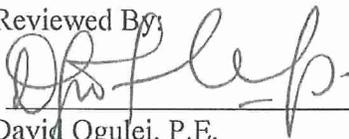
Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW STE 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

For additional information visit the Environmental Hearings Office Website:
<http://www.eho.wa.gov>

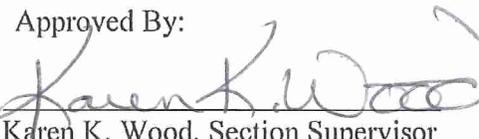
To find laws and agency rules visit the Washington State Legislature Website:
<http://www1.leg.wa.gov/CodeReviser>

DATED this 5th day of August, 2011, at Spokane, Washington.

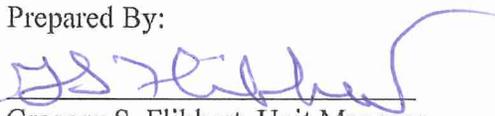
Reviewed By:


David Ogulei, P.E.
Science & Engineering Section
Department of Ecology
State of Washington

Approved By:

 8/8/11
Karen K. Wood, Section Supervisor
Eastern Regional Office
Department of Ecology
State of Washington

Prepared By:


Gregory S. Flibbert, Unit Manager
Eastern Regional Office
Department of Ecology
State of Washington



RECEIVED

OCT 22 2010

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

IN THE MATTER OF APPROVING A NEW) APPROVAL ORDER No. 10AQ-E374
AIR CONTAMINANT SOURCE FOR)
MICROSOFT CORPORATION)
COLUMBIA DATA CENTER)

TO: Jack Eaton, Facilities Program Manager
Microsoft Corporation
Columbia Data Center
501 Port Industrial Parkway
Quincy, WA 98848

EQUIPMENT

- List of equipment that was evaluated for this order of approval. Existing unit ID nos. CO1/1 nos. 1-12 and CO1/2 nos. 1-12 were permitted in 09AQ-E308. New unit ID nos. 25-37 were proposed in the document titled "Microsoft Columbia Data Center CO3, CO4, and CO5 Expansion, Microsoft Corporation, Quincy, WA" submitted on May 14, 2010. Microsoft has subsequently changed the designations of the Columbia Data Center Expansion phases to CO3.1 (Phase II), CO3.2 (Phase I), and CO3.3 (Phase II), respectively. The phases will be referred to in this Order as CO3.1, CO3.2, and CO3.3.

Phase	Unit ID	Engine SN	Generator SN	Build date
CO1/1	1	SBK000170	G4B00130	8/14/06
"	2	SBK000179	G4B00132	8/25/06
"	3	SBK000169	G4B00128	8/10/06
"	4	SBK000181	G4B00133	8/28/06
"	5	SBK000176	G4B00131	8/25/06
"	6	SBK000168	G4B00129	8/10/06
"	7	SBK000160	G4B00125	7/21/06
"	8	SBK000159	G4B00127	7/19/06
"	9	SBK000162	G4B00126	7/24/06
"	10	SBK000158	G4B00124	7/19/06
"	11	SBK000172	G4B00113	8/18/06
"	12			
CO1/2	1	SBK000208	G4B00173	11/1/06
"	2	SBK000214	G4B00171	11/6/06
"	3	SBK000211	G4B00176	11/3/06
"	4	SBK000213	G4B00177	11/6/06
"	5	SBK000201	G4B00178	10/20/06
"	6	SBK000171	G4B00112	8/17/06
"	7	SBK000212	G4B00175	11/6/06
"	8	SBK000205	G4B00170	10/30/06
"	9	SBK000210	G4B00172	11/3/06

“	10	SBK000200	G4B00179	10/20/06
“	11	SBK000209	G4B00174	11/2/06
“	12			
CO3.2	25	SBK00949	G8D00117	7/25/10
	26	SBK00947	G8D00116	7/16/10
	27	SBK00945	G8D00115	7/15/10
	28	SBK00953	G8D00119	7/28/10
	29	SBK00951	G8D00118	7/28/10
CO3.1	30	Not purchased		
	31	Not purchased		
	32	Not purchased		
	33	Not purchased		
CO3.3	34	Not purchased		
	35	Not purchased		
	36	Not purchased		
	37	Not purchased		

Table 1.2: Fire Pump Engine SN

Unit ID	Engine SN	Engine Size	Build Year
CO1	Pe6068t602182	149 bhp	2006
CO2	Pe6068t679482	149 bhp	2007
CO3.1, 3.2, 3.3	Not purchased	149 bhp	

Table 1.3: Cooling Water Pre-treatment Generator Engine SN

Unit ID	Engine SN	Engine Size	Build Year
CWPT.1	G5AO1427	398 bhp	2007

Table 1.4: Cooling Towers

Unit ID	# Cooling Tower Banks	# Cooling Tower Units per Bank	Total # Cooling Tower Units
CO1	1	18	18
CO2	1	18	18
Total	2	na	36

PROJECT SUMMARY

1. The Microsoft Columbia Data Center will contain six buildings designated CO1, CO2, WTF, CO3.1, CO3.2, and CO3.3. Buildings CO1 and CO2 were permitted in 2007, and constructed in 2007 and 2008. Buildings CO3.1, CO3.2, and CO3.3 were permitted in 2010, and will be constructed in 2010 through 2012. The Columbia Data Center will have thirty-seven Caterpillar Model 3516C-TA diesel powered electric generators and four small diesel-fired emergency engines. The Department of Ecology (Ecology) approved the installation and operation of twenty-four of the engines in Order No. 09AQ-

E308 issued on August 28, 2009. The current action approves the installation and operation of thirteen additional 2.5 eMW engines. At the request of the applicant, Ecology is also reducing the allowable operating hours and diesel fuel allocation for the existing CO1 and CO2 engines.

Table 2: Potential to Emit for Microsoft Columbia Data Center			
Pollutant	Existing Units 1 thru 24 Potential To Emit	Expansion Units 25 thru 37 Potential To Emit	Facility Potential to Emit
Criteria Pollutant	tons/yr	tons/yr	tons/yr
2.1.1 NO _x	30.1	13.9	44.0
2.1.2 CO	2.1	8.0	10.1
2.1.3 SO ₂	0.032	0.015	0.047
2.1.4 PM _{2.5}	0.58	0.45	1.03
2.1.5 VOC	1.4	0.60	2.0
Toxic Air Pollutants			
2.1.6 Primary NO ₂ *	3.01	1.39	4.40
2.1.7 Acrolein	2.29E-03	7.90E-05	2.37E-03
2.1.8 Benzene	2.16E-02	7.80E-03	2.94E-02
2.1.9 Toluene	7.75E-03	2.80E-03	1.06E-02
2.1.10 Xylenes	5.39E-03	1.90E-03	7.29E-02
2.1.11 1,3 Butadiene	2.02E-03	2.00E-04	2.22E-03
2.1.12 Formaldehyde	5.39E-02	7.90E-04	5.47E-02
2.1.13 Acetaldehyde	2.29E-02	2.50E-04	2.32E-02
2.1.14 Benzo(a)Pyrene	3.71E-06	1.30E-06	5.01E-06
2.1.15 PAH (sum)	na	3.90E-05	na
2.1.16 PAH (w/ TEF)	na	5.00E-06	na
2.1.17 Diesel Engine Exhaust Particulate**	0.58	0.45	1.03
2.1.18 Carbon monoxide	2.1	8.0	10.1
2.1.19 Sulfur dioxide	0.032	0.015	0.047

* Assumed to be equal to 10% of the total NO_x emitted.

** diesel engine exhaust particulate is DEEP, which is equal to PM_{2.5} emissions.

2. The small emergency engines consist of three 149 bhp engines to power fire water pumps and one 398 bhp emergency engine to power the cooling water pre-treatment facility. The three fire water pump engines and the cooling water pre-treatment engine are considered permit exempt under Washington Administrative Code (WAC) 173-400-110(4)(h)(xxxix), and will not be further addressed in the Approval Order.
3. The original (2007) MSN Columbia Data Center (CO1 and CO2) was constructed with 12 Evapco Model USS 312-454 cooling units to dissipate heat from the electronic servers. Each Model USS 312-454 unit has three cooling towers and three fans. Each end

of the building will have one bank of six Model USS 312-454 units for a total of eighteen cooling towers with a total of 36 cooling towers. Each individual cooling tower has a design recirculation rate of 3150 gallons per minute.

DETERMINATIONS

In relation to this project, the State of Washington Department of Ecology (Ecology), pursuant to Revised Code of Washington (RCW) 70.94.152, Washington Administrative Code (WAC) 173-460-040, and WAC 173-400-110, makes the following determinations:

1. The project, if constructed and operated as herein required, will be in accordance with applicable rules and regulations, as set forth in Chapter 173-400 WAC, and Chapter 173-460 WAC, and the operation thereof, at the location proposed, will not emit pollutants in concentrations that will endanger public health.
2. The proposed project, if constructed and operated as herein required, will utilize best available control technology (BACT) as defined below:

Pollutant(s)	BACT Determination
Particulate matter (PM), carbon monoxide and volatile organic compounds	Restricted operation of EPA Tier-2 certified engines, and compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart III.
Nitrogen oxides (NOx)	Good combustion practices; an engine design that incorporates fuel injection timing retard, turbocharger and a low-temperature after-cooler; EPA Tier-2 certified engines; and compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart III.
Sulfur dioxide	Use of ultra-low sulfur diesel fuel containing no more than 15 parts per million by weight of sulfur.

3. The proposed project, if constructed and operated as herein required, will utilize best available control technology for toxic air pollutants (tBACT) as defined below:

Toxic Air Pollutant(s)	tBACT Determination
Acetaldehyde, carbon monoxide, acrolein, benzene, benzo(a)pyrene, 1,3-butadiene, diesel engine exhaust particulate, formaldehyde, toluene, total PAHs, xylenes	Restricted operation of EPA Tier-2 certified engines, and compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart III.
Nitrogen dioxide	Good combustion practices; an engine design that incorporates fuel injection timing retard, turbocharger and a low-temperature after-cooler; EPA Tier-2 certified engines; and compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart III.
Sulfur dioxide	Use of ultra-low sulfur diesel fuel containing no more than 15 parts per million by weight of sulfur.

4. Ecology has evaluated the cumulative health risks associated with diesel engine exhaust particulate emissions from the proposed project, in accordance with WAC 173-460-100. Ecology has concluded that the cumulative health risks from the project are acceptable, and that approval of the project will result in a greater environmental benefit to the state of Washington. The technical analysis supporting this determination is hereby incorporated into this Notice of Construction Approval Order.

THEREFORE, IT IS ORDERED that the project as described in the Notice of Construction application and more specifically detailed in plans, specifications, and other information submitted to Ecology is approved for construction and operation, provided the following conditions are met:

APPROVAL CONDITIONS

1. ADMINISTRATIVE CONDITION

- 1.1 Notice of Construction Approval Order No. 09AQ-E308 is rescinded and replaced entirely on March 1, 2011. During the time period in which both this Order and Order No. 09AQ-E308 are in effect and on or after the date construction has begun on the proposed CO3.1, CO3.2, and CO3.3 emission units, all emission limits contained in this Order take precedence over 09AQ-E308. Order No. 09AQ-E308 Approval Condition 3.1 shall remain in effect until March 1, 2011 provided that no emission limit in Order No. 10AQ-E308 is violated.
- 1.2 Microsoft shall schedule a meeting with Mountain View Elementary School administrators by no later than February 15, 2011. The meeting will include officials from the Quincy School District at the discretion of the Mountain View Elementary School administrators. The purpose of the meeting will be to both communicate, and better understand, any potential concerns or complaints that the school may have regarding emergency generator maintenance testing and operation. In addition, Microsoft will provide the school administrators with a direct telephone contact to one of the Columbia Data Center managers. The school administrators shall also be provided a maintenance testing schedule as contained in the permit, and will update the school whenever Ecology-approved changes occur in the maintenance testing schedule. As decided by the school administrators and Microsoft, an ongoing relationship between the school and Microsoft should be established.

2. EQUIPMENT RESTRICTIONS

- 2.1. The 37 Caterpillar Model 3516C 2.5 eMW engines used to power the electrical generators shall be certified by the manufacturer to meet 40 CFR 89 Tier II emission levels if manufactured before January 1, 2011. Any generator engine manufactured after January 1, 2011 shall meet 40 CFR 89 Tier IV Transitional emission levels or other specifications as required by the EPA at the time the engines are installed.
- 2.2. The only Caterpillar Model 3516C 2.5 eMW engines and electrical generating units approved for operation at the Columbia Data Center are those listed in Table 1.1 above.
- 2.3. Manufacture and installation of the engine/generator sets identified as unit numbers 23 and 24 in Table 1.1 shall take place by August 28, 2012.

Manufacture and installation of the CO3.2 engine/generator sets identified in Table 1.1 shall take place within 12 months of the issue date of this Order. Manufacture and installation of the CO3.1 and CO3.3 engine/generator sets identified in Table 1.1 shall take place within 24 months of the issue date of this Order. If the manufacture and installation of these engines has not completed within the above schedule, a NOC application may be required prior to installation.

- 2.4. Replacement of failed engines with identical engines (same manufacturer and model) requires notification prior to installation, but will not require Notice of Construction unless there is an emission rate increase from the replacement engines.
- 2.5. The twenty 2.5 eMW CO1 and CO2 engine-generator exhaust stack heights shall be greater than or equal to 38 feet above ground level and 8 feet above roof height. The four 2.5 eMW ground level CO1 and CO2 engine-generators exhaust stack heights shall be greater than or equal to 20 feet above ground level. The thirteen 2.5 eMW ground level CO3.1, CO3.2, and CO3.3 engine-generators exhaust stack heights shall be greater than or equal to 31 feet above ground level.

3. OPERATING LIMITATIONS

- 3.1. The fuel consumption at the Columbia Data Center facility shall be limited to a total of 439,493 gallons per year and 88,800 gallons per day of diesel fuel equivalent to on-road specification No. 2 distillate fuel oil (less than 0.00150 weight percent sulfur). Total annual fuel consumption by the facility may be averaged over a three (3) year period using monthly rolling totals.
- 3.2. The 24 CO1 and CO2 generators shall be limited to 300,000 gallons per year and not operate more than 121 hours per year per engine at an average capacity of 53% of full standby capacity. Individual units may be operated at a higher load than 53% of full standby capacity as long as total generator fuel consumption remains below 300,000 gallons per year of diesel fuel equivalent to on-road specification No. 2 distillate fuel oil and no emission limit is exceeded. Total annual fuel consumption by the 24 CO1 and CO2 generators may be averaged over a three (3) year period using monthly rolling totals.
- 3.3. The 13 CO3.1, CO3.2, and CO3.3 generators shall not operate more than 104 hours per year per engine at an average load of 53% of full standby capacity. Individual units may be operated at a higher load than 53% of full standby capacity as long as total generator fuel consumption from the 13 engines remains below 139,493 gallons per year of diesel fuel equivalent to on-road specification No. 2 distillate fuel oil and no emission limit is exceeded. Total annual fuel consumption by the 13 CO3.1, CO3.2, and CO3.3 generators may be averaged over a three (3) year period using monthly rolling totals.
- 3.4. The limitation on the annual diesel fuel allocation for the 13 CO3.1, CO3.2, and CO3.3 generator engines does not become effective until Microsoft has completed acceptance testing of the engines and generators. However, all emission limits remain effective during the acceptance testing period.

- 3.5. Operation of the 13 CO3.1, CO3.2, and CO3.3 generators for required monthly maintenance and testing shall be limited to approximately one hour per month each at an average electric load of 10% of the standby rating.
- 3.6. Operation of the 13 CO3.1, CO3.2, and CO3.3 generators for electrical bypass shall be limited to approximately 44 hours per year each at an average electrical load of 40% of the standby rating. No more than two engines shall operate at the same time during any electrical bypass operation
- 3.7. Each of the 37 generator engines require maintenance and testing for approximately one hour per month. To mitigate engine emission impacts, Microsoft Corporation will perform at least 80% of all maintenance testing from 7:00 AM until 5:00 PM on Monday through Wednesday with no more than 3 engines tested concurrently. Engine maintenance and testing may take place outside of these restrictions upon coordination by Microsoft with the other data centers in Quincy to minimize engine emission impacts to the community. Microsoft shall maintain records of the coordination communications with the other data centers, and those communications shall be available for review by Ecology. This schedule can be re-negotiated at any time as approved in writing by Ecology, and will not trigger revision or amendment of this Order.
- 3.8. CO1 and CO2 each have 1 bank of 6 cooling units with a total of 18 cooling towers each. Each individual unit shall have a mist eliminator that will maintain the maximum drift rate to no more than 0.001 percent of the circulating water rate.

4. GENERAL TESTING AND MAINTENANCE REQUIREMENTS

- 4.1. MSN will follow engine-manufacturer's recommended diagnostic testing and maintenance procedures to ensure that each of the thirty-seven 2.5 eMW engines will conform to 40 CFR 89 emission specifications throughout the life of each engine.
- 4.2. At the conclusion of the manufacturer's warranty term (60 months from engine delivery date or 3,000 hours of operation), MSN shall pursue one of the following options:
 - 4.2.1 Emission testing of each engine for NO_x, CO, and non-methane hydrocarbon (NMHC) emission rates to determine continuing compliance with the 40 CFR 89 Tier II emission standards (the applicant may replace the dynamometer requirement in Subpart E of 40 CFR 89 with corresponding measurement of gen-set electrical output). The testing of each engine shall be repeated every 60 months after its first test. The engine testing may be staged to test 5 engines in each 12 month period.
 - 4.2.2 Re-evaluating BACT and tBACT and health risks of the facility's operations.
 - 4.2.3 Show compliance with the manufacturer's maintenance requirements by renewing or extending engine manufacturer's maintenance contracts.

- 4.2.4 Any combination of the above three options, or an alternative method approved by Ecology in writing.
- 4.3 Each engine shall be equipped with a properly installed and maintained non-resettable meter that records total operating hours.
- 4.4 Each engine shall be connected to a properly installed and maintained fuel flow monitoring system that records the amount of fuel consumed by that engine during each operation.
- 4.5 Periodic emission testing of each engine is not required by this Approval Order unless Condition 4.2.1 is selected as the compliance verification option. Ecology may require stack testing as allowed in WAC-173-400-105(4) at its discretion.

5. EMISSION LIMITS

The thirty-seven 2.5 eMW engine-generators shall meet the follow emission rate limitations:

- 5.1 Each existing CO1 and CO2 engine shall not exceed NO_x plus NMOC emissions of 6.4 g/kW-hr.
- 5.2 Each new CO1, CO2, CO3.1, CO3.2, and CO3.3 engine shall not exceed NO_x emissions of 6.12 g/kW-hr if built before January 1, 2011. The NO_x emission factor for engines built after January 1, 2011 shall comply with 40 CFR Part 60, Subpart IIII, or any other applicable EPA requirement, in effect at the time the engines are installed.
- 5.3 Each new CO1, CO2, CO3.1, CO3.2, and CO3.3 engine shall not exceed VOC emissions of 0.28 g/kW-hr.
- 5.4 Each existing CO1 and CO2 engine shall not exceed CO emissions of 3.5 g/kW-hr.
- 5.5 Each new CO1, CO2, CO3.1, CO3.2, and CO3.3 engine shall not exceed CO emissions of 3.50 g/kW-hr if built before January 1, 2011. The CO emission factor for engines built after January 1, 2011 shall comply with 40 CFR Part 60, Subpart IIII, or any other applicable EPA requirement, in effect at the time the engines are installed.
- 5.6 Each existing CO1 and CO2 engine shall not exceed PM emissions of 0.20 g/kW-hr. All PM shall be considered diesel engine exhaust particulate.
- 5.7 Each new CO1, CO2, CO3.1, CO3.2, and CO3.3 engine shall not exceed PM emissions of 0.20 g/kW-hr if built before January 1, 2011. The PM emission factor for engines built after January 1, 2011 shall comply with 40 CFR Part 60, Subpart IIII, or any other applicable EPA requirement, in effect at the time the engines are installed.
- 5.8 The total amount of PM emissions from operating all 37 engines during each year shall not exceed 1.03 tons/yr. All PM emissions shall be considered diesel engine exhaust particulate (DEEP) emissions and all DEEP emissions shall be considered PM_{2.5} emissions.
- 5.9 Visual emissions from each diesel electric generator exhaust stack shall be no more than 5 percent, with the exception of a ten (10) minute period after unit

start-up. Visual emissions shall be measured by using the procedures contained in 40 CFR 60, Appendix A, Method 9.

- 5.10 SO₂ emissions from each diesel electric generator exhaust stack shall not exceed 0.03 lbs/hr.

6 OPERATION AND MAINTENANCE MANUALS

A site-specific O&M manual for the MSN CDC facility equipment shall be developed and followed. Manufacturers' operating instructions and design specifications for the engines, generators, cooling towers, and associated equipment shall be included in the manual. The O&M manual shall be updated to reflect any modifications of the equipment or its operating procedures. Emissions that result from failure to follow the operating procedures contained in the O&M manual or manufacturer's operating instructions may be considered proof that the equipment was not properly installed, operated, and/or maintained. The O&M manual for the diesel engines and associated equipment shall at a minimum include:

- 6.1 Manufacturer's testing and maintenance procedures that will ensure that each individual engine will conform to the EPA Tiered Emission Standards appropriate for that engine throughout the life of the engine.
- 6.2 Normal operating parameters and design specifications.
- 6.3 Operating maintenance schedule.

7 SUBMITTALS

All notifications, reports, and other submittals shall be sent to:

Washington State Department of Ecology
Air Quality Program
4601 N. Monroe Street
Spokane, WA 99205-1295

8 RECORDKEEPING

All records, Operations and Maintenance Manual, and procedures developed under this Order shall be organized in a readily accessible manner and cover a minimum of the most recent 60-month period. The following records are required to be collected and maintained.

- 8.1 Fuel receipts with amount of diesel and sulfur content for each delivery to the facility.
- 8.2 Annual hours of operation for each diesel engine.
- 8.3 Annual number of start-ups for each diesel engine.
- 8.4 Annual gross power generated by facility-wide operation of the emergency backup electrical generators.
- 8.5 Upset condition log for each engine and generator that includes date, time, duration of upset, cause, and corrective action.

8.6 Recordkeeping required by 40 CFR Part 60 Subpart IIII.

8.7 Air quality complaints received from the public or other entity, and the affected emissions units.

9 REPORTING

9.1 Within 10 business days after entering into a binding agreement to purchase the engine/generator sets identified in Equipment Table 1.1 above, Microsoft Corporation shall notify Ecology in writing. The serial number of the engine and the generator, and the engine build date will be submitted prior to installation of each engine.

9.2 The following information will be submitted to the AQP at the address in Condition 7 above by January 31 of each calendar year.

9.2.1 Monthly rolling annual total summary of air contaminant emissions, monthly rolling hours of operation with annual total, and monthly rolling gross power generation with annual total.

9.2.2 Written notification that the O&M manual has been developed and updated within 60 days after the issuance of this Order.

9.3 Any air quality complaints resulting from operation of the emissions units or activities shall be promptly assessed and addressed. A record shall be maintained of Microsoft Corporation's action to investigate the validity of the complaint and what, if any, corrective action was taken in response to the complaint. Ecology shall be notified within three (3) days of receipt of any such complaint.

10 STACK TESTING

10.1 Any emission testing performed to verify conditions of this Approval Order or for submittal to Ecology in support of this facility's operations shall be conducted as follows:

10.1.1 At least 30 days in advance of such testing, the Permittee shall submit a testing protocol for Ecology approval that includes the following information:

10.1.1.1 The location and Unit ID of the equipment proposed to be tested.

10.1.1.2 The operating parameters to be monitored during the test and the personnel assigned to monitor the parameters during the test.

10.1.1.3 A description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations.

10.1.1.4 Time and date of the test and identification and qualifications of the personnel involved.

10.1.1.5 A description of the test methods or procedures to be used.

10.1.2 Test Reporting: test reports shall be submitted to Ecology within 45 days of completion of the test and shall include, at a minimum, the following information:

- 10.1.2.1 A description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations.
- 10.1.2.2 Time and date of the test and identification and qualifications of the personnel involved.
- 10.1.2.3 A summary of results, reported in units and averaging periods consistent with the applicable emission standard or limit.
- 10.1.2.4 A summary of control system or equipment operating conditions.
- 10.1.2.5 A summary of production related parameters.
- 10.1.2.6 A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation.
- 10.1.2.7 A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation.
- 10.1.2.8 Copies of field data and example calculations.
- 10.1.2.9 Chain of custody information.
- 10.1.2.10 Calibration documentation.
- 10.1.2.11 Discussion of any abnormalities associated with the results.
- 10.1.2.12 A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

11 GENERAL CONDITIONS

- 11.1 **Commencing/Discontinuing Construction and/or Operations:** This approval shall become void if the construction or operation of backup emergency diesel electric generation is discontinued at the facility for a period of eighteen (18) months, unless prior written notification is received by Ecology at the address in Condition 7 above.
- 11.2 **Compliance Assurance Access:** Access to the source by representatives of Ecology or the EPA shall be permitted upon request. Failure to allow such access is grounds for enforcement action under the federal Clean Air Act or the Washington State Clean Air Act, and may result in revocation of this Approval Order.
- 11.3 **Availability of Order and O&M Manual:** Legible copies of this Order and the O&M manual shall be available to employees in direct operation of the emergency diesel electric generators, and be available for review upon request by Ecology.
- 11.4 **Equipment Operation:** Operation of the Caterpillar Model 3516C units and related equipment shall be conducted in compliance with all data and specifications submitted as part of the NOC application and in accordance with the O&M manual, unless otherwise approved in writing by Ecology.
- 11.5 **Modifications:** Any modification to the generators, engines, or cooling towers and their related equipment's operating or maintenance procedures, contrary to information in the NOC application, shall be reported to Ecology at least 60 days before such modification. Such modification may require a new or amended NOC Approval Order.

- 11.6 **Activities Inconsistent with the NOC Application and this Approval Order:** Any activity undertaken by the permittee or others, in a manner that is inconsistent with the NOC application and this determination, shall be subject to Ecology enforcement under applicable regulations.
- 11.7 **Obligations under Other Laws or Regulations:** Nothing in this Approval Order shall be construed to relieve the permittee of its obligations under any local, state or federal laws or regulations.
- 11.8 **Fees:** Per WAC 173-455-120, this Approval Order and related regulatory requirements have a fee associated for review and issuance. This Order is effective upon Ecology's receipt of the fee, for which Ecology's fiscal office will provide a billing statement.

All plans, specifications, and other information submitted to the Department of Ecology relative to this project and further documents and any authorizations or approvals or denials in relation thereto shall be kept at the Eastern Regional Office of the Department of Ecology in the "Air Quality Controlled Sources" files, and by such action shall be incorporated herein and made a part thereof.

Authorization may be modified, suspended or revoked in whole or part for cause including, but not limited to the following:

- a. Violation of any terms or conditions of this authorization;
- b. Obtaining this authorization by misrepresentation or failure to disclose fully all relevant fact.

The provisions of this authorization are severable and, if any provision of this authorization, or application of any provisions of their circumstances, and the remainder of this authorization, shall not be affected thereby.

You have a right to appeal this permit. To appeal this you must:

- File your appeal with the Pollution Control Hearings Board within 30 days of the "date of receipt" of this document. Filing means actual receipt by the Board during regular office hours
- Serve your appeal on the Department of Ecology within 30 days of the "date of receipt" of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). "Date of receipt" is defined at RCW 43.21B.001(2).

Be sure to do the following:

- Include a copy of (1) the permit you are appealing and (2) the application for the permit.
- Serve and file your appeal in paper form; electronic copies are not accepted.

1. To file your appeal with the Pollution Control Hearings Board

Mail appeal to:

Deliver your appeal in person to:

The Pollution Control Hearings Board
PO Box 40903
Olympia WA 98504-0903

OR

The Pollution Control Hearings Board
4224 – 6th Ave SE Rowe Six, Bldg 2
Lacey, WA 98503

2. To serve your appeal on the Department of Ecology

Mail appeal to:

Deliver your appeal in person to:

The Department of Ecology
Appeals Coordinator
P.O. Box 47608
Olympia, WA 98504-7608

OR

The Department of Ecology
Appeals Coordinator
300 Desmond Dr SE
Lacey, WA 98503

3. And send a copy of your appeal to:

Karen K. Wood
Air Quality Program
Department of Ecology
4601 N. Monroe Street
Spokane, WA 99205-1295

For additional information visit the Environmental Hearings Office Website:

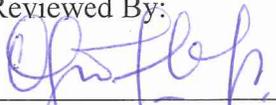
<http://www.eho.wa.gov>

To find laws and agency rules visit the Washington State Legislature Website:

<http://www1.leg.wa.gov/CodeReviser>

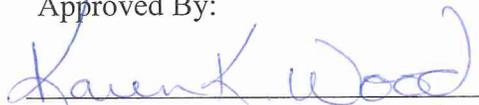
DATED this 26th day of October, 2010, at Spokane, Washington.

Reviewed By:

 10/21/10

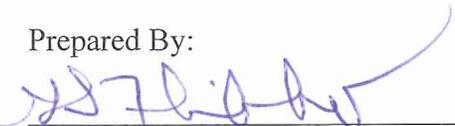
David Ogulei, P.E.
Science & Engineering Section
Department of Ecology
State of Washington

Approved By:

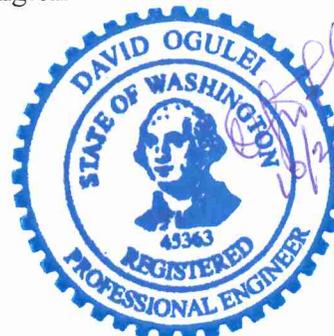


Karen K. Wood, Section Supervisor
Eastern Regional Office
Department of Ecology
State of Washington

Prepared By:



Gregory S. Flibbert, Unit Manager
Eastern Regional Office
Department of Ecology
State of Washington



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF APPROVING A NEW)
AIR CONTAMINANT SOURCE FOR)
SABEY INTERGATE QUINCY, LLC)
INTERGATE-QUINCY DATA CENTER)

ORDER No. 11AQ-E424

TO: John Ford, Vice President
Sabey Intergate Quincy, LLC
12201 Tukwila International Blvd
Seattle, WA 98168-5121

EQUIPMENT

The list of equipment that was evaluated for this order of approval consists of 44 Caterpillar Model 3516 diesel engines used to power emergency electrical generators. The forty-four 2.0 megawatt (MWe) generators will have a combined capacity of 88 MWe. Provisions for the use of smaller Caterpillar engines and engines supplied by other manufacturers are contained in this Approval Order. Annual operations and emissions will be restricted by 263,725 gallons per year of fuel consumption and 57.5 hours per year of operation. Each engine will operate for approximately 1.5 hour per month for required monthly maintenance testing, at an average electrical load of 50% of the standby rating. The generators will be installed in three construction phases. Phase 1 will consist of twelve 2.0 MWe generators that will be installed upon approval. Phase 2 and 3 will consist of sixteen 2.0 MWe generators each, and will be installed at the facility as independent tenant companies contract for space at the Intergate-Quincy Data Center.

Project	Unit ID	Capacity MWe	Engine SN	Generator SN	Build date
Phase 3	A01	2.0	EBG00972	SBG0124	07/22/2011
"	A02	2.0	EBG00973	SBG1025	07/22/2011
"	A03	2.0	EBG00975	SBG1026	07/22/2011
"	A04	2.0			
"	A05	2.0			
"	A06	2.0			
"	A07	2.0			
"	A08	2.0			
"	A09	2.0			
"	A10	2.0			
"	A11	2.0			
"	A12	2.0			
"	A13	2.0			
"	A14	2.0			
"	A15	2.0			
"	A16	2.0			
Phase 2	B01	2.0			
"	B02	2.0			

“	B03	2.0			
“	B04	2.0			
“	B05	2.0			
“	B06	2.0			
“	B07	2.0			
“	B08	2.0			
“	B09	2.0			
“	B10	2.0			
“	B11	2.0			
“	B12	2.0			
“	B13	2.0			
“	B14	2.0			
“	B15	2.0			
“	B16	2.0			
Phase 1	C01	2.0			
“	C02	2.0			
“	C03	2.0			
“	C04	2.0			
“	C05	2.0			
“	C06	2.0			
“	C07	2.0			
“	C08	2.0			
“	C09	2.0			
“	C10	2.0			
“	C11	2.0			
“	C12	2.0			
total	44	88.0			

The Intergate-Quincy Data Center will utilize Munters Model PV-W35-PVT cooling units or equivalents to dissipate heat from electronic equipment at the facility.

	# Fans per Cooling Unit	# Cooling Units per engine	Total # Cooling Units
Total	3	4	176

PROJECT SUMMARY

The Intergate-Quincy Data Center Phase 1 construction will consist of Building C with 135,257 ft² of floor space. Phase 2 and 3 construction will consist of Buildings A and B respectively, with 186,660 ft² of floor space each. The data center will be leased for occupancy by companies that require a fully supported data storage and processing facility. Air contaminant emissions from the Intergate-Quincy Data Center project have been based primarily on operation of the 44 emergency generator engines. Table 2a contains criteria pollutant potential- to- emit for the Intergate-Quincy Data Center project. Table 2b contains toxic air pollutant potential- to- emit for the Intergate-Quincy Data Center project. Table 2c contains emissions from the cooling systems.

Table 2a: Criteria Pollutant Potential to Emit for Intergate-Quincy Data Center			
Pollutant	Emission Factor (EF) Reference	Emission Factors	Facility Emissions
Criteria Pollutant		g/kWm-hr	tons/yr
2.1.1 NO _x Total			29.49
2.1.1a NO _x <75% load	EPA Tier 2	6.12	na
2.1.1b NO _x 75% load	Caterpillar	6.20	na
2.1.1c NO _x 100% load	Caterpillar	8.68	na
2.1.2 CO Total	EPA Tier 2	3.50	14.15
2.1.2a CO 10% load	EPA Tier 2	3.50	na
2.1.2b CO 50% load	EPA Tier 2	3.50	na
2.1.2c CO 75% load	EPA Tier 2	3.50	na
2.1.2d CO 100% load	EPA Tier 2	3.50	na
2.1.3 SO ₂	Mass Balance	na	0.028
2.1.4 PM _{2.5} /DEEP Total	EPA Tier 2	0.20	0.809
2.1.4a DEEP 10% load	Caterpillar	0.67	na
2.1.4b DEEP 50% load	Caterpillar	0.108	na
2.1.4c DEEP 75% load	Caterpillar	0.0605	na
2.1.4d DEEP 100% load	Caterpillar	0.0477	na
2.1.5 VOC	EPA Tier 2	0.282	1.14

Table 2b: Toxic Air Pollutant Potential to Emit for Intergate-Quincy Data Center		
Pollutant	AP-42 Section 3.4 EF	Facility Emissions
Organic Toxic Air Pollutants	Lbs/MMbtu	tons/yr
2.1.6 Propylene	2.79E-03	4.2E-02
2.1.7 Acrolein	7.88E-06	1.42E-04
2.1.8 Benzene	7.76E-04	1.40E-02
2.1.9 Toluene	2.81E-04	5.08E-03
2.1.10 Xylenes	1.93E-04	3.49E-03
2.1.11 Napthalene	1.30E-04	1.96E-03
2.1.11 1,3 Butadiene	1.96E-05	3.53E-04
2.1.12 Formaldehyde	7.89E-05	1.43E-03
2.1.13 Acetaldehyde	2.52E-05	4.55E-04
2.1.14 Benzo(a)Pyrene	1.29E-07	2.32E-06
2.1.15 Benzo(a)anthracene	6.22E-07	1.12E-05
2.1.16 Chrysene	1.53E-06	2.76E-05
2.1.17 Benzo(b)fluoranthene	1.11E-06	2.01E-05
2.1.18 Benzo(k)fluoranthene	1.09E-07	1.97E-06
2.1.19 Dibenz(a,h)anthracene	1.73E-07	3.13E-06
2.1.20 Ideno(1,2,3-cd)pyrene	2.07E-07	3.74E-06

2.1.21 PAH (no TEF)	3.88E-06	7.01E-05
2.1.22 PAH (apply TEF)	4.98E-07	9.00E-06
State Criteria Pollutant Air Toxics		
2.1.23 DEEP/PM _{2.5}	EPA Tier 2	0.809
2.1.24 Carbon monoxide	EPA Tier 2	14.15
2.1.25 Sulfur dioxide	EPA Tier 2	0.028
2.1.26 Primary NO ₂ *	10% total NO _x	2.95

*Assumed to be equal to 10% of the total NO_x emitted.

The Intergate-Quincy Data Center will utilize cooling systems to dissipate heat from electronic equipment at the facility. The tenants at the Intergate-Quincy Data Center may use a variety of cooling systems to dissipate heat from electronic equipment at the facility. Cooling system particulate matter emissions were calculated based on design and operating parameters for 176 Munters Model PV-W35-PVT cooling units or equivalents at full buildout. The emission rate contained in Tabel 2.c has been estimated based on total water consumption (water evaporation plus sump bleed-down) and a maximum drift rate of 0.001% of water consumption. Actual water consumption from evaporation will be approximately 66% of total water consumption.

Pollutant	Water supply conc. Mg/l	Maximum Recirc. water conc. Mg/l	Emission rate Lbs/year
TDS* as PM _{2.5}	Na	7500	4,635.5

*"TDS" stands for Total Dissolved Solids.

DETERMINATIONS

In relation to this project, the State of Washington Department of Ecology (Ecology), pursuant to Revised Code of Washington (RCW) 70.94.152, Washington Administrative Code (WAC) 173-460-040, and WAC 173-400-110, makes the following determinations:

1. The project, if constructed and operated as herein required, will be in accordance with applicable rules and regulations, as set forth in Chapter 173-400 WAC, and Chapter 173-460 WAC, and the operation thereof, at the location proposed, will not emit pollutants in concentrations that will endanger public health.
2. The proposed project, if constructed and operated as herein required, will utilize best available control technology (BACT) as defined below:

Pollutant(s)	BACT Determination
Particulate matter (PM), carbon monoxide and volatile organic compounds (VOC)	a. Use of good combustion practices; b. Use of EPA Tier 2 certified engines if the engines are installed and operated as emergency engines, as defined at 40 CFR§60.4219; or applicable emission

	<p>standards found in 40 CFR Part 89.112 Table 1 and 40 CFR Part 1039.102 Tables 6 and 7 if Model Year 2011 or later engines are installed and operated as non-emergency engines;</p> <p>c. Compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart III; and</p> <p>d. Maintaining the water droplet drift rate from cooling systems and drift eliminators to a maximum drift rate of 0.001% of the circulating water flow rate.</p>
Nitrogen oxides (NOx)	<p>a. Use of good combustion practices;</p> <p>b. Use of an engine design that incorporates fuel injection timing retard, turbocharger and a low-temperature aftercooler;</p> <p>c. Use of EPA Tier 2 certified engines if the engines are installed and operated as emergency engines, as defined at 40 CFR §60.4219; or applicable emission standards found in 40 CFR Part 89.112 Table 1 and 40 CFR Part 1039.102 Tables 6 and 7 if Model Year 2011 or later engines are installed and operated as non-emergency engines; and</p> <p>d. Compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart III.</p>
Sulfur dioxide	Use of ultra-low sulfur diesel fuel containing no more than 15 parts per million by weight of sulfur.

3. The proposed project, if constructed and operated as herein required, will utilize best available control technology for toxic air pollutants (tBACT) as defined below:

Toxic Air Pollutant(s)	tBACT Determination
Acetaldehyde, carbon monoxide, acrolein, benzene, benzo(a)pyrene, 1,3-butadiene, diesel engine exhaust particulate, formaldehyde, propylene, toluene, total PAHs, xylenes	Compliance with the VOC BACT requirement.
Nitrogen dioxide	Compliance with the NOx BACT requirement.
Sulfur dioxide	Compliance with the SO ₂ BACT requirement.

4. The modeled ambient concentrations of two toxic air pollutants – diesel engine exhaust particulate matter and nitrogen dioxide – exceed the Acceptable Source Impact Levels (ASILs) for those pollutants, as defined in Chapter 173-460 WAC. Ecology has evaluated the health risks associated with diesel engine exhaust particulate and nitrogen dioxide emissions from the proposed project, in accordance with WAC 173-460-090. Ecology has concluded that the health risks from the project are acceptable as defined in WAC 173-460-090(7). The technical analysis supporting this determination is hereby incorporated into this Notice of Construction Approval Order.

THEREFORE, IT IS ORDERED that the project as described in the Notice of Construction application and more specifically detailed in plans, specifications, and other information submitted to Ecology is approved for construction and operation, provided the following are met:

APPROVAL CONDITIONS

1. ADMINISTRATIVE CONDITION

- 1.1 Sabey Intergate shall schedule a meeting with Quincy School District officials by no later than July 19, 2011. The purpose of the meeting will be to both communicate, and better understand, any potential concerns or complaints that the Quincy School District may have regarding emergency generator maintenance testing and operation. In addition, Sabey Intergate will provide school administrators with the telephone number for the Intergate-Quincy Data Center and a 24 hour contact number for a Sabey Intergate manager. The school administrators shall also be provided a maintenance testing schedule as developed by Sabey Intergate. The Intergate-Quincy Data Center will notify the school whenever (Ecology) approved changes occur in the maintenance testing schedule. As decided by the school administrators and the Intergate-Quincy Data Center, an ongoing relationship shall be established to facilitate future communications.
- 1.2 Sabey-Intergate submitted a NOC application for the Intergate-Quincy Data Center to determine compliance with all applicable state and federal air quality regulations. At full build out of all three phases, the Intergate-Quincy Data Center is anticipated to be occupied by up to eight independent tenants. Each independent tenant will be issued an approval order based on the parameters established in this approval order. A NOC application (form only) and engine manufacturer's specification sheets will be required from each independent tenant prior to occupancy, subject to Approval Conditions 2.4 and 2.7. Ecology will review the NOC application form to determine whether the proposed project conforms to the parameters contained in this approval order. If the proposed project conforms to the approval order, Ecology will issue an administrative approval order to the applicant without further review. If the proposed project does not conform to this approval order, Ecology will require new source review under Chapters 173-400 WAC and 173-460 WAC. The purpose of the administrative approval orders for each independent tenant is to establish responsibility for their individual operations, and to ensure conformity to this approval Order.
- 1.3 The administrative approval orders issued to each independent tenant will contain conditions that will require coordination of operations with other tenants to provide for compliance with this approval order with the intent to minimize community impacts.
- 1.4 Sabey shall make available information on diesel engine exhaust health risks and emergency generator operations to existing residents and commercial and industrial

facilities within 0.25 miles of the Intergate-Quincy Data Center property boundaries. Information on diesel exhaust health risks and emergency generator operations shall be provided to the City of Quincy Building and Planning Department for distribution to new homeowners and businesses that locate on undeveloped parcels within 0.25 miles of the Intergate-Quincy Data Center property boundary. The health risk information may be, or should be similar to, Ecology Focus on Diesel Exhaust Health Risks dated February 2011, Publication Number 11-02-005. A copy of the materials to be used to comply with this condition shall be provided to Ecology for review, and distributed prior to starting Phase 1 operations.

2. EQUIPMENT RESTRICTIONS

- 2.1. Any engine used to power the electrical generators shall be certified by the manufacturer to meet 40 CFR 89 Tier II emission levels or other specifications as required by the EPA at the time the engines are installed. Each engine to be installed must be permanently labeled by the manufacturer as an emergency engine in accordance with 40 CFR § 60.4210(f). Each engine approved in this Order must operate as an emergency engine as defined at WAC 173-400-930(3).
- 2.2. The only engines and electrical generating units approved for operation at the Intergate-Quincy Data Center are those listed by serial number in Table 1 above.
- 2.3. Replacement of failed engines with identical engines (same manufacturer and model) requires notification prior to installation but will not require new source review unless there is an increase in emission rates or community impacts.
- 2.4. The installation of any new engines after July 1, 2014 will require notification to Ecology that includes engine manufacturer's specification sheets. Ecology will decide whether new source review is required based on various factors including whether the new engines will have either an increased emission rate or result in an emission concentration that may increase community impacts over those evaluated for this approval Order, or if an update to the current BACT analysis is necessary.
- 2.5. The forty-four (44) Caterpillar Model 3516 engines exhaust stack heights shall be greater than or equal to 48 feet above ground level and will be no more than 16 inches in diameter. All engines that may be used for this project shall be required to verify that exhaust stack parameters such as diameter, height, and exhaust rate and velocity do not result in community emissions impacts greater than what was evaluated for this project.
- 2.6. The manufacture and installation of the forty-four (44) engine/generator sets proposed for Building A, Building B and Building C of the project shall occur by January 1, 2014. If the manufacture and installation of the engines has not been completed within the above schedule, new source review may be required prior to installation, and community impacts will be re-evaluated if new source review is required. Sabey Intergate may request an extension of this time schedule, and Ecology may approve of an extension without revision to this Order.
- 2.7. This Order only applies to the forty-four (44) Caterpillar Model 3516 engines, each with a rated full standby capacity of 2937 hp that were evaluated in the Notice of Construction application and second tier review. New source review will not be required for engines with a rated full standby capacity of less than 2937 hp that comply

with the engine certification requirements contained in Approval Condition 2.1 unless there is an increase in community emission impacts. On a case-by-case basis, Ecology may require additional ambient impacts analyses prior to installation of smaller engines.

3. OPERATING LIMITATIONS

- 3.1. The fuel consumption at the Intergate-Quincy Data Center facility shall be limited to a total of 263,725 gallons per year of diesel fuel equivalent to on-road specification No. 2 distillate fuel oil (less than 0.00150 weight percent sulfur). Total annual fuel consumption by the facility may be averaged over a three (3) year period using monthly rolling totals.
- 3.2. Except as provided in Approval Condition 3.5, the forty-four (44) Intergate-Quincy Data Center engines are limited to the following average hours of operation, averaging periods, total fuel limit, and number of engines operating concurrently:

Table 3.2: Engine Operating Restrictions				
Operating Activity	Average hours/year per engine, 3-year monthly rolling totals	Average Operating Loads (%)	Diesel fuel gallons/year, 3-year monthly rolling totals	# Operating Concurrently
Monthly Testing	16.5	Idle to 50%		4
Annual Load Bank Testing	6	100%		4
Electrical Bypass	15	75%		16
Corrective Tests	12	50%		1
Power Outage	8	75%		44
Total	57.5		263,725	

- 3.3. A load bank will be used for electrical energy dissipation whenever prescheduled monthly maintenance testing, corrective testing or annual load bank testing occurs above idle.
- 3.4. The forty-four (44) Caterpillar Model 3516 engines at the Intergate-Quincy Data Center require periodic scheduled operation. To mitigate engine emission impacts, Intergate-Quincy Data Center will perform all scheduled engine maintenance testing, bypass operations, and load testing during daylight hours. The Intergate-Quincy Data Center shall develop an operating schedule for tenants of the facility; and that schedule shall be available for review by Ecology upon request. Changes to the operating schedule will not trigger revision or amendment of this Order as long as the number of engines operating concurrently do not exceed Table 3.2 in this Order.
- 3.5. Initial start-up (commissioning) testing for the forty-four (44) Caterpillar Model 3516 engines at the Intergate-Quincy Data Center is restricted to an average of 30 hours per generator and 2309 gallons of fuel per generator, averaged over all generators installed during any consecutive 3 year period.

- 3.5.1 Except during site integration testing as specified below, only one engine shall be operated at any one time during start-up testing.
- 3.5.2 During a site integration test, no more than sixteen (16) generator engines may operate concurrently for up to four continuous hours.
- 3.5.3 All startup and commissioning testing shall be conducted during daylight hours.
- 3.5.4 Fuel use limits contained in Approval Conditions 3.1 and emission limits contained in Approval Conditions 5, remain in effect during initial start-up testing.
- 3.6. The Intergate-Quincy Data Center will utilize up to 176 Munters PV-W35-PVT or equivalent cooling units. Each individual unit shall maintain a maximum drift rate to no more than 0.001 percent of the circulating water rate.

4. GENERAL TESTING AND MAINTENANCE REQUIREMENTS

- 4.1. The Intergate-Quincy Data Center will follow engine-manufacturer's recommended diagnostic testing and maintenance procedures to ensure that each engine will conform to 40 CFR 89 emission specifications throughout the life of each engine.
- 4.2 Within 12 months of installation of any new proposed engine approved in this Order, the Intergate-Quincy Data Center shall measure concentrations of nitric oxide (NO), nitrogen dioxide (NO₂), carbon monoxide (CO), and oxygen (O₂) leaving that engine's exhaust stack in accordance with Approval Condition 4.3. This testing will serve to demonstrate compliance with the emission limits contained in Section 5, and as an indicator of proper operation of the engines. Periodic testing shall be conducted at the conclusion, or upon termination, of the manufacturer's warranty term for each engine, on a frequency of every 60 months from warranty expiration date, or 3,000 hours of operation, whichever occurs first.
- 4.3 The following procedure shall be used for each test for the engines as required by Approval Condition 4.2 unless an alternate method is proposed by the Intergate-Quincy Data Center and approved in writing by Ecology prior to the test.
 - 4.3.1 Initial emissions testing should be combined with start-up and commissioning testing. Subsequent periodic emissions testing should be combined with pre-scheduled maintenance testing and annual load bank engine testing. Additional operation of the engines for the purpose of emissions testing beyond the operating hours allowed in this Order may be allowed by Ecology upon request.
 - 4.3.2 NO, NO₂, and CO emissions measurement shall be conducted for each engine at each of the proposed average engine loads of 10% (idle), 50%, 75%, and 100% that correspond to scheduled engine testing scenarios in Approval Conditions 3.2.
 - 4.3.3 EPA Reference Methods from 40 CFR 60 and/or 40 CFR 89 as appropriate for each pollutant shall be used for no less than two engines from each

manufacturer and each size engine from each manufacturer. A test plan will be submitted for Ecology approval at least 30 days before any testing is conducted.

- 4.3.4 The Intergate-Quincy Data Center may propose using a portable emissions instrument analyzer after compliance is verified under Approval Condition 4.3.3. The analyzer model must be approved in writing by Ecology prior to testing. The analyzer shall be calibrated using EPA Protocol 1 gases according to the procedures for drift and bias limits outlined in EPA Methods 7E and Method 10. Alternate calibration procedures may be approved in advance by Ecology.
- 4.3.5 Three test runs shall be conducted for each engine when using a portable emissions instrument analyzer. Each run must last at least 15 minutes. Analyzer data shall be recorded at least once every minute during the test. Engine run time and fuel usage shall be recorded during each test run for each load and shall be included in the test report.
- 4.3.6 The F-factor method, as described in EPA Method 19, may be used to calculate exhaust flow rate through the exhaust stack. The fuel meter data, as measured according to Approval Condition 4.6, shall be included in the test report, along with the emissions calculations.
- 4.3.7 If the measured NO, NO₂ and CO emission rates from the first 4 engines of each make, size, and model number are found to be consistent and less than the emission limits contained in this order, the Intergate-Quincy Data Center may request approval from Ecology to discontinue initial compliance emission testing on the remainder of the engines of that make and model number.

- 4.4 Each engine shall be equipped with a properly installed and maintained non-resettable meter that records total operating hours.
- 4.5 Each engine shall be connected to a properly installed and maintained fuel flow monitoring system that records the amount of fuel consumed by that engine during operation.
- 4.6 Ecology may relax the frequency of periodic testing under Approval Condition 4.2 if the manufacturer's warranty term for each engine is extended. Periodic testing will be required upon conclusion or termination of the manufacturer's warranty.

5 EMISSION LIMITS

The forty-four (44) engines shall meet the emission rate limitations contained in this section. Unless otherwise approved by Ecology in writing, compliance with emission limits for those pollutants that are required to be tested under Approval Conditions 4.2 and 4.3 shall be based on emissions test data as determined according to those approval conditions.

- 5.1 If required to demonstrate compliance with the g/kW-hr EPA Tier 2 average emission limits through stack testing, the Intergate-Quincy Data Center shall conduct exhaust stack testing and average emission rates for 5 individual operating loads (10%, 25%, 50%, 75% and 100%) according to 40 CFR §89.410, Table 2 of Appendix B, 40 CFR

Part 89, Subpart E; and/or 40 CFR Part 60, Subpart III, or any other applicable EPA requirement in effect at the time the engines are installed.

- 5.2 Nitrogen oxide (NOx) emissions from each of the forty-four (44) Caterpillar Model 3516 engines rated at 2937 brake horse power shall not exceed the following emission rates at the stated loads, based on emission factors provided by the engine manufacturer:

Table 5.2: Nitrogen oxide (NOx) emission rate limits

	Operating Scenario	Operating Load	Emissions Limit per engine in lb/hr ¹
5.2.1	Annual Load Testing	100%	41.9
5.2.2	Electrical Bypass	100%	41.9
5.2.3	Monthly	50%	15.3
	Maintenance	10%	6.49
5.2.4	Corrective Testing	50%	15.3
5.2.5	Power Outages	75%	22.5

¹ Caterpillar “Not To Exceed” or EPA Tier-2 (6.12 g/kw-hr) whichever is higher

- 5.3 Nitrogen dioxide (NO₂) emissions from each of the forty-four (44) Caterpillar Model 3516 engines rated at 2937 brake horse power shall not exceed the following emission rates at the stated loads, based on emission factors provided by the engine manufacturer:

Table 5.3: Nitrogen dioxide (NO₂) emission rate limits

	Operating Scenario	Operating Load	Emissions Limit per engine in lb/hr ¹
5.3.1	Annual Load Testing	100%	4.19
5.3.2	Electrical Bypass	100%	4.19
5.3.3	Monthly	50%	1.53
	Maintenance	10%	0.65
5.3.4	Corrective Testing	50%	1.53
5.3.5	Power Outages	75%	2.25

¹ 10% of total NOx emission limits

- 5.4 Carbon monoxide emissions from each of the forty-four (44) Caterpillar Model 3516 engines rated at 2937 brake horse power shall not exceed the following emission rates at the stated loads, based on emission factors provided by the engine manufacturer:

Table 5.4: Carbon monoxide (CO) emission rate limits

	Operating Scenario	Operating Load	Emissions Limit per engine in lb/hr ¹
5.4.1	Annual Load Testing	100%	16.9
5.4.2	Electrical Bypass	100%	16.9
5.4.3	Monthly Maintenance	50%	8.75
		10%	2.35
5.4.4	Corrective Testing	50%	8.75
5.4.5	Power Outages	75%	12.7

¹ Caterpillar Not To Exceed ” or EPA Tier-2 (3.5 g/kw-hr) whichever is higher

- 5.5 Diesel Engine Exhaust Particulate (DEEP) emissions from each of the forty-four (44) Caterpillar Model 3516 engines rated at 2937 brake horse power shall not exceed the following emission rates at the stated loads, based on emission factors provided by the engine manufacturer:

Table 5.5: Diesel Engine Exhaust Particulate (DEEP) emission rate limits

	Operating Scenario	Operating Load	Emissions Limit per engine in lb/hr ¹
5.5.1	Annual Load Testing	100%	0.23
5.5.2	Electrical Bypass	100%	0.23
5.5.3	Monthly Maintenance	50%	0.27
		10%	0.45
5.5.4	Corrective Testing	50%	0.27
5.5.5	Power Outages	75%	0.22

¹ Caterpillar “Not-to-Exceed” data.

- 5.6 Particulate matter emissions from all 44 engines combined shall not exceed 0.809 tons/yr (1618 lbs/yr). All PM emissions shall be considered diesel engine exhaust particulate (DEEP) and PM_{2.5} emissions.
- 5.7 Nitrogen dioxide (NO₂) emissions from all 44 engines combined shall not exceed 99 lbs/hr and 2.95 tons/yr.
- 5.8 Volatile organic compound (VOC) emissions from all 44 engines combined shall not exceed 1.14 tons/yr (2280 lbs/yr).
- 5.9 Sulfur dioxide emissions from all 44 engines combined shall not exceed 0.028 tons/yr (56 lbs/yr).
- 5.10 Visual emissions from each diesel electric generator exhaust stack shall be no more than 5 percent, with the exception of a two (2) minute period after unit start-up. Visual emissions shall be measured by using the procedures contained in 40 CFR 60, Appendix A, Method 9.

6 OPERATION AND MAINTENANCE MANUALS

A site-specific O&M manual for the Intergate-Quincy Data Center facility equipment shall be developed and followed. Manufacturers' operating instructions and design specifications for the engines, generators, and associated equipment shall be included in the manual. The O&M manual shall be updated to reflect any modifications of the equipment or its operating procedures. Emissions that result from failure to follow the operating procedures contained in the O&M manual or manufacturer's operating instructions may be considered proof that the equipment was not properly installed, operated, and/or maintained. The O&M manual for the diesel engines and associated equipment shall at a minimum include:

- 6.1 Manufacturer's testing and maintenance procedures that will ensure that each individual engine will conform to the EPA Tier Emission Standards appropriate for that engine throughout the life of the engine.
- 6.2 Normal operating parameters and design specifications.
- 6.3 Operating maintenance schedule.

7 SUBMITTALS

All notifications, reports, and other submittals shall be sent to:

Washington State Department of Ecology
Air Quality Program
4601 N. Monroe Street
Spokane, WA 99205-1295

8 RECORDKEEPING

All records, Operations and Maintenance Manual, and procedures developed under this Order shall be organized in a readily accessible manner and cover a minimum of the most recent 60-month period. Any records required to be kept under the provisions of this Order shall be provided within 30 days to Ecology upon request. The following records are required to be collected and maintained.

- 8.1 Fuel receipts with amount of diesel and sulfur content for each delivery to the facility.
- 8.2 Monthly and annual hours of operation for each diesel engine.
- 8.3 Purpose, electrical load and duration of runtime for each diesel engine period of operation.
- 8.4 Annual gross power generated by each independent tenant at the facility and total annual gross power for the facility.
- 8.5 Upset condition log for each engine and generator that includes date, time, duration of upset, cause, and corrective action.
- 8.6 Any recordkeeping required by 40 CFR Part 60 Subpart IIII.
- 8.7 Air quality complaints received from the public or other entity, and the affected emissions units.

9 REPORTING

- 9.1 Within 10 business days after entering into a binding agreement with an independent tenant, Sabey-Intergate shall provide Ecology with the company and the name and contact information of the company representative. Information on the Phase 2 and 3 engine/generator sets for Equipment Table 1.1 above will be the responsibility of the independent tenants of the Intergate-Quincy Data Center. The serial number, manufacturer make and model, standby capacity, and date of manufacture will be submitted prior to installation for each Phase 1, 2, and 3 engine and generator.
- 9.2 The following information will be submitted to the AQP at the address in Condition 7 above by January 31 of each calendar year. This information may be submitted with annual emissions information requested by the AQP.
- 9.2.1 Monthly rolling annual total summary of air contaminant emissions,
 - 9.2.2 Monthly rolling hours of operation with annual total,
 - 9.2.3 Monthly rolling gross power generation with annual total as specified in Approval Condition 8.4,
 - 9.2.4 A listing of each start-up of each diesel engine that shows the purpose, fuel usage, and duration of each period of operation.
- 9.3 Any air quality complaints resulting from operation of the emissions units or activities shall be promptly assessed and addressed. A record shall be maintained by each tenant of the action taken to investigate the validity of the complaint and what, if any, corrective action was taken in response to the complaint. Ecology shall be notified within three (3) days of receipt of any such complaint.
- 9.4 Each tenant shall notify Ecology by e-mail or in writing within 24 hours of any engine operation of greater than 60 minutes if such engine operation occurs as the result of a power outage or other unscheduled operation. This notification does not alleviate the tenant from annual reporting of operations contained in any section of Approval Condition 9.

10 GENERAL CONDITIONS

- 10.1 **Commencing/Discontinuing Construction and/or Operations:** This approval shall become void if construction of the facility is not begun within 18 months of permit issuance or if facility operation is discontinued for a period of eighteen (18) months or more. In accordance with WAC 173-400-111(7)(c), each phase must commence construction within 18 months of the projected and approved construction dates in this Order.
- 10.2 **Compliance Assurance Access:** Access to the source by representatives of Ecology or the EPA shall be permitted upon request. Failure to allow such access is grounds for enforcement action under the federal Clean Air Act or the Washington State Clean Air Act, and may result in revocation of this Approval Order.
- 10.3 **Availability of Order and O&M Manual:** Legible copies of this Order and the O&M manual shall be available to employees in direct operation of the diesel electric generation station, and be available for review upon request by Ecology.
- 10.4 **Equipment Operation:** Operation of the 44 Caterpillar Model 3516 diesel engines used to power emergency electrical generators and related equipment shall be

- conducted in compliance with all data and specifications submitted as part of the NOC application and in accordance with the O&M manual, unless otherwise approved in writing by Ecology.
- 10.5 **Modifications:** Any modification to the generators or engines and their related equipment's operating or maintenance procedures, contrary to information in the NOC application, shall be reported to Ecology at least 60 days before such modification. Such modification may require a new or amended NOC Approval Order.
 - 10.6 **Activities Inconsistent with the NOC Application and this Approval Order:** Any activity undertaken by the permittee or others, in a manner that is inconsistent with the NOC application and this determination, shall be subject to Ecology enforcement under applicable regulations.
 - 10.7 **Obligations under Other Laws or Regulations:** Nothing in this Approval Order shall be construed to relieve the permittee of its obligations under any local, state or federal laws or regulations.

All plans, specifications, and other information submitted to the Department of Ecology relative to this project and further documents and any authorizations or approvals or denials in relation thereto shall be kept at the Eastern Regional Office of the Department of Ecology in the "Air Quality Controlled Sources" files, and by such action shall be incorporated herein and made a part thereof.

Nothing in this approval shall be construed as obviating compliance with any requirement of law other than those imposed pursuant to the Washington Clean Air Act and rules and regulations thereunder.

Authorization may be modified, suspended or revoked in whole or part for cause including, but not limited to the following:

- a. Violation of any terms or conditions of this authorization;
- b. Obtaining this authorization by misrepresentation or failure to disclose fully all relevant fact.

The provisions of this authorization are severable and, if any provision of this authorization, or application of any provision to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this authorization, shall not be affected thereby.

YOUR RIGHT TO APPEAL

You have a right to appeal this Approval Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Approval Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of this Approval Order:

- File your appeal and a copy of this Approval Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Approval Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW STE 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

For additional information visit the Environmental Hearings Office Website:
<http://www.eho.wa.gov>

To find laws and agency rules visit the Washington State Legislature Website:
<http://www1.leg.wa.gov/CodeReviser>

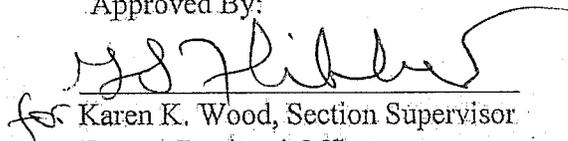
DATED this 26th day of August, 2011, at Spokane, Washington.

Reviewed By:



David Ogulei, P.E.
Science & Engineering Section
Department of Ecology
State of Washington

Approved By:

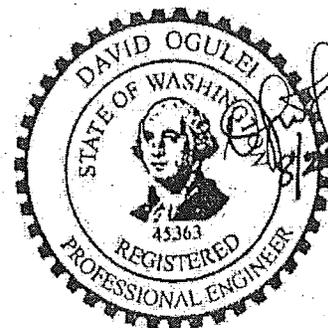


for Karen K. Wood, Section Supervisor
Eastern Regional Office
Department of Ecology
State of Washington

Prepared By:



Gregory S. Flibbert, Unit Manager
Eastern Regional Office
Department of Ecology
State of Washington



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF APPROVING A NEW)
 AIR CONTAMINANT SOURCE FOR) Approval Order No. 12AQ-E450
 VANTAGE DATA CENTERS)
 MANAGEMENT COMPANY, LLC)
 VANTAGE-QUINCY DATA CENTER)

TO: Jeff Kane, Vice President
 Vantage Data Centers Management Company, LLC
 2625 Walsh Ave
 Santa Clara, CA 95051

EQUIPMENT

The list of equipment that was evaluated for this order of approval consists of 17 MTU Model 20V4000 diesel engines used to power emergency electrical generators, Model MTU 3000. The seventeen 3.0 megawatt (MWe) generators will have a combined capacity of 51 MWe. Following initial commissioning testing, build-out annual operations and emissions will be restricted to 167,205 gallons per year of fuel consumption and up to 82 hours per year of operation per engine. Each primary engine will operate for approximately 72.5 hours per year for required maintenance testing and outage operation and an additional 9.5 hours per year of no-load idle cool down. The generators will be installed in up to four phases. Phase 1 will consist of seven 3.0 MWe generators that will be installed upon approval. Phases 2, 3, and 4 will consist of a total of ten additional 3.0 MWe generators, which will be installed at the facility as independent tenant companies contract for space at the Vantage-Quincy Data Center (hereafter "Vantage").

Project Phase	DC BLDG	Unit ID	Capacity MWe	Engine SN	Generator SN	Build date
1	DC1	DC1-1P	3.0			
"	DC1	DC1-2P	3.0			
"	DC1	DC1-3P	3.0			
"	DC1	DC1-4P	3.0			
"	DC1	DC1-5P	3.0			
"	DC1	DC1-6R	3.0			
"	DC1	DC1-7R	3.0			
2	DC2	DC2-1P	3.0			
"	DC2	DC2-2P	3.0			
"	DC2	DC2-3P	3.0			
"	DC2	DC2-4R	3.0			
3	DC3	DC3-1P	3.0			
"	DC3	DC3-2P	3.0			
"	DC3	DC3-3P	3.0			
"	DC3	DC3-4R	3.0			
4	ETC	ETC-1P	3.0			
"	ETC	ETC-2R	3.0			

The Vantage Data Center will utilize non-evaporative cooling units to dissipate heat from electronic equipment at the facility, thus eliminating evaporative cooling tower emissions from the project.

PROJECT SUMMARY

The Vantage Data Center Phase 1 construction will consist of Building 1 with 5 primary engine-generators and 2 reserve engines. Phases 2, 3, and 4 construction will consist of Buildings 2, 3, and 4 ('ETC') with 10 additional engines total. The data center will be leased for occupancy by companies that require a fully supported data storage and processing facility. Vantage will own and operate the generators. Air contaminant emissions from the Vantage Data Center project have been estimated based on build-out operation of the 17 emergency generator engines. Table 2a contains criteria pollutant potential- to- emit for the Vantage Data Center project excluding emissions due to commissioning of each engine. Table 2b contains toxic air pollutant potential- to- emit for the Vantage-Quincy Data Center project excluding emissions due to commissioning of each engine.

Table 2a: Criteria Pollutant Potential to Emit for Vantage Data Center			
Pollutant	Emission Factor (EF) Reference	Emission Factors	Facility Emissions
Criteria Pollutant		Lb/hr	tons/yr
2.1.1 NOx Total			5.83
2.1.1a NOx 10% load	MTU Guarantee	3.73	na
2.1.1b NOx 93.3% load	MTU Guarantee	15.4	na
2.1.1c NOx 100% load	MTU Guarantee	17.2	na
2.1.2 CO Total	MTU Guarantee	na	1.22
2.1.2a CO 10% load	MTU Guarantee	1.41	na
2.1.2b CO 81% load	MTU Guarantee	1.93	na
2.1.2c CO 93.3% load	MTU Guarantee	2.17	na
2.1.2d CO 100% load	MTU Guarantee	2.39	na
2.1.3 SO ₂	MTU Guarantee	na	0.02
2.1.4 PM _{2.5} /DEEP Total	MTU Guarantee	na	0.22
2.1.4a DEEP 10% load	MTU Guarantee	0.400	na
2.1.4b DEEP 81% load	MTU Guarantee	0.396	na
2.1.4c DEEP 93.3% load	MTU Guarantee	0.47	na
2.1.4d DEEP 100% load	MTU Guarantee	0.512	na
2.1.5 VOC 10% Load	MTU Guarantee	0.25	0.25

Table 2b: Toxic Air Pollutant Potential to Emit for Vantage Data Center		
Pollutant	AP-42 Section 3.4 EF	Facility Emissions
Organic Toxic Air Pollutants	Lbs/MMbtu	tons/yr
2.1.6 Propylene	2.79E-03	6.8E-03
2.1.7 Acrolein	7.88E-06	1.92E-05
2.1.8 Benzene	7.76E-04	1.89E-03
2.1.9 Toluene	2.81E-04	6.85E-4
2.1.10 Xylenes	1.93E-04	4.71E-04
2.1.11 Napthalene	1.30E-04	1.96E-03
2.1.11 1,3 Butadiene	1.96E-05	4.77E-05
2.1.12 Formaldehyde	7.89E-05	1.92E-04
2.1.13 Acetaldehyde	2.52E-05	6.14E-05
2.1.14 Benzo(a)Pyrene	1.29E-07	2.98E-07
2.1.15 Benzo(a)anthracene	6.22E-07	1.44E-06
2.1.16 Chrysene	1.53E-06	3.55E-06
2.1.17 Benzo(b)fluoranthene	1.11E-06	2.58E-06
2.1.18 Benzo(k)fluoranthene	1.09E-07	2.53E-07
2.1.19 Dibenz(a,h)anthracene	1.73E-07	4.02E-07
2.1.20 Ideno(1,2,3-cd)pyrene	2.07E-07	4.81E-07
2.1.21 PAH (no TEF)	3.88E-06	9.01E-06
2.1.22 PAH (apply TEF)	4.98E-07	1.16E-06
State Criteria Pollutant Air Toxics		
2.1.23 DEEP/PM _{2.5}	MTU Guarantee	0.19
2.1.24 Carbon monoxide	MTU Guarantee	1.13
2.1.25 Sulfur dioxide	MTU Guarantee	0.02
2.1.26 Primary NO ₂ *	10% total NO _x	0.6
2.1.27 Ammonia	15 ppmv at 15%O ₂	0.36

*Assumed to be equal to 10% of the total NO_x emitted.

DETERMINATIONS

In relation to this project, the State of Washington Department of Ecology (Ecology), pursuant to Revised Code of Washington (RCW) 70.94.152, Washington Administrative Code (WAC) 173-460-040, and WAC 173-400-110, makes the following determinations:

1. The project, if constructed and operated as herein required, will be in accordance with applicable rules and regulations, as set forth in Chapter 173-400 WAC, and Chapter 173-460 WAC, and the operation thereof, at the location proposed, will not emit pollutants in concentrations that will endanger public health.

2. The proposed project, if constructed and operated as herein required, will utilize best available control technology (BACT) as defined below:

Table 3: Best Available Control Technology Requirements	
Pollutant(s)	BACT Determination
Particulate matter (PM), carbon monoxide and volatile organic compounds (VOC)	<ul style="list-style-type: none"> a. Use of EPA Tier 2 certified engines if the engines are installed and operated as emergency engines, as defined at 40 CFR§60.4219; or applicable emission standards found in 40 CFR Part 89.112 Table 1 and 40 CFR Part 1039.102 Tables 6 and 7 if Model Year 2011 or later engines are installed and operated as non-emergency engines; b. Compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart III; and
Nitrogen oxides (NO _x)	<ul style="list-style-type: none"> a. Use of EPA Tier 2 certified engines if the engines are installed and operated as emergency engines, as defined at 40 CFR§60.4219; or applicable emission standards found in 40 CFR Part 89.112 Table 1 and 40 CFR Part 1039.102 Tables 6 and 7 if Model Year 2011 or later engines are installed and operated as non-emergency engines; b. Compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart III; and
Sulfur dioxide	Use of ultra-low sulfur diesel fuel containing no more than 15 parts per million by weight of sulfur.

3. The proposed project, if constructed and operated as herein required, will utilize best available control technology for toxic air pollutants (tBACT) as defined below:

Table 4: Best Available Control Technology for Toxics Requirements	
Toxic Air Pollutant(s)	tBACT Determination
Acetaldehyde, carbon monoxide, acrolein, benzene, benzo(a)pyrene, 1,3-butadiene, diesel engine exhaust particulate, formaldehyde, propylene, toluene, total PAHs, xylenes	Compliance with the VOC, CO, PM BACT requirement.
Nitrogen dioxide	Compliance with the NO _x BACT requirement.
Sulfur dioxide	Compliance with the SO ₂ BACT requirement.

4. The modeled ambient concentration of one toxic air pollutant – diesel engine exhaust particulate matter – exceeds the Acceptable Source Impact Level (ASIL) for that pollutant, as defined in Chapter 173-460 WAC. Ecology has reviewed the health risks associated with diesel engine exhaust particulate from the proposed project, in accordance with WAC 173-460-090. Ecology has concluded that the health risks from the project are acceptable as defined in WAC 173-460-090(7). A summary of the technical analysis supporting this determination is hereby incorporated into this Notice of Construction Approval Order.

THEREFORE, IT IS ORDERED that the project as described in the Notice of Construction application and more specifically detailed in plans, specifications, and other information submitted to Ecology is approved for construction and operation, provided the following are met:

APPROVAL CONDITIONS

1. ADMINISTRATIVE CONDITION

- 1.1. The engine generators approved for operation by this order are to be used solely for those purposes described in application materials as further limited by the conditions of this Order. There shall be no operation of this equipment to produce power for demand-response arrangements, peak shaving arrangements, nor to provide power as part of a financial arrangement with another entity, nor to supply power to the grid.

2. EQUIPMENT RESTRICTIONS

- 2.1. Any engine used to power the electrical generators shall be certified by the manufacturer to meet 40 CFR 60 Tier II emission levels or other specifications as required by the EPA at the time the engines are installed. Each engine to be installed must be permanently labeled by the manufacturer as an emergency engine in accordance with 40 CFR § 60.4210(f), and must be equipped with CO, VOC, PM, and NO_x control equipment at least as effective as that evaluated in this NOC approval. Each engine approved in this Order must operate as an emergency engine as defined at 40 CFR 60, Subpart IIII or 40 CFR 63, Subpart ZZZZ.

- 2.2. The only engines and electrical generating units approved for operation at the Vantage Data Center are those listed by serial number in Table 1 above.
- 2.3. Replacement of failed engines with identical engines (same manufacturer and model) requires notification prior to installation but will not require new source review unless there is an increase in emission rates or community impacts.
- 2.4. The installation of any new engines after July 1, 2014 will require notification to Ecology that includes engine manufacturer's specification sheets. Ecology will decide whether new source review is required based on various factors including whether the new engines will have either an increased emission rate or result in an emission concentration that may increase impacts over those evaluated for this approval Order, or if an update to the current BACT analysis is necessary.
- 2.5. The seventeen (17) MTU Model 20V4000 engines exhaust stack heights shall be greater than or equal to 41 feet above ground level for engines providing power to Buildings 1,2, and 3, and 43.8 feet for engines serving Building ETC, and will be no more than 26 inches in diameter. All engines that may be used for this project shall be required to verify that exhaust stack parameters such as diameter, height, and exhaust rate and velocity do not result in community emissions impacts greater than what was evaluated for this project.
- 2.6. The manufacture and installation of the seventeen (17) engine/generator sets proposed for Building 1, Building 2, Building 3, and Building ETC of the project shall occur by July 1, 2014. If the manufacture and installation of the engines has not been completed by the above date, new source review may be required prior to additional installation, and community impacts will be re-evaluated if new source review is required. Vantage may request an extension of this time schedule, and Ecology may approve of an extension without revision to this Order.
- 2.7. This Order only applies to the seventeen (17) MTU Model 20V4000 engines, each with a rated full standby capacity of 4678 hp that were evaluated in the Notice of Construction application and second tier review. New source review will not be required for engines with a rated full standby capacity of less than 4678 hp that comply with the engine certification requirements and control equipment requirements contained in Approval Condition 2.1 unless there is an increase in community emission impacts. On a case-by-case basis, Ecology may require additional ambient impacts analyses prior to installation of smaller engines.

3. OPERATING LIMITATIONS

- 3.1 Following commissioning/start-up testing, the fuel consumption at the Vantage Data Center facility at build-out (4 buildings with a total of 12 primary and 5 reserve engines) shall be limited to a total of 167,205 gallons per year of diesel fuel equivalent to on-road specification No. 2 distillate fuel oil (less than 0.00150 weight percent sulfur). Total annual fuel consumption by the facility may be averaged over a three (3) year period using monthly rolling totals.
- 3.2 Except as provided in Approval Condition 3.5, the seventeen (17) Vantage Data Center engines are limited to the following average hours of operation, and averaging periods:

- 3.2.1 Each primary engine serving Building 1 shall not exceed 82 hours of operation (at any load, for any purpose) per year, on a rolling monthly 3-year average.
- 3.2.2 Each reserve engine serving Building 1 shall not exceed 62 hours of operation (at any load, for any purpose) per year, on a rolling monthly 3-year average.
- 3.2.3 Following start-up and commissioning, the engines serving Building 1 shall not exceed an annual fuel consumption of 65,907 gallons, averaged over a 3 year period using monthly rolling totals.
- 3.2.4 Operation of the two Building 1 reserve engines shall not exceed 10% load except for 8.5 hours at 100% load for corrective maintenance and step testing. The reserve engines may also provide outage (8 hours) or storm avoidance (16 hours) power in the event of the failure of a primary engine. These hours may be averaged over a three (3) year period using monthly rolling totals.
- 3.2.5 Operation of the five primary engines serving Building 1 shall not exceed 10% load except for 8.5 hours per year at 100% load for step testing and corrective maintenance, and 41 hours per year at 81.3% load for building transformer maintenance, storm avoidance, and power outages. These hours may be averaged over a three (3) year period using monthly rolling totals.
- 3.2.6 Each primary engine serving Building 2, 3 and ETC shall not exceed 66 hours of operation (at any load, for any purpose) per year, on a rolling monthly 3-year average. A total of 16 hours per year of 'storm avoidance' operation may be added to the above total without amendment of this approval upon satisfactory demonstration to Ecology that these hours are a necessity for the tenants of these buildings.
- 3.2.7 Operation of each of the Building 2 and Building 3 and ETC Building reserve engines (one at each building) shall not exceed 10% load except for 8.5 hours at 100% load for corrective maintenance and step testing. The reserve engines may also provide outage power in the event of the failure of a primary engine. These hours may be averaged over a three (3) year period using monthly rolling totals.
- 3.2.8 Operation of the six primary engines serving Building 2 (3) and Building 3 (3) shall not exceed 10% load except for 8.5 hours at 100% load for corrective maintenance and step testing, and 25 hours per year at 90% load for building transformer maintenance and power outages. These hours may be averaged over a three (3) year period using monthly rolling totals.
- 3.2.9 Operation of the primary engine serving Building ETC shall not exceed 10% load except for 8.5 hours at 100% load for corrective maintenance and step testing, and 25 hours per year at 93% load for building transformer maintenance and power outages. These hours may be averaged over a three (3) year period using monthly rolling totals.

- 3.3 A load bank will be used for electrical energy dissipation whenever prescheduled monthly maintenance testing, corrective testing or annual load bank testing occurs above idle.
- 3.4 The seventeen (17) MTU Model 20V4000 engines at the Vantage Data Center require periodic scheduled operation. To mitigate engine emission impacts, Vantage Data Center will perform all scheduled engine maintenance testing, bypass operations, and load testing during daylight hours. The Vantage Data Center shall develop an operating schedule that shall be available for review by Ecology upon request. Changes to the operating schedule will not trigger revision or amendment of this Order if approved in advance by Ecology.
- 3.5 Initial start-up (commissioning) testing for the seventeen (17) MTU Model 20V4000 engines at the Vantage Data Center shall not exceed an average of 40 hours per generator and 8,692 gallons of fuel per generator, averaged over all generators installed during any consecutive 3 year period.
 - 3.5.1 Except during site integration testing as specified below, only one engine shall be operated at any one time during start-up testing.
 - 3.5.2 During a site integration test, no more than seven (7) generator engines may operate concurrently for no more than four continuous hours.
 - 3.5.3 All startup and commissioning testing shall be conducted during daylight hours.
 - 3.5.4 Fuel use limits contained in Approval Conditions 3.1 and emission limits contained in Approval Conditions 5, are not applicable to initial commissioning testing of each engine.
 - 3.5.5 Following start-up and conditioning testing, the number of hours each engine has run, the fuel consumed during the testing, and the date shall be recorded. These data shall be provided to Ecology on request.

4. GENERAL TESTING AND MAINTENANCE REQUIREMENTS

- 4.1. The Vantage Data Center will follow engine-manufacturer's recommended diagnostic testing and maintenance procedures to ensure that each engine will conform to the emission limits in Condition 5 of this approval throughout the life of each engine.
- 4.2. Within 12 months of the first engine installation and every 36 months thereafter, the Vantage Data Center shall measure emissions of particulate matter (PM), Volatile Organic Compounds (VOC), nitric oxide (NO), nitrogen dioxide (NO₂), carbon monoxide (CO), Ammonia (NH₃), and oxygen (O₂) from at least one representative primary and one representative reserve engine's exhaust stack in accordance with Approval Condition 4.3. This testing will serve to demonstrate compliance with the emission limits contained in Section 5, and as an indicator of proper operation of the engines. The selection of the engine(s) to be tested shall be subject to prior approval by Ecology and shall be defined in

the source test protocol submitted to Ecology no less than 30 days in advance of any compliance- related stack sampling conducted by Vantage.

- 4.3. The following procedure shall be used for each test for the engines as required by Approval Condition 4.2 unless an alternate method is proposed by the Vantage Data Center and approved in writing by Ecology prior to the test:
 - 4.3.1. Periodic emissions testing should be combined with other pre-scheduled maintenance testing and annual load bank engine testing. Additional operation of the engines for the purpose of emissions testing beyond the operating hours allowed in this Order must be approved by Ecology in writing.
 - 4.3.2. PM including the condensible fraction, NO, NO₂, VOC, CO and ammonia emissions measurement shall be conducted for each engine tested at the proposed maximum engine load that corresponds to scheduled engine operating scenarios in Approval Conditions 3.2.
 - 4.3.3. EPA Reference Methods from 40 CFR 60, 40 CFR 51, BAAQMD ST-1B (for ammonia) and/or 40 CFR 89 as appropriate for each pollutant shall be used for at least one (representative) engine at this data center. A test plan will be submitted for Ecology approval at least 30 days before any testing is conducted and must include the criteria used to select the engine for testing, as well as any modifications to the standard test procedures contained in the above references.
 - 4.3.4. The F-factor method, as described in EPA Method 19, may be used to calculate exhaust flow rate through the exhaust stack. The fuel meter data, as measured according to Approval Condition 4.5, shall be included in the test report, along with the emissions calculations.
- 4.4. Each engine shall be equipped with a properly installed and maintained non-resettable meter that records total operating hours.
- 4.5. Each engine shall be connected to a properly installed and maintained fuel flow monitoring system that records the amount of fuel consumed by that engine during operation.

5. EMISSION LIMITS

- 5.1 The seventeen (17) engines shall meet the emission rate limitations contained in this section. The limits are for an engine operating in a steady-state mode (warm) and do not include emission rates during initial commissioning testing of the engines. The annual limits may be averaged over a rolling monthly three year period. Unless otherwise approved by Ecology in writing, compliance with emission limits for those pollutants that are required to be tested under Approval Conditions 4.2 and 4.3 shall be based on emissions test data determined according to those approval conditions.
- 5.2 If required to demonstrate compliance with the g/kW-hr EPA Tier IV average emission limits through stack testing, the Vantage Data Center shall conduct exhaust stack testing

and average emission rates for 5 individual operating loads (10%, 25%, 50%, 75% and 100%) according to 40 CFR §89.410, Table 2 of Appendix B, 40 CFR Part 89, Subpart E, and/or 40 CFR Part 60, Subpart IIII, or any other applicable EPA requirement in effect at the time the engines are installed.

- 5.3 Nitrogen oxide (NO_x) emissions from each of the seventeen (17) MTU Model 20V4000 engines rated at 4678 brake horse power shall not exceed the following emission rates at the stated loads, based on not-to-exceed emission rates stated in application materials:

Table 5.3: Nitrogen oxide (NO_x) emission rate limits			
	Operating Scenario	Operating Load	Emissions Limit per engine in lb/hr
5.3.1	Annual Step Testing	100%	10.3
5.3.2	Corrective Maintenance	100%	10.3
5.3.3	Building 1 Outage, Storm Avoidance	81% 10%	7.58 2.6
5.3.4	Buildings 2 and 3 Outage	90%	8.83
5.3.5	Building ETC Outage	93%	9.3

- 5.4 Nitrogen dioxide (NO₂) emissions from each of the seventeen (17) MTU Model 20V4000 engines rated at 4678 brake horse power shall not exceed the following emission rates at the stated loads, based on not-to-exceed emission rates stated in application materials:

Table 5.4: Nitrogen dioxide (NO₂) emission rate limits			
	Operating Scenario	Operating Load	Emissions Limit per engine in lb/hr
5.4.1	Annual Step Testing	100%	1.50
5.4.2	Corrective Maintenance	100%	1.50
5.4.3	Building 1 Outage, Storm Avoidance	81% 10%	0.40 1.50
5.4.4	Buildings 2 and 3 Outage	90% 10%	0.40 1.50
5.4.5	Building ETC Outage	93% 10%	0.40 1.50

- 5.5 Carbon monoxide emissions from each of the seventeen (17) MTU Model 20V4000 engines rated at 4678 brake horse power shall not exceed the following emission rates at the stated loads, based on not-to-exceed emission rates stated in application materials:

Table 5.5: Carbon monoxide (CO) emission rate limits			
	Operating Scenario	Operating Load	Emissions Limit per engine in lb/hr
5.5.1	Annual Step Testing	100%	1.35
5.5.2	Corrective Maintenance	100%	1.35
5.5.3	Building 1 Outage, Storm Avoidance	81%	1.05
		10%	0.60
5.5.4	Buildings 2 and 3 Outage	90%	1.19
		10%	0.60
5.5.5	Building ETC Outage	93%	1.24
		10%	0.60

5.6 Diesel Engine Exhaust Particulate (DEEP) emissions (Total PM after control on these engines) from each of the seventeen (17) MTU Model 20V4000 engines rated at 4678 brake horse power shall not exceed the following emission rates at the stated loads, based on not-to-exceed emission rates stated in application materials:

Table 5.6: Diesel Engine Exhaust Particulate (DEEP) emission rate limits			
	Operating Scenario	Operating Load	Emissions Limit per engine in lb/hr
5.6.1	Annual Step Testing	100%	0.484
5.6.2	Corrective Maintenance	100%	0.484
5.6.3	Building 1 Outage, Storm Avoidance	81%	0.374
		10%	0.400
5.6.4	Buildings 2 and 3 Outage	90%	0.425
		10%	0.400
5.6.5	Building ETC Outage	93%	0.444
		10%	0.400

5.7 Volatile Organic Compound (VOC) emissions from each of the seventeen (17) MTU Model 20V4000 engines rated at 4678 brake horse power shall not exceed the following emission rates at the stated loads, based on not-to-exceed emission rates stated in application materials:

Table 5.7: Volatile Organic Compound (VOC) emission rate limits

	Operating Scenario	Operating Load	Emissions Limit per engine in lb/hr
5.7.1	Annual Step Testing	100%	0.22
5.7.2	Corrective Maintenance	100%	0.22
5.7.3	Building 1 Outage, Storm Avoidance	81%	0.22
		10%	0.25
5.7.4	Buildings 2 and 3 Outage	90%	0.22
		10%	0.25
5.7.5	Building ETC Outage	93%	0.22
		10%	0.25

- 5.8 Total Particulate Matter (PM) emissions from all 17 engines combined shall not exceed 0.22 tons/yr (440 lbs/yr). All PM emissions shall be considered diesel engine exhaust particulate (DEEP) and PM_{2.5} emissions.
- 5.9 Nitrogen dioxide (NO₂) emissions from all 17 engines combined shall not exceed 18.1 lbs/hr and 0.6 tons/yr.
- 5.10 Volatile organic compound (VOC) emissions from all 17 engines combined shall not exceed 0.37 tons/yr (740 lbs/yr).
- 5.11 Carbon Monoxide (CO) emissions from all 17 engines combined shall not exceed 1.22 tons per year (2440 lbs/yr).
- 5.12 Ammonia emissions from any of the 17 engines at the Vantage Center shall not exceed 15 ppmvd at 15%O₂, nor 0.64 pounds per hour.
- 5.13 Sulfur dioxide emissions from all 17 engines combined shall not exceed 0.020 tons/yr (40 lbs/yr).
- 5.14 Visual emissions from each diesel electric generator exhaust stack shall be no more than 5 percent, with the exception of a two (2) minute period after unit start-up. Visual emissions shall be measured by using the procedures contained in 40 CFR 60, Appendix A, Method 9.

6. OPERATION AND MAINTENANCE MANUALS

- 6.1 A site-specific O&M manual for the Vantage Data Center facility equipment shall be developed and followed. Manufacturers' operating instructions and design specifications for the engines, generators, and associated equipment shall be included in the manual. The O&M manual shall be updated to reflect any modifications of the equipment or its operating procedures. Emissions that result from failure to follow the operating procedures contained in the O&M manual or manufacturer's operating instructions may be considered proof that

the equipment was not properly installed, operated, and/or maintained. The O&M manual for the diesel engines and associated equipment shall at a minimum include:

- 6.1.1. Manufacturer's testing and maintenance procedures that will ensure that each individual engine will conform to the EPA Tier Emission Standards appropriate for that engine throughout the life of the engine.
- 6.1.2. Normal operating parameters and design specifications.
- 6.1.3. Operating and maintenance schedules.

7. SUBMITTALS

All notifications, reports, and other submittals shall be sent to:

Washington State Department of Ecology
Air Quality Program
4601 N. Monroe Street
Spokane, WA 99205-1295

8. RECORDKEEPING

- 8.1 All records, Operations and Maintenance Manual, and procedures developed under this Order shall be organized in a readily accessible manner and cover a minimum of the most recent 60-month period. Any records required to be kept under the provisions of this Order shall be provided within 30 days to Ecology upon request. The following records are required to be collected and maintained:
 - 8.1.1. Fuel receipts with amount of diesel and sulfur content for each delivery to the facility.
 - 8.1.2. Monthly and annual hours of operation for each diesel engine.
 - 8.1.3. Purpose, electrical load and duration of runtime for each diesel engine during any periods of operation.
 - 8.1.4. Annual gross power generated by or for each independent tenant at the facility and total annual gross power for the facility.
 - 8.1.5. Upset condition log for each engine and generator that includes date, time, duration of upset, cause, and corrective action.
 - 8.1.6. Any recordkeeping required by 40 CFR Part 60 Subpart IIII.
 - 8.1.7. Air quality complaints received from the public or other entity, and the affected emissions units.

9. REPORTING

- 9.1 Within 10 business days after entering into a binding agreement with a new tenant, Vantage shall notify Ecology of such agreement. The serial number, manufacturer make and model, standby capacity, and date of manufacture of engines proposed will be submitted prior to installation of engines in the Building 2, 3, and ETC phases of this project.

- 9.2 The following information will be submitted to the AQP at the address in Condition 7 above by January 31 of each calendar year. This information may be submitted with annual emissions information requested by the AQP.
- 9.2.1 Monthly rolling annual total summary of air contaminant emissions,
 - 9.2.2 Monthly rolling hours of operation with annual total,
 - 9.2.3 Monthly rolling gross power generation with annual total as specified in Approval Condition 8.1.4,
 - 9.2.4 A log of each start-up of each diesel engine that shows the purpose, fuel usage, and duration of each period of operation.
- 9.3 Any air quality complaints resulting from operation of the emissions units or activities shall be promptly assessed and addressed. Vantage shall maintain a record of the action taken to investigate the validity of the complaint and what, if any, corrective action was taken in response to the complaint. Ecology shall be notified within three (3) days of receipt of any such complaint.
- 9.4 Vantage shall notify Ecology by e-mail or in writing within 24 hours of any engine operation of greater than 60 minutes if such engine operation occurs as the result of a power outage or other unscheduled operation. This notification does not alleviate Vantage from annual reporting of operations contained in any section of Approval Condition 9.

10. GENERAL CONDITIONS

- 10.1 Commencing/Discontinuing Construction and/or Operations:** This approval shall become void if construction of the facility is not begun within 18 months of permit issuance or if facility operation is discontinued for a period of eighteen (18) months or more. In accordance with WAC 173-400-111(7)(c), each phase must commence construction within 18 months of the projected and approved construction dates in this Order.
- 10.2 Compliance Assurance Access:** Access to the source by representatives of Ecology or the EPA shall be permitted upon request. Failure to allow such access is grounds for enforcement action under the federal Clean Air Act or the Washington State Clean Air Act, and may result in revocation of this Approval Order.
- 10.3 Availability of Order and O&M Manual:** Legible copies of this Order and the O & M manual shall be available to employees in direct operation of the diesel electric generation station, and be available for review upon request by Ecology.
- 10.4 Equipment Operation:** Operation of the 17 MTU Model 20V4000 diesel engines used to power emergency electrical generators and related equipment shall be conducted in compliance with all data and specifications submitted as part of the NOC application and in accordance with the O&M manual, unless otherwise approved in writing by Ecology.

- 10.5 Modifications:** Any modification to the generators or engines and their related equipment's operating or maintenance procedures, contrary to information in the NOC application, shall be reported to Ecology at least 60 days before such modification. Such modification may require a new or amended NOC Approval Order.
- 10.6 Activities Inconsistent with the NOC Application and this Approval Order:** Any activity undertaken by the permittee or others, in a manner that is inconsistent with the NOC application and this determination, shall be subject to Ecology enforcement under applicable regulations.
- 10.7 Obligations under Other Laws or Regulations:** Nothing in this Approval Order shall be construed to relieve the permittee of its obligations under any local, state or federal laws or regulations.

All plans, specifications, and other information submitted to the Department of Ecology relative to this project and further documents and any authorizations or approvals or denials in relation thereto shall be kept at the Eastern Regional Office of the Department of Ecology in the "Air Quality Controlled Sources" files, and by such action shall be incorporated herein and made a part thereof.

Nothing in this approval shall be construed as obviating compliance with any requirement of law other than those imposed pursuant to the Washington Clean Air Act and rules and regulations thereunder.

Authorization may be modified, suspended or revoked in whole or part for cause including, but not limited to the following:

- a. Violation of any terms or conditions of this authorization;
- b. Obtaining this authorization by misrepresentation or failure to disclose fully all relevant fact.

The provisions of this authorization are severable and, if any provision of this authorization, or application of any provision to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this authorization, shall not be affected thereby.

YOUR RIGHT TO APPEAL

You have a right to appeal this Approval Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Approval Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of this Approval Order:

- File your appeal and a copy of this Approval Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Approval Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

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You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

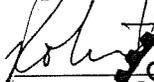
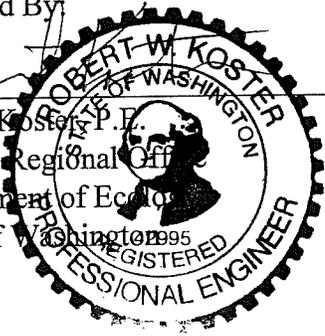
Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW STE 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

For additional information visit the Environmental Hearings Office Website:
<http://www.eho.wa.gov>

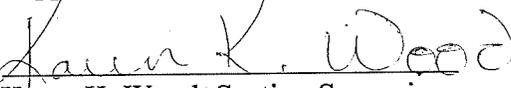
To find laws and agency rules visit the Washington State Legislature Website:
<http://www1.leg.wa.gov/CodeReviser>

DATED this 18th day of March, 2013 at Spokane, Washington.

Prepared By:


Robert W. Koster, P.E.
Eastern Regional Office
Department of Ecology
State of Washington


Approved By:


Karen K. Wood, Section Supervisor
Eastern Regional Office
Department of Ecology
State of Washington

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF APPROVING A) Approval Order No. 11AQ-E399
AIR CONTAMINANT SOURCE FOR)
YAHOO! INC.)
YAHOO! DATA CENTER)

TO:

Mozan Totani, Project Manager
Yahoo! Inc.
701 First Avenue
Sunnyvale, CA 94089

Mark Johnson, Facilities Manager
Yahoo! Data Center
1010 Yahoo! Way
Quincy, WA 98848

1. EQUIPMENT

The following table contains a list of equipment that was evaluated for this order of approval. Existing MTU Detroit Diesel emergency generator unit identification numbers R through 12 were approved in Notice of Construction (NOC) approval Order No. 07AQ-E241 issued on November 13, 2007. New unit identification numbers 13 through 22 were proposed in the NOC application for the Phase 5 Expansion for the Yahoo! Data Center located in Quincy, and submitted to Ecology on September 20, 2010.

Phase	Unit ID	Engine SN	Generator SN	Manuf. date
1	R	527103530	81 28288 A505	12/14/06
	1	527103852	81 28288 A205	2/16/07
	2	527103897	81 28288 A305	2/19/07
	3	527103898	81 28288 A105	2/19/07
2	4	527104004	81 28288 A405	3/1/07
	5	527104645	81 28976 A404	9/12/07
	6	527104646	81 28597 A405	9/12/07
	7	527105840	81 28597 A101	8/8/08
	8	527104665	81 28597 A105	9/12/07
3	9	527105203	81 28597 A505	2/1/08
	10	527105204	81 28976 A104	2/1/08
	11	527105205	81 28976 A204	2/1/08
	12	527105206	81 28976 A304	2/1/08
5	13	527107949	WA-527124	9/16/10
	14	527107950	WA-575140	9/16/10
	15	527107951	WA-575127	9/16/10
	16	527107948	WA-575180	9/16/10
	17			
	18			
	19			
	20			
	21			
	22			

Total Units	Manufacturer & Model	# Cooling Towers Per Unit	Total # Cooling Towers
6	Evapco Model AT 212-636	2	12

2. PROJECT SUMMARY

2.1 Original Project: Phases 1-3

Yahoo! Inc. submitted a Notice of Construction (NOC) application on January 24, 2007, for the installation of the Yahoo! Data Center at 1010 Yahoo! Way, Quincy, in Grant County. The Yahoo! Data Center will be used as an electronic data storage and data access facility. The primary air contaminant sources at the facility consist of thirteen (13) MTU Detroit Diesel, Inc. Model 16V4000 G83 B3 diesel engines that power Newage AvK Model DSG 86 L1-4s generators. The servers at the Yahoo! Data Center are cooled by six Evapco Model AT 212-636 two cell evaporative cooling units. The Yahoo! Data Center is supported by associated equipment such as fuel tanks, cooling water storage and treatment, and electrical systems. The MTU Detroit Diesel engines are used to power emergency backup electrical generators in case of a failure of the Grant County PUD hydroelectric power grid.

Notice of Construction Approval Order No. 07AQ-E241 was issued on November 13, 2007. The Order limited operation of each generator to 400 hours per year for combined break-in, maintenance, and emergency backup electrical generation. The diesel engines were restricted to 49,296 gallons/day and 821,600 gallons/year of low sulfur (less than 0.0015 wt %), EPA on-road specification No. 2 distillate diesel oil.

2.2 Expansion Project: Phase 5

Yahoo! Inc. submitted a NOC application on September 20, 2010, to expand the Yahoo! Data Center. The expansion project will increase the size of the facility by approximately 151,000 square feet, and will include ten (10) 2.28 MWm MTU Detroit Diesel, Inc. Model 16V4000 G83 diesel engines that power Newage AvK Model DSG 86 L1-4s generators. The additional servers at the Yahoo! Data Center expansion will not use evaporative cooling systems. Operation of the ten (10) MTU Detroit Diesel engines will be limited to 100 hours per year each, and will be restricted to no more than 103,551 gallons per year of low sulfur (less than 0.0015 wt %), EPA on-road specification No. 2 distillate diesel oil.

Yahoo! has proposed to reduce allowed operation of the existing 13 generators from 400 hours per year to 200 hours per year for combined break-in, maintenance, and emergency backup electrical generation. Yahoo! also proposes to reduce allowed diesel fuel for the existing generators from 821,600 gallons/year to 410,800 gallons per year of low sulfur (less than 0.0015 wt %), EPA on-road specification No. 2 distillate diesel oil. Engine exhaust stack heights will be raised from 15 feet to 20 feet above ground level.

The operating reductions being proposed in the 2010 Yahoo! Expansion project will result in an annual total decrease in potential engine combustion emissions from the Yahoo! Data

Center, and will reduce most potential ambient impacts. Annual permitted facility fuel allocation will decrease from 821,600 gallons as allowed in NOC Approval Order No. 07AQ-E241 to 514,351 gallons under the expansion project approval order.

Table 2.1: Potential to Emit for the Yahoo! Data Center Generators			
Pollutant	Existing Units R thru 12 Potential To Emit	Expansion Units 13 thru 22 Potential To Emit	Total Facility Potential to Emit
Criteria Pollutant	tons/yr	tons/yr	tons/yr
2.1.1 NO _x	35	11	46
2.1.2 CO	13	6.1	19.1
2.1.3 SO ₂	80 lb/yr	22 lb/yr	102 lb/yr
2.1.4 PM _{2.5}	1.2	0.35	1.6
2.1.5 VOC	80 lb/yr	349 lb/yr	429 lb/yr
Toxic Air Pollutants (TAPs)			
2.1.6 Primary NO ₂ *	3.5	1.1	4.6
2.1.7 DEEP**	1.2	0.35	1.6
2.1.8 Carbon monoxide	13	6.1	19.1
2.1.9 Sulfur dioxide	4.0E-02	1.0E-02	5.1E-02
Carbon based TAPs			
2.1.10 Acrolein	2.1E-04	5.59E-05	2.7E-04
2.1.11 Benzene	2.1E-02	5.5E-03	2.6E-02
2.1.12 Propylene	7.47E-02	1.98E-02	9.4E-02
2.1.13 Toluene	7.5E-03	1.99E-03	9.5E-03
2.1.14 Xylenes	5.2E-03	1.37E-03	6.5E-03
2.1.15 Formaldehyde	2.1E-03	5.6E-04	2.7E-03
2.1.16 Acetaldehyde	6.7E-04	1.79E-04	8.5E-04
Poly Aromatic Hydrocarbons			
2.1.17 Naphthalene	3.5E-03	9.22E-04	4.4E-03
2.1.18 Benz(a)anthracene	1.7E-05	4.41E-06	2.1E-05
2.1.19 Chrysene	4.1E-05	1.1E-05	5.2E-05
2.1.20 Benzo(b)fluoranthene	3.0E-05	7.9E-06	3.8E-05
2.1.21 Benzo(k)fluoranthene	5.8E-06	1.55E-06	7.4E-06
2.1.22 Benzo(a)Pyrene	6.9E-06	1.82E-06	8.7E-06
2.1.23 Indeno(1,2,3-cd)pyrene	1.1E-05	2.94E-06	1.4E-05
2.1.24 Dibenz(a,h)anthracene	9.2E-06	2.45E-06	1.2E-05

* Assumed to be equal to 10% of the total NO_x emitted.

** DEEP is diesel engine exhaust particulate, which is equal to PM_{2.5} emissions.

2.3 There are no small emergency engines to power fire water pumps or cooling water pre-treatment facility. Washington Administrative Code (WAC) 173-400-110(4)(h)(xxxix), as adopted on the date of this Order, exempts all emergency engines below 500 bhp.

2.4 The Yahoo! Data Center was constructed with 6 Evapco Model USS 212-636 cooling units to dissipate heat from the electronic servers. Each Model USS 212-636 unit has two cooling towers and two fans. Each individual cooling tower has a design recirculation rate of 2460 gallons per minute.

Pollutant	Max loading conc. mg/l	Emission rate Total Lbs/yr
2.4.1 Arsenic	0.002	0.00263
2.4.2 Barium	0.013	0.0171
2.4.3 Cadmium	0.003	0.00395
2.4.4 Chromium III	0.0047	0.00618
2.4.5 Copper	0.0032	0.00421
2.4.6 Iron	0.0665	0.0875
2.4.7 Lead	0.0005	0.000658
2.4.8 Manganese	0.002	0.00263
2.4.9 Mercury	0.0003	0.000395
2.4.10 Particulate ¹	3200	4210
¹ All particulate is considered to be 10 microns or less in diameter		

3. DETERMINATIONS

In relation to this project, the State of Washington Department of Ecology (Ecology), pursuant to Revised Code of Washington (RCW) 70.94.152, Washington Administrative Code (WAC) 173-460-040, and WAC 173-400-110, makes the following determinations:

3.1 The project, if constructed and operated as herein required, will be in accordance with applicable rules and regulations, as set forth in Chapter 173-400 WAC, and Chapter 173-460 WAC, and the operation thereof, at the location proposed, will not emit pollutants in concentrations that will endanger public health.

3.2. The proposed project, if constructed and operated as herein required, will utilize best available control technology (BACT) as defined below:

Pollutant(s)	BACT Determination
Particulate matter (PM), carbon monoxide and volatile organic compounds	Restricted operation of EPA Tier-2 certified engines, and compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart III.
Nitrogen oxides (NOx)	Good combustion practices; an engine design that incorporates fuel injection timing retard, turbocharger and a low-temperature after-cooler; EPA Tier-2 certified engines; and compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart III.
Sulfur dioxide	Use of ultra-low sulfur diesel fuel containing no more than 15 parts per million by weight of sulfur.

3.3 The proposed project, if constructed and operated as herein required, will utilize best available control technology for toxic air pollutants (tBACT) as defined below:

Toxic Air Pollutant(s)	tBACT Determination
Acetaldehyde, carbon monoxide, acrolein, benzene, benzo(a)pyrene, 1,3-butadiene, diesel engine exhaust particulate, formaldehyde, toluene, total PAHs, propylene, xylenes	Restricted operation of EPA Tier-2 certified engines, and compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart IIII.
Nitrogen dioxide	Good combustion practices; an engine design that incorporates fuel injection timing retard, turbocharger and a low-temperature after-cooler; EPA Tier-2 certified engines; and compliance with the operation and maintenance restrictions of 40 CFR Part 60, Subpart IIII.
Sulfur dioxide	Use of ultra-low sulfur diesel fuel containing no more than 15 parts per million by weight of sulfur.

4. HEALTH IMPACT ANALYSIS

Ecology has evaluated the cumulative health risks associated with diesel engine exhaust particulate and nitrogen dioxide emissions from the proposed project, in accordance with WAC 173-460-100. Ecology has concluded that the cumulative health risks from the project are acceptable. Approval of the project will result in a greater environmental benefit to the state of Washington based on emissions reductions. The Third Tier Petition was approved on February 10, 2011. The Technical Support Document for the Third Tier Review dated February 8, 2011 that contains the analysis for the Third Tier approval determination is hereby incorporated into this Notice of Construction Approval Order.

THEREFORE, IT IS ORDERED that the project as described in the Notice of Construction application and more specifically detailed in plans, specifications, and other information submitted to Ecology is approved for construction and operation, provided the following conditions are met:

APPROVAL CONDITIONS

1. ADMINISTRATIVE CONDITION

- 1.1 Notice of Construction Approval Order No. 07AQ-E241 issued on November 13, 2007 is hereby rescinded and replaced entirely by this Order.
- 1.2 Yahoo! shall schedule a meeting with Quincy School District officials by no later than April 15, 2011. The meeting will include administrators from any elementary or secondary school at the discretion of the Quincy School District officials. The purpose of the meeting will be to both communicate, and better understand, any potential concerns or complaints that local schools may have regarding emergency generator maintenance testing and operation. In addition, Yahoo! will provide school administrators and District Officials with a direct telephone contact to one or more of the Yahoo! Data Center managers. The school administrators and District Officials

shall also be provided a maintenance testing schedule as contained in this Order, and will update the school whenever Ecology-approved changes occur in the maintenance testing schedule. As decided by the school administrators, District Officials, and Yahoo!, an ongoing relationship between the school and Yahoo! shall be established.

2. EQUIPMENT RESTRICTIONS

- 2.1. The twenty-three (23) MTU Detroit Diesel, Inc. Model 16V4000 G83 B3 diesel engines or equivalents that power the 2.28 MWm (2.0 eMW) Newage AvK Model DSG 86 L1-4s generators shall be certified by the manufacturer to meet 40 CFR 89 Tier II emission levels or other specifications as required by the EPA at the time the engines are installed.
- 2.2. The only engines and electrical generating units approved for operation at the Yahoo! Data Center are those listed in Table 1.1 above.
- 2.3. Manufacture and installation of the first 4 of 10 engine/generator sets proposed for the Phase 5 expansion project shall occur by July 1, 2011. The manufacture and installation of the last 6 of 10 engine/generator sets proposed for the expansion project shall occur by July 1, 2013. If the manufacture and installation of these engines has not completed within the above schedule, a NOC application may be required prior to installation.
- 2.4. Replacement of failed engines with identical engines (same manufacturer and model) requires notification prior to installation, but will not require Notice of Construction unless there is an emission rate increase from the replacement engines.
- 2.5. The 13 existing 2.28 MWm engine-generator exhaust stack heights shall be increased from 15 feet to greater than or equal to 20 feet above ground level.
- 2.6. The 10 expansion 2.28 MWm engine-generators exhaust stack heights shall be greater than or equal to 30 feet above ground level.

3. OPERATING LIMITATIONS

- 3.1. The fuel consumption at the Yahoo! Data Center facility shall be limited to a total of 514,351 gallons per year of diesel fuel equivalent to on-road specification No. 2 distillate fuel oil (less than 0.00150 weight percent sulfur). Total annual fuel consumption by the facility may be averaged over a three (3) year period using monthly rolling totals.
- 3.2. The 13 existing engines shall be limited to 410,800 gallons per year of diesel fuel equivalent to on-road specification No. 2 distillate fuel oil (less than 0.0015 weight percent sulfur) and not operate more than 200 hours per year per engine. Total annual fuel consumption by the 13 engines may be averaged over a three (3) year period using monthly rolling totals.
- 3.3. The 10 expansion project engines shall be limited to 103,551 gallons per year of diesel fuel equivalent to on-road specification No. 2 distillate fuel oil (less than 0.0015 weight percent sulfur) and not operate more than 100 hours per year per engine. Total annual fuel consumption by the 10 engines may be averaged over a three (3) year period using monthly rolling totals.

- 3.4. The 23 Yahoo! Data Center engines are limited to the following hours of operation, fuel limits, and number of engines operating concurrently. Except as provided in Condition 3.11, the 13 existing engines are limited as follows in Table 3.4a, and the 10 expansion engines are limited as follows in Table 3.4b:

Operating Activity	Hours/year per generator	Operating Load (%)	Diesel Fuel Gallons/year	# Operating Concurrently
Maintenance Testing	12	100	24,648	1
Load Testing	4	100	8216	1
Electrical Bypass	36	100	73,944	2
Power Outage	148	100	303,992	13
Total	200		410,800	

Operating Activity	Hours/year per generator	Operating Load (%)	Diesel Fuel Gallons/year	# Operating Concurrently
Maintenance Testing	12	0%	1896	1
Load Bank Testing	4	100	5892	1
Electrical Bypass	36	2 at 40, or 1 at 80	43,020	2
Power Outage	48	8 at 90, 2 at 10	52743	10
Total	100		103,551	

- 3.5. Operation of the 23 Yahoo! Data Center generators for required monthly maintenance testing shall be limited to approximately one hour per month per engine for a total of 12 hours per year. The 13 existing engines are limited to an average electric load of 100% of the standby rating during testing. The 10 expansion engines will be maintenance tested at 0% electric load. Only one generator shall be operated at a time during monthly maintenance testing.
- 3.6. Operation of the 23 Yahoo! Data Center generators for required annual load testing shall be limited to approximately 4 hours per year per engine at an average electric load of 100% of the standby rating. The 10 expansion engines are limited to one engine operating concurrently at an average load of 100% of the standby rating.
- 3.7. Operation of the 23 Yahoo! Data Center generators for electrical bypass shall be limited to approximately 36 hours per year per engine. The 13 existing engines are limited to two engines operating concurrently at an average load of 100% of the standby rating. The 10 expansion engines are limited to two engines operating concurrently for electrical bypass maintenance at an average load of 40% of the standby rating, and 4 hours of total engine runtime per day.
- 3.8. The 13 existing generators operating for emergency power generation shall be limited to approximately 148 hours per year per engine at an average electrical load of 100% of the standby rating. The 10 expansion generators operating for

emergency power generation shall be limited to approximately 48 hours per year per engine at an average electrical load of 74% of the standby rating. No more than eight (8) expansion engines shall operate at greater than 90% load during any power outage.

- 3.9. The twenty-three (23) Yahoo! Data Center generator engines require maintenance testing each month. To mitigate engine emission impacts, Yahoo! will perform all maintenance testing during daylight hours, and at least 80% of all maintenance testing within a contiguous two week period each month. Engine maintenance and testing may take place outside of these time restrictions upon coordination by Yahoo! with the other data centers in northeast Quincy to minimize engine emission impacts to the community. Yahoo! shall maintain records of the coordination communications with the other data centers, and those communications shall be available for review by Ecology. Approved days for testing can be re-negotiated at any time as approved in writing by Ecology, and will not trigger revision or amendment of this Order.
- 3.10. The 6 evaporative cooling units with a total of 2 cooling towers per unit shall each have a mist eliminator that will maintain the maximum drift rate to no more than 0.001 percent of the circulating water rate.
- 3.11. Start-up testing of the 10 expansion generators is restricted as follows:
 - 3.11.1 Prior to beginning normal operation of the new engines, each generator engine may operate for no more than 16 hours for startup testing at an average load of 83%.
 - 3.11.2 Except during site integration testing as specified below, only one engine shall be operated at any one time during start-up testing.
 - 3.11.3 During a site integration test, up to six generator engines may operate concurrently for up to four hours at a time at a load of 100%.
 - 3.11.4 Combined engine runtime during startup testing shall not exceed sixteen hours over two days.
 - 3.11.5 All startup testing shall be conducted during daylight hours.
 - 3.11.6 Fuel use limits and emission limits contained in Approval Conditions 3.4 and 5, respectively, remain in effect during start-up testing.

4. GENERAL TESTING AND MAINTENANCE REQUIREMENTS

- 4.1. Yahoo! will follow engine-manufacturer's recommended diagnostic testing and maintenance procedures to ensure that each of the twenty-three (23) 2.28 MWh engines will conform to 40 CFR 89 emission specifications throughout the life of each engine.

- 4.2. Within 12 months of installation of any new expansion engine approved in this Order, Yahoo! shall measure concentrations of nitric oxide (NO), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂) and oxygen (O₂) leaving that engine's exhaust stack in accordance with Approval Condition 4.3. This testing will serve to demonstrate compliance with the emission limits contained in Approval Conditions 5.3.1, 5.3.2, 5.3.3, 5.13.1, 5.13.2 and 5.13.3, and as an indicator of proper operation of the engines. Additional periodic testing shall be conducted according to Approval Condition 4.4.
- 4.3. The following procedure shall be used for each test for the 10 expansion engines required by Approval Condition 4.2 unless an alternate method is proposed by Yahoo! and approved in writing by Ecology prior to the test.
 - 4.3.1 Initial emissions testing shall be combined with start-up testing and subsequent emissions testing shall be combined with pre-scheduled monthly maintenance and annual load bank engine testing. Additional operation of the engines for the purpose of emissions testing beyond the operating hours allowed in this Order is not allowed.
 - 4.3.2 A portable emissions instrument analyzer may be used. The analyzer model must be approved in writing by Ecology prior to the first required test. The analyzer shall be calibrated using EPA Protocol 1 gases according to the procedures for drift and bias limits outlined in EPA Methods 7E and Method 10. Alternate calibration procedures may be approved in advance by Ecology.
 - 4.3.3 Three test runs shall be conducted for each engine. Each run must last at least 15 minutes. Analyzer data shall be recorded at least once every 5 minutes during the test. Engine electrical power output shall be recorded during testing.
 - 4.3.4 Emissions measurement shall be conducted at each of the proposed average engine loads of 0%, 80%, and 100% that correspond to scheduled engine testing scenarios in Approval Condition 3.4 and Table 3.4b. Monthly testing emission rates were evaluated at 10% load due to the lack of manufacture emissions data at 0% load. Actual monthly testing will occur at 0% load. Emissions measurements need not be conducted at 90% load because a power outage is not scheduled operation.
 - 4.3.5 The F-factor method, as described in EPA Method 19, may be used to calculate exhaust flow rate through the exhaust stack. The fuel meter data, as measured according to Approval Condition 4.6, shall be included in the test report, along with the emissions calculations.
- 4.4. At the conclusion of the manufacturer's warranty term for each engine, or 60 months from engine delivery date, or 3,000 hours of operation, whichever occurs first, Yahoo! shall pursue one of the following options to verify compliance with federal emissions standards and the emission limits in this Order:

- 4.4.1 Emission testing of each engine for DEEP, NO₂, CO, total nitrogen oxides, and non-methane hydrocarbon (NMHC) emission rates to determine continuing compliance with the 40 CFR 89 Tier II emission standards (the applicant may replace the dynamometer requirement in Subpart E of 40 CFR 89 with corresponding measurement of gen-set electrical output). The testing of each engine shall be repeated every 60 months after its first test. The engine testing may be staged to test 5 engines in each 12 month period.
 - 4.4.2 Re-evaluating BACT and tBACT and health risks of the facility's operations based on the previous 5 years of actual operations and actual power reliability data.
 - 4.4.3 Show compliance with the manufacturer's maintenance requirements by renewing or extending engine manufacturer's maintenance contracts.
 - 4.4.4 Any combination of the above three options, or an alternative method approved by Ecology in writing.
 - 4.4.5 This requirement is in addition to any testing required by Approval Condition 4.2 above.
- 4.5 All engines shall be equipped with a properly installed and maintained non-resettable meter that records total operating hours.
- 4.6 Each of the 10 new expansion engines shall be connected to a properly installed and maintained fuel flow monitoring system that records the amount of fuel consumed by that engine during each period of operation.
- 4.7 Ecology may require additional testing as allowed in WAC-173-400-105(4) at its discretion.

5 EMISSION LIMITS

The twenty-three 2.28 MWm engine-generators shall meet the following emission limits. If required to demonstrate compliance with the g/kW-hr average emission limits through emissions testing, Yahoo! shall average emission rates for 5 individual operating loads (10%, 25%, 50%, 75% and 100%) according to 40 CFR §89.410 and Table 2 of Appendix B to 40 CFR Part 89, Subpart E.

- 5.1 Each existing engine shall not exceed NO_x emissions of 5.4 g/kW-hr.
- 5.2 Each expansion project engine shall not exceed NO_x emissions of 6.3 g/kW-hr if built before January 1, 2011. The NO_x emission factor for engines built after January 1, 2011 shall comply with 40 CFR Part 60, Subpart IIII, or any other applicable EPA requirement, in effect at the time the engines are installed.
- 5.3 Nitrogen dioxide (NO₂) emissions from each of the 10 expansion project engines shall not exceed the following emission rates at the stated loads, based on emission factors derived from source testing:

	Operating Scenario	Operating Load	Emissions Limit (lb/hr) per engine
5.3.1	Annual Load Testing	100%	3.5
5.3.2	Startup Testing	80%	2.3
5.3.3	Monthly Maintenance	10%	0.34
5.3.4	Electrical Bypass/Maintenance	80%	2.3
5.3.5	Power Outages	90%	2.9

- 5.4 Each existing engine shall not exceed VOC emissions of 0.2 g/kW-hr.
- 5.5 Each expansion engine shall not exceed VOC emissions of 0.1 g/kW-hr.
- 5.6 Each existing engine shall not exceed CO emissions of 2.0 g/kW-hr.
- 5.7 Each expansion project engine shall not exceed CO emissions of 3.50 g/kW-hr if built before January 1, 2011. The CO emission factor for engines built after January 1, 2011 shall comply with 40 CFR Part 60, Subpart IIII, or any other applicable EPA requirement, in effect at the time the engines are installed.
- 5.8 Each existing engine shall not exceed PM emissions of 0.19 g/kW-hr.
- 5.9 Each expansion project engine shall not exceed PM emissions of 0.20 g/kW-hr if built before January 1, 2011. The PM emission factor for engines built after January 1, 2011 shall comply with 40 CFR Part 60, Subpart IIII, or any other applicable EPA requirement, in effect at the time the engines are installed.
- 5.10 The total amount of PM emissions from operating all 10 expansion project engines during each year shall not exceed 0.35 tons/yr, based on load specific emission factors supplied by the engine manufacturer.
- 5.11 The total amount of PM emissions from operating all 23 engines during each year shall not exceed 1.6 tons/yr, based on load specific emission factors supplied by the engine manufacturer. All PM emissions shall be considered diesel engine exhaust particulate (DEEP) emissions and all DEEP emissions shall be considered PM_{2.5} emissions.
- 5.12 Visual emissions from each diesel engine exhaust stack shall be no more than 5 percent, with the exception of a ten (10) minute period after unit start-up. Visual emissions shall be measured by using the procedures contained in 40 CFR 60, Appendix A, Method 9.
- 5.13 SO₂ emissions from each diesel engine exhaust stack shall not exceed 0.03 lbs/hr, based on emission factors derived from source testing.

	Operating Scenario	Operating Load	Emissions Limit (lb/hr) per engine
5.13.1	Annual Load Testing	100%	0.031
5.13.2	Startup Testing	80%	0.025
5.13.3	Monthly Maintenance	0% (eval at 10%)	0.0033
5.13.4	Electrical Bypass/Maintenance	80%	0.025
5.13.5	Power Outages	90%	0.028

6 OPERATION AND MAINTENANCE MANUALS

A site-specific O&M manual for the Yahoo! Data Center facility equipment shall be developed and followed. Manufacturers' operating instructions and design specifications

for the engines, generators, cooling towers, and associated equipment shall be included in the manual. The O&M manual shall be updated to reflect any modifications of the equipment or its operating procedures. Emissions that result from failure to follow the operating procedures contained in the O&M manual or manufacturer's operating instructions may be considered proof that the equipment was not properly installed, operated, and/or maintained. The O&M manual for the diesel engines and associated equipment shall at a minimum include:

- 6.1 Manufacturer's testing and maintenance procedures that will ensure that each individual engine will conform to the EPA Tiered Emission Standards appropriate for that engine throughout the life of the engine.
- 6.2 Normal operating parameters and design specifications.
- 6.3 Operating maintenance schedule.

7 SUBMITTALS

All notifications, reports, and other submittals shall be sent to:

Washington State Department of Ecology
Air Quality Program
4601 N. Monroe Street
Spokane, WA 99205-1295

8 RECORDKEEPING

All records, Operations and Maintenance Manual, and procedures developed under this Order shall be organized in a readily accessible manner and cover a minimum of the most recent 60-month period. The following records are required to be collected and maintained.

- 8.1 Fuel receipts with amount of diesel and sulfur content for each delivery to the facility.
- 8.2 Total annual hours of operation for each diesel engine.
- 8.3 Operational mode and duration for each start-up of each diesel engine.
- 8.4 Annual gross power generated by facility-wide operation of the backup electrical generators.
- 8.5 Upset condition log for each engine and generator that includes date, time, duration of upset, cause, and corrective action.
- 8.6 Recordkeeping required by Title 40 CFR Part 60 Subpart III.
- 8.7 Air quality complaints received from the public or other entity, and the affected emissions units.

9 REPORTING

- 9.1 Within 10 business days after entering into a binding agreement to purchase the engine/generator sets identified in Equipment Table 1.1 above, Yahoo! shall notify Ecology in writing. The serial number of the engine and the generator, and the engine build date will be submitted prior to installation of each engine.

9.2 The following information will be submitted to the AQP at the address in Condition 7 above by January 31 of each calendar year.

9.2.1 Monthly rolling annual total summary of air contaminant emissions, monthly rolling hours of operation with annual total, and monthly rolling gross power generation with annual total, and a listing of each start-up of each diesel engine that shows the mode and duration of each type of operation.

9.2.2 Written notification that the O&M manual has been developed and updated within 60 days after the issuance of this Order.

9.3 Any air quality complaints resulting from operation of the emissions units or activities shall be promptly assessed and addressed. A record shall be maintained of Yahoo!'s action to investigate the validity of the complaint and what, if any, corrective action was taken in response to the complaint. Ecology shall be notified within three (3) days of receipt of any such complaint.

9.4 Yahoo! shall notify Ecology by e-mail or in writing within 24 hours of any engine operation of greater than 60 minutes if such engine operation occurs as the result of a power outage. This notification does not alleviate Yahoo! from annual reporting of operations contained in any section of Approval Condition 9.

10 STACK TESTING

10.1 Any emission testing performed to verify conditions of this Approval Order or for submittal to Ecology in support of this facility's operations shall be conducted as follows:

10.1.1 As soon as possible in advance of such testing, the Permittee shall submit a testing protocol for Ecology approval that includes the following information:

10.1.1.1 The location and Unit ID of the equipment proposed to be tested.

10.1.1.2 The operating parameters to be monitored during the test and the personnel assigned to monitor the parameters during the test.

10.1.1.3 A description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations.

10.1.1.4 Time and date of the test and identification and qualifications of the personnel involved.

10.1.1.5 A description of the test methods or procedures to be used.

10.1.2 Test Reporting: test reports shall be submitted to Ecology within 45 days of completion of the test and shall include, at a minimum, the following information:

10.1.2.1 A description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations.

10.1.2.2 Time and date of the test and identification and qualifications of the personnel involved.

- 10.1.2.3 A summary of results, reported in units and averaging periods consistent with the applicable emission standard or limit.
- 10.1.2.4 A summary of control system or equipment operating conditions.
- 10.1.2.5 A summary of production related parameters.
- 10.1.2.6 A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation.
- 10.1.2.7 A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation.
- 10.1.2.8 Copies of field data and example calculations.
- 10.1.2.9 Chain of custody information.
- 10.1.2.10 Calibration documentation.
- 10.1.2.11 Discussion of any abnormalities associated with the results.
- 10.1.2.12 A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

11 GENERAL CONDITIONS

- 11.1 **Commencing/Discontinuing Construction and/or Operations:** This approval shall become void if operation of the Yahoo! Data Center backup emergency diesel electric generators is discontinued at the facility for a period of eighteen (18) months, unless prior written notification is received by Ecology at the address in Condition 7 above.
- 11.2 **Compliance Assurance Access:** Access to the source by representatives of Ecology or the EPA shall be permitted upon request. Failure to allow such access is grounds for enforcement action under the federal Clean Air Act or the Washington State Clean Air Act, and may result in revocation of this Approval Order.
- 11.3 **Availability of Order and O&M Manual:** Legible copies of this Order and the O&M manual shall be available to employees in direct operation of the emergency diesel electric generators, and be available for review upon request by Ecology.
- 11.4 **Equipment Operation:** Operation of the engine/generator sets and related equipment shall be conducted in compliance with all data and specifications submitted as part of the NOC application and in accordance with the O&M manual, unless otherwise approved in writing by Ecology.
- 11.5 **Modifications:** Any modification to the generators, engines, or cooling towers and their related equipment's operating or maintenance procedures, contrary to information in the NOC application, shall be reported to Ecology at least 60 days before such modification. Such modification may require a new or amended NOC Approval Order.
- 11.6 **Activities Inconsistent with the NOC Application and this Approval Order:** Any activity undertaken by the permittee or others, in a manner that is inconsistent with the NOC application and this determination, shall be subject to Ecology enforcement under applicable regulations.

- 11.7 **Obligations under Other Laws or Regulations:** Nothing in this Approval Order shall be construed to relieve the permittee of its obligations under any local, state or federal laws or regulations.
- 11.8 **Fees:** Per WAC 173-455-120, this Approval Order and related regulatory requirements have a fee associated for review and issuance. This Order is effective upon Ecology's receipt of the fee, for which Ecology's fiscal office will provide a billing statement.

All plans, specifications, and other information submitted to the Department of Ecology relative to this project and further documents and any authorizations or approvals or denials in relation thereto shall be kept at the Eastern Regional Office of the Department of Ecology in the "Air Quality Controlled Sources" files, and by such action shall be incorporated herein and made a part thereof.

Authorization may be modified, suspended or revoked in whole or part for cause including, but not limited to the following:

- a. Violation of any terms or conditions of this authorization;
- b. Obtaining this authorization by misrepresentation or failure to disclose fully all relevant fact.

The provisions of this authorization are severable and, if any provision of this authorization, or application of any provisions of their circumstances, and the remainder of this authorization, shall not be affected thereby.

You have a right to appeal this permit. To appeal this you must:

- File your appeal with the Pollution Control Hearings Board within 30 days of the "date of receipt" of this document. Filing means actual receipt by the Board during regular office hours
- Serve your appeal on the Department of Ecology within 30 days of the "date of receipt" of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). "Date of receipt" is defined at RCW 43.21B.001(2).

Be sure to do the following:

- Include a copy of (1) the permit you are appealing and (2) the application for the permit.
- Serve and file your appeal in paper form; electronic copies are not accepted.

1. To file your appeal with the Pollution Control Hearings Board

Mail appeal to:

The Pollution Control Hearings Board
PO Box 40903
Olympia WA 98504-0903

OR

Deliver your appeal in person to:

The Pollution Control Hearings Board
4224 – 6th Ave SE Rowe Six, Bldg 2
Lacey, WA 98503

2. To serve your appeal on the Department of Ecology

Mail appeal to:

Deliver your appeal in person to:

The Department of Ecology
Appeals Coordinator
P.O. Box 47608
Olympia, WA 98504-7608

OR

The Department of Ecology
Appeals Coordinator
300 Desmond Dr SE
Lacey, WA 98503

3. And send a copy of your appeal to:

Karen K. Wood
Air Quality Program
Department of Ecology
4601 N. Monroe Street
Spokane, WA 99205-1295

For additional information visit the Environmental Hearings Office Website:

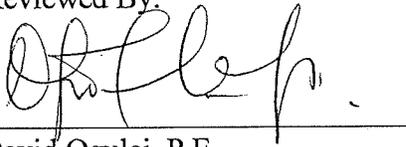
<http://www.eho.wa.gov>

To find laws and agency rules visit the Washington State Legislature Website:

<http://www.l.leg.wa.gov/CodeReviser>

DATED this 28th day of March, 2011, at Spokane, Washington.

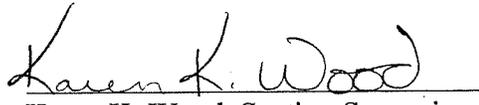
Reviewed By:



David Ogulei, P.E.
Science & Engineering Section
Department of Ecology
State of Washington

Approved By:

April 1, 2011 KKW



Karen K. Wood, Section Supervisor
Eastern Regional Office
Department of Ecology
State of Washington



September 16, 2013

Department of Ecology
ATTN: Anya Caudill
PO Box 47600
Olympia, WA 98504-7600

RE: SIP Submittal

Dear Ms. Caudill:

Please accept my comments regarding Ecology's proposed amendments to the Washington State Implementation Plan (SIP). Washington's air quality statutes, intended by our legislature to be more protective than federal minimums, are only as good as their implementation and enforcement. Because Ecology has a reputation of ignoring, undermining and preempting this authority, the citizens of Washington State need the state's more stringent regulations adopted into the SIP for federal enforceability. Accomplishing this provides the citizens with additional EPA oversight, enforcement, and a citizen suit provision provided by the federal Clean Air Act. 42 USC 7401, et seq.

Maintaining the state's more stringent air quality regulations, which is the state's prerogative under 42 USC 7416, requires retaining existing language currently in the SIP providing for regulation of other air pollutants and establishing more stringent emission limitations than required by federal law. EPA's and Ecology's claim that SIPs can only contain the criteria pollutants, is not supported by the Congressional record. 95th Congress, 1st session, H.R. 95-294, p 68¹ (see attached)

Washington's air quality will only be as good as the implementation and enforcement of its regulations. For this reason, all of Washington State's clean air regulations, WAC 173-400, -460 and others, must be adopted into the SIP to become federally enforceable. Ecology relies on a 1985 letter (Appendix C) that suggests that Ecology is prohibited from submitting its more stringent regulations into the SIP because they are "non-criteria pollutants". Reliance on this document is inappropriate. The Clean Air Act Amendments of 1990², which supersedes this interpretation, specifically allow for the adoption of a state's more stringent air quality regulations. Read in conjunction with the earlier interpretation of *Bleicher* and 42 USC 7416 providing for the state's prerogative to set more stringent standards, the statute clearly provides

¹ *Bleicher, Samuel A., "Economic and Technical Feasibility in Clean Air Enforcement Against Stationary Sources," 89 Harv. L. Rev. 316-354 (December 1975)*

² S. 1630, 101st CONGRESS, 2d Session. (l) State Programs- (1) Each State may develop and submit to the Administrator for approval a program for the implementation and enforcement ... of emission standards and other requirements for air pollutants subject to this section. 42 USC 7412(l)

states the rights to set standards that are more stringent than the NAAQS and adopt them into the SIP for federal enforceability.

Additionally, 42 USC 7416(2) prevents backsliding under the CAA:

“...if an emission standard or limitation is in effect under an applicable implementation plan ..., such State or political subdivision may not adopt or enforce any emission standard or limitation which is less stringent than the standard or limitation under such plan or section.”

Ecology lacks statutory authority to weaken the state’s SIP.

Ecology also lacks authority to adopt the diesel engine rule found under WAC 173-400-930. Ecology is not attempting to adopt this exemption into the SIP, because the agency knows they do not have statutory authority to do so. Instead, the agency intends to keep this as a state only rule: not enforceable in federal court and blocking EPA’s ability to intercede for Washington residents. This kind of manipulation is typical of Ecology. Washington statute provides no exemption from the requirement to employ BACT on all sources requiring a notice of construction. RCW 70.94.152(10)

Ecology has been reminded by EPA that minor NSR must account for precursors of PM2.5 and ozone. Rather than do so, the state intends to remove the minor NSR from the SIP by combining -110, -112 and -113 into one permitting process that is limited to major sources. These revisions should not be adopted. The existing rule in the SIP is more stringent because it applies to both minor and major sources, and sets a more stringent increment in areas that are in attainment or unclassifiable. Being more stringent and in the existing SIP, it cannot be weakened. 42 USC 7416(2)

The minor NSR requires precursors to be PM2.5 and ozone to be considered, but I do not find this accounting in the rule changes.

I am requesting that Ecology retain all the sections of WAC 173-400 that are proposed for removal from the SIP, and that Ecology include the state’s original air toxics regulations (pre-2009) for adoption under Section 112(l) authority into the SIP as was originally planned in 1995. It was not the people of the State of Washington who objected to the inclusion of the state toxic air regulations; it was a couple of industries.

The WAC 173-460, while not directly adopted into the SIP, was indirectly adopted through definition. Definitions that Ecology is now attempting to remove (173-400-030(91) and 173-400-030(3)(b)(i)) to weaken the SIP and relegate it to criteria pollutants only. Re-defining “air contaminant” to limit its applicability to criteria pollutants (173-400-030(3)(b)(i)) and removing reference to “toxic air pollutant” removes the requirement to comply with the WAC 173-460s. This is back sliding and is prohibited. 42 USC 7416(2)

Clean air is the right of all people to enjoy, and the responsibility of all industry doing business in Washington State to protect. Please incorporate our WAC 173-460 air quality regulations into

the SIP so we can hold Ecology accountable for properly implementing and enforcing the legislatures mandate to protect air quality for future generations.

Please do not adopt any of the revisions that are less stringent than the existing SIP and do not remove any of the regulations currently in the SIP. We will all breathe easier with more options to ensure the air quality laws are properly implemented and enforced.

Thank you for the opportunity to comment.

Sincerely,

Patricia Anne Martin
Former Mayor, Quincy WA
617 H St. SW
Quincy, WA 98848

smelter order), even if this means a source may have to terminate operation.¹⁷ Under section 110(c) of the act the Administrator stands in a position of the State, if the State has failed to adopt an approvable plan.

Even though certain air quality limitations are placed on this discretionary authority in the case of smelter orders, that does not mean that the Committee intends to compel the issuance of smelter orders up to this limit or DCOs without limit regardless of the health or environmental consequences. Therefore, the discretionary authority is retained to permit allocation of such DCO's and smelter orders among eligible sources on the basis of such criteria as the State may determine. A first-come, first-served policy is neither required, nor deemed desirable by the committee.

Section 121—DCO's Smelter Orders and the Consideration of Economic and Technical Feasibility.—As indicated previously, section 121 authorizes consideration of certain specific economic and technical factors in the context of delayed compliance orders for existing sources from requirements of the applicable implementation plan.

In adopting section 121, the committee was thus trying to establish a balance based on two principles. First, economic and technical feasibility may be considered, under the conditions expressly provided for in the statute, including under a DCO application. Second and conversely, consideration of economic and technical factors in other contexts (i.e. in section 110 approvals, section 307(b) judicial review of such approvals, or in section 113 enforcement proceedings) is not authorized.

Although the committee bill deletes the postponement provision of section 110(f) of the act and substitutes the compliance date extension provision of new section 121, the following description of the act remains basically correct if the words delayed compliance order or smelter order are substituted for "postponement":

First, Congress clearly intended the attainment of primary [national ambient air quality standards] within the 3-year period regardless of economic and technical obstacles, unless there was either (1) an extension [under section 110(e)] at the outset, or (2) a specific postponement after a hearing on the record. Second, States were assured the opportunity to set more stringent standards than those necessary to meet [national ambient air quality standards] if they so desired, and to include them in their [State implementation plans] without risking a veto by the Administrator for unnecessary stringency.¹⁸

Similarly, the committee language confirms the judgment of the commentator who reviewed certain statements from previous legislative history and concluded,

These statements close the door unequivocally on judicial consideration of economic and technical factors on a case-by-case basis in enforcement proceedings. Their foundation is

¹⁷ See Bonine, *op. cit.*, p. 2 and cases at nt. 17. The committee thus is in agreement with the holding of the *Union Electric* case, 427 U.S. 246 (1976).

¹⁸ Becher, *op. cit.*, p. 322.

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¹⁸ Becher, *op. cit.*, p. 322.

From: [Patty Martin](#)
To: [Caudill, Anya \(ECY\)](#)
Subject: SIP early comment
Date: Wednesday, August 28, 2013 10:21:56 AM

Anya,

Please check the citation for the conflict of interest. I believe it is incorrect.

Patty

--

Patricia Martin
Safe Food and Fertilizer
617 H St. SW
Quincy, WA 98848

A project of Earth Island Institute.

From: [Patricia Davis](#)
To: [Caudill, Anya \(ECY\)](#)
Subject: RE: wood smoke issues
Date: Tuesday, September 17, 2013 7:06:04 PM

hello again Anya

sorry for the extreme tight time available right now. I think there are a few CORE problems. per my email sent to margo thompson 9/9/2013 there is considerable difficulty getting assistance to people suffering under outrageous levels of COMMERCIAL - RESTAURANT wood smoke. Multiple agencies 'pass the buck' and the result is that these wood burning pizza places, wood burning BBQ places, and restaurants that use charcoal are creating excessive smoke that without a doubt hinders public health and is certainly a nuisance beyond that. As you likely know: 1,000 Washington residents will die prematurely from exposure to wood smoke particulate. Additionally, that the American Lung Assoc determined that wood smoke enters neighboring property with all the windows and doors closed. Also wood smoke is clearly a carcinogenic and health hazard and that is well documented for decades via valid and replicated research. (check burning issues website for citations) and of course we all know the EPA, 1991: wood smoke is 12 times more toxic than a cigarette (actually 2nd hand smoke - so therefore even more lethal) Also that the American heart assoc. found CAUSALITY between air pollution and heart disease. Wood smoke is most certainly a prevalent air pollutant.

We need to do a better job of requiring commercial wood burning/BBQ/food trucks/ mobile catering/ etc and require of them the same standards that are required of regular homeowners (to have a CERTIFIED wood burning device to greatly reduce emissions) Why in the world would a wood burning restaurant (note: when I use the term restaurant I am referring to ALL commercial and licensed food generating businesses) - which involves massive numbers of hours and day after day, year after year have no air filtration requirements? it seems it slipped through the cracks. Or perhaps it was lobbying by the BBQ industry that managed to get the Fire Dept memo for intervention in this arena to specific exclude BBQ and have no possible intervention for people being choked to death with smoke on and on? (see the email that I wrote to PSCA, DPD, on this) UTTERLY AMAZING !! UNFAIR!

We need to require that all food businesses/restaurants have at least the emission standards of a home owner. This needs to take place on multiple levels and in particular relative to licensing and mechanical permits. And that license can be withdrawn if not in compliance.

On a completely other pathway two main issues:

1) given the high level of deception/manipulation around the 'only source of adequate heat' for wood burning residentially - the 'burden of proof' must be on the homeowner with severe penalties (along the lines of makes false statements and legal recourse for having manipulated the intention of that 'loop hole'. There are multiple methods to warm up a residence and they should be required prior to allowing filthy air pollution to harm the health of innocent babies, children, and others who live near a wood burning home. 1) close off a room (even a blanket can do that) 2) boil some water: increased humidity increases heat 3) use an Emergency Blanket (they are lightweight and very inexpensive: \$5) over themselves to hold in body heat 4) dress in layers 5) drink hot liquids. And there are many more ways to warm up. One need (to keep warm) does not FAIRLY offset the other: of being able to simply breathe. When we have wood smoke around here you cannot open the window for any fresh air: there is none! Our home is filled is smoke- inside. So those people need to mitigate their situation - not harm others health and shorten their live. this is a serious - killer - issue. Smoke is not a smell - it is a known killer. The agencies that are supposed to protect us - need to do that not take excuses that can be deceptive.

2) There is a DISTINCT difference in urban and rural areas for the use of wood burning. In Seattle it

is unlikely that literally anyone "has no other adequate source of heat" Why? We have assistance for insulating, and heating homes. We have multiple sources of methods of generate heat: electric, gas, etc.

In rural areas a home could find it more difficult to access multiple sources of heat and assistance.

therefore, there should be different laws for urban versus rural. Rural more lenient with regard to wood smoke. urban very stringent. Urban areas have much higher population density - therefore more people are impacted by wood smoke. also, as mentioned, urban areas have more heat options. And I add to that in Seattle if it is rental property the landlord is now required to be licensed and most certainly MUST provide 'adequate heat' for renters. Also Seattle voted for laws that protect them from cigarette smoke. That speaks volumes. Regretfully the average citizen does not realize that being in cigarette smoke is far less dangerous than breathing in wood smoke. Wood smoke is not only more toxic, but of much greater volumes (chimneys smoking - and in the case of wood burning restaurants: it can be hour after hour after hour.....day after day.....month after month.....with NO RELIEF from wood smoke. No way to get an intervention from ANY agency

3) That brings me to my final and very serious stand: The old brochure from ECY specifically mentioned Nuisance Laws. I am going from recall right now - but basically it stated that "any odor or smoke that interferes with the health or enjoyment of property of your neighbor is illegal"

Then that helpful reference disappears - and i fought hard to get 'something' back in. It is still too weak

the woman who owns the apt. building 'eating' smoke on and on from the BBQ place said (with great intensity and frustration) that she had called everyone, every place and tried everything - and no one can/will help. that the smoke (so much smoke I had called the fire dept. thinking garbage was on fire behind a fence) goes on and on - with no way to get it stopped. Well, one way is nuisance laws. Problem: most citizens don't know about it. Problem: the laws are not well enough written for a person who hires an attorney to actually feel confident that after all the time, \$ for an attorney, and willingness to 'stand up' (which can be met with threats, retaliation, and in my case: an increase in smoke along the lines of 'don't tell me what to do' (I am a cancer survival - and wood smoke is beyond words deadly for me)

what in the world is left for the average person? How do we get remedy? It seems there is no remedy with regard to commercial/restaurant/catering truck/mobile wood burning pizza catering. That is not right at the deepest level. People should not have to go through this ! There has to be a remedy ! People should not be forced to breathe in heavy wood smoke - hour after hour.....day after day.....month after month..... with NO RELIEF.

PLEASE PLEASE pass this email along and put your heart and souls into helping those of us that suffer under volumes of smoke that are crushing to health. And it is worse yet when there is no remedy. Please help ! please !

patricia davis, seattle

feel free to email this 'where ever' We need an intervention and some help. We are literally choking to death! The win-win is: they keep cooking yummy things and CONTAIN their smoke and odors. And on the other topic: than Nuisance laws get some predictability and teeth into them, and that permits for food entities not be granted unless they contain smoke and odor - no matter 'who' is doing the cooking.

thank you

From: Patricia Davis [<mailto:tapestry4@gmail.com>]
Sent: Monday, September 09, 2013 10:25 AM
To: Thompson, Margo (ECY)
Cc: 'Craig Kenworthy'
Subject: RE: wood smoke issues

good morning Margo- and yes, PLEASE, send my email to everyone who can help. This is a serious issue and one that is an increasing problem: we are getting more and more commercial pizza and BBQ places that emit unrelenting, excessive, choking amounts of smoke with ZERO regulations. Given the known health hazards of smoke this is ridiculous. Additionally, it is required that residential wood stoves, for example, be certified and yet we have no effective regulation of commercial entities that indeed can be generating smoke - NON STOP HOUR AFTER HOUR and there is no remedy

That is a reason I have been adamant about ECY keeping the reference to Nuisance Laws and also getting Legislation in place that gives a regular citizen half a chance to prevail in court. This poor woman who owns the apt. building directly downwind of Jones BBQ here in West Seattle has lost tenants, has made complaints to the Fire Dept. and Puget Sound Clean Air - only to have the 'buck passed' (read Diane Davis, DPD letter below) and find she has no pathway to impact the smoke. She suffers under (as do many living by these wood burning commercial food entities) from massive smoke exposure, impact on her business (people move away from the apartment to get away from breathing in smoke day after day.....on and on.

Seriously, there NEEDS to be a way for people to have remedy in these situations. They are being forced to breathe UNFILTERED smoke - for 40 or more hours per week - every single week. Week after week, and year after year with NO REGULATION. That is pitiful that a homeowner needs a certified wood burning device (and likely most homeowners do not burn continuously for 40 or more hours per week) and a commercial entity does not. RESTAURANTS are required to filter their cook smoke - why in the world is that not required - and at an even higher level - for a WOOD BURNING restaurant? They generate more smoke than a 'normal' restaurant and simply put up a steel flu and they are 'good to go'.....all in compliance while people and children suffer with breathing and perhaps an end point cancer.

Again: we NEED

- 1) Legislation that REQUIRES at least as much smoke filtering as a homeowner, and I think even more stringent standards: such as no smell or smoke
- 2) As ECY, EPA and PSCA address non-compliance it is also necessary to take into account COMMERCIAL WOOD BURNING and 1) above

3) We need to educate the public about the toxicity of wood smoke (12 times more toxic than a cigarette, EPA, 1991 gets through to the average person no matter what their education level/ability to comprehend complex issues)

4) We MUST be able to set up a legal process that takes wood smoke seriously (reminder: Seattle VOTED not to allow smoking in public places that speaks volumes: people are getting smart about their health and becoming more educated as a public. Regretfully most people do not truly understand the toxicity of wood burning smoke) Anyway: There must be a route for some remedy than can be relied on. Nuisance laws were written to intervene on people who are suffering in their own homes. It states (which used to be in the ECY bulletin) that any odor or smoke that interferes with the health or enjoyment of property is illegal. Ok, that is step one (get that back into the handout and educate the public they do not have to endless suffer or perhaps die later so some commercial entity can make \$ and poison their air with no consequence whatsoever) Next there MUST MUST MUST be some laws written that assist a person to prevail in court if they go so far as to hire a private attorney and pursue choking on smoke (day after day) in court. Nuisance Laws are there for a reason. And more laws needs to be written to protect the public. We have a RIGHT TO BREATHE. I understand this woman's absolute frustration: she hits wall after all after wall.....and she is breathing smoke that I actually thought was a flat out fire when I drove by. No recourse. That is heartbreaking and also irresponsible by those parties that are supposed to help protect the air.

Please advise if this letter can be part of public comment for what is being worked on currently. Also please forward this entire email 'everywhere' and let's get busy cleaning up the air on a commercial level as well.

cc: Craig Kenworthy, PSCA

Thank you

patricia davis

From: Patricia Davis [<mailto:tapestry4@gmail.com>]

Sent: Friday, September 06, 2013 7:07 PM

To: 'Davis, DianeC'

Subject: FW: wood smoke issues

Hello again Diane - It has been a hectic summer ! Today I was driving into our Alaska Street Junction here in W. Seattle and drove past what I thought was a fire. I had no time to stop right then, but did call 911 and reported it. Afterwards I did drive by again and saw the massive billows of smoke were still there. I parked and walked up to the source and it was an unattended BBQ activity by Jones BBQ. I did

get some photos of the smoke and source. As I stood there I noticed an apartment building with multiple vacancy signs out (basically 'eating' the smoke from this activity) and I called the number. I spoke briefly with the woman who either owns or manages the apartment building and she said has tried 'everything' to get that smoke handled with no success. She had someone come in, so we had to cut it short, but I will telephone her back and try to understand what she has tried. She did mention she tried Puget Sound Clean Air, and the Fire Dept and could get nowhere. I could tell she was so distressed and upset on breathing in THAT much smoke - OMG !

So then I went over to Fire Station (who had responded to my 911 call - thinking it was like garbage on fire behind a fence) I was advised they have had many complaints about Jones BBQ and printed me the code for their response. He showed me that BBQ fires specifically have NO REGULATION whatsoever and it even states they are unregulated (CAM 5022 document. CAM means Client Assistance Memo entitled: Recreational and Cooking Fire Regulations, updated Nov. 2009)) I quote: "Barbeques (has it's own headline) "Use of barbecues for cooking is not regulated in the City of Seattle". and then it changes topics.

He said the Fire Dept is in a hard place because they can't write a citation for something that can't be backed up with code - which makes sense. After more inquiry I determined that the Fire Marshall's Office keeps records on 911 calls and also when the fire truck dispatches/complaints. Although the names may be private, he felt that there would be numerous Fire Dept calls/complaints about commercial BBQ (and other BBQ) and that it appears to be an issue upsetting a number of people. But, again: that the Fire Dept can only enforce the code with regard to residential fires (eg: the fire must be 25 feet from any combustible structure or material; a fire extinguishing equipment must be readily available (bucket of water, charged garden hose, or fire extinguisher with 4-A rating; and be not more than 3 feet in diameter and 2 feet high (there are more items, but those seem the most essential to note here)

Clearly these excessive smoking producing commercial entities are a nuisance and yet no effective intervention (for the health of the public: this is the air we breathe. Wood smoke is a known carcinogenic and toxic! We decided, as a City not to smoke, but allow these entities to puke out smoke hour after hour after hour with zero regulation or intervention.

Something must be done. I find it irritating that a private citizen, such as myself, has to work their tail off on things like this that are a no brainer scientifically with regard to health issues. Additionally, that myself and others attempt an intervention, but none takes place. I have heard from multiple sources that this is the terrain of Puget Sound Clean Air.

I wrote you to ask if I can forward your email to me (below) and this email I am writing to Craig Kenworthy, Director of Puget Sound Clean Air. Please advise

Additionally, the public can go before the Board of Directors of Puget Sound Clean Air (which I did last year) and I will do that as well.

And lastly I would like to forward our emails to Dept of Ecology and EPA and get the ball rolling there - as well as make contact with the entities you advised me of in the email below. I am exceptionally busy, but someone needs to pursue this - and I guess that buck stops here.

Please advise if you email can be readily forwarded around. And on my end: certainly forward my email around. This is a serious issue and people should not have to choke on smoke where they live.

I appreciate your email and contacts. thank you for taking that time and again: please feel free to forward my email (actually I ask you to) to 'others'

best regards,

pat davis

From: Patricia Davis [<mailto:tapestry4@gmail.com>]
Sent: Thursday, July 25, 2013 10:13 PM
To: 'Davis, DianeC'
Subject: RE: wood smoke issues

hello diane and THANK YOU THANK YOU for this follow up. I have worked a very long day (it is 10 pm) so I printed this and I will read in detail tomorrow.

thank you DEEPLY !!

patricia

From: Davis, DianeC [<mailto:DianeC.Davis@seattle.gov>]
Sent: Thursday, July 25, 2013 12:54 PM
To: Patricia Davis (tapestry4@gmail.com)
Subject: wood smoke issues

Patricia Davis
tapestry4@gmail.com

Dear Patricia:

Sorry for the delay in responding. I am sorry too that the smoke from Pizzeria 22 (4217 SW College St in our system) continues to be a problem. As you know, the codes we enforce allowed the construction of this establishment, and the required building and mechanical permits were obtained.

When this issue first came to my attention two years ago, I contacted Puget Sound Clean Air Agency (PSCAA) and was told they do not regulate or permit restaurants or their equipment, instead referring complainants to the health department. But, Seattle - King County Public Health told me that PSCAA is the resource for all outdoor air issues in the state even if the source comes from a restaurant (which is also what I concluded when I looked at the statutes and rules). The health department has no authority over outdoor air quality and they refer people back to the PSCAA. A frustrating situation.

Why wood-burning commercial ovens are permitted and why the regulations don't do more to control emissions are questions outside my workgroup's authority and jurisdiction. It appears to me that a code or law change is necessary. That would be an issue for our legislators. DPD does have a mechanism to request a code change, which I learned about only recently (I previously had directed customers to their City Council representatives for code changes, which is also an option). Please see our Tip 110, *Requesting a Code Amendment*, available here: <http://web1.seattle.gov/dpd/cams/camdetail.aspx?cn=110>. This would be a technical code issue, involving the requirements for ventilation (mechanical) systems. It may be that the change needs to be at a higher level such as the state legislature, but this would be a place to start.

Here are some people in DPD who are closer to this issue and would be more likely to be able to answer your questions about current law relating to mechanical systems and the likelihood of changes to our codes in the future as well as what the inspector evaluates in the field when investigating this type of complaint.

Technical code information and plan review: Mechanical Plans Engineer Supervisor Shailesh Desai, 206-233-7860, Shailesh.desai@seattle.gov. His supervisor is Andy Higgins, Manager, Construction Plans Administration, 206-615-0568, andy.higgins@seattle.gov.

Code Development: Code Development Manager Maureen Traxler, 206-233-3892, Maureen.traxler@seattle.gov. She reports to Chief Engineer & Building Official Jon Siu, 206-233-5163, jon.siu@seattle.gov.

Inspections: Victor Keys, Mechanical Inspector Supervisor, 206-684-8449, vic.keys@seattle.gov. His supervisor is Dave Cordaro, Construction Inspections Manager, 206-683-7933, dave.cordaro@seattle.gov.

I wish I could be more helpful but unfortunately my workgroup's responsibilities do not include this issue and I do not have the resources to focus on it.

Sincerely,
Diane Davis

Diane C. Davis
Code Compliance Manager

City of Seattle
Dept of Planning & Development (DPD)

700 5th Av, Ste 2000
P O Box 34019
Seattle, WA 98124-4019

206-233-7873 (direct line)
206-615-1812 (fax)
dianec.davis@seattle.gov

Building a Dynamic and Sustainable Seattle!

Oct. 25, '13

Dear Mrs. Caudill:

I know this is late,
but I'd still like to be
heard.

I'm really against
people being allowed to
use burn barrels within
city limits, at least. If
a person nearby opens
their window for fresh air
or goes outside in their
yard they have to breathe
the fumes. This is especially
troublesome in summer. I'm
also against wood heat
being allowed (also wood
fireplaces) for the same
reasons in the city.

Thank you for listening.

Mrs. Helen Zenon

From: swanrobinson@gmail.com
To: [ECY_RE AQComments](#)
Subject: pollution prevention
Date: Saturday, August 10, 2013 9:47:43 AM

I would like to see more air prevention measures taken with industrial dust created by moving vehicles and equipment on unpaved or gravel roads. I live near such a problem and very often affected by the dust created into the air. I have worked as an Environmental Health and Safety Professional with a local University working to keep our environment clean and healthy. I have also studied the effects of dust pollution in Arizona that is very toxic to humans, called valley fever. The dust created by farming and vehicles near residential areas in our state contains toxics from weed sprays and numerous organic materials including silica. Some of this can be prevented by reasonable measures and should be implemented in best management practices.

My neighbors are renting from the local farm and afraid to complain to the owners for fear of some reprisal. They get a daily dose of dust that covers their house every dry day. Please include dust pollution in your proposal.

Sincerely,

Monte R. Robinson

8618 Ershig Road

Bow, Washington 98232

1700 Fowler St.
Mount Vernon, WA 98274
Sept. 12, 2013

ATTENTION: MARGO THOMPSON & ANYA CAUDILL
Department of Ecology, Olympia, WA

Regarding: Rule and State Implementation Plan Concerning Air Quality

In Mount Vernon, the number of coal and oil tanker trains heading to Bellingham and Canada destinations have already increased significantly which has caused our air quality to diminish significantly.

Both coal and oil are considered high carbon risk in air pollution and very dangerous for the lungs are the diesel particulates released into the air by the engines pulling the rail cars. Not to be forgotten is the coal dust which means that coal dust and diesel particulates are released into the air for the entire route these trains take from start to destination. The effects are felt through all cities and the country side along the way in air pollution and traffic congestion.

In the specific case of Mount Vernon, the trains are causing long lines of idling cars, trucks, buses, while the trains pass by - often 150 or more rail cars long. The tracks go right through our city center at the busiest intersection of the city. This particular crossing, it should be noted, is the worst in the city - badly in need of repair which Burlington Northern has ignored.

Residents of Mount Vernon packed McIntyre Hall during the scoping process protesting the building of the Gateway Pacific Terminal in Bellingham.

With the terminal's approval, we are to expect 18 to 23 coal trains per day through Mount Vernon - total lunacy for downtown businesses, (some already closed). Questionable backers of the terminal cite exaggerated creation of jobs. More jobs may occur for the building of the terminal but far less permanent jobs, (also depending upon who they hire, local or otherwise).

Trading health of people and the environmental health of the Pacific Northwest for jobs is not a bargain. It is my hope and expectation that Ecology will see the great health risks ongoing right now with this project and also recognize the sacrifice of the Skagit Valley serenity of the agricultural and tulip industries. These industries have brought millions of dollars in economic benefit to the area, (to include tourism). This beautiful valley must not become a railway center. Even at this present time, there are oil tanker cars parked on tracks throughout Mount Vernon - a real eyesore and environmental risk.

The question must then be asked and answered:
What monetary and health benefits are our many communities in WA State deriving from huge corporations exploitation of the Pacific Northwest - strictly for their profit??

Concerned,

Jonis Deamed

M



P.S. I am enclosing a copy of an article, dated 9-04-13 from the Cascadia Weekly. Please take the time to read this article and if you want real detailed information about coal or oil happenings, view the articles of this fact finding weekly paper on your computer.

From: [ptawdirector](#)
To: [ECY RE AQComments: Pritchett, Nancy \(ECY\)](#)
Subject: Ch173-400WAC SIP Revision, comments
Date: Friday, September 20, 2013 8:44:16 PM

September 20, 2013
Department of Ecology ATTN: Anya Caudill PO Box 47600 Olympia, WA 98504-7600

RE: SIP Submittal

Dear Ms. Caudill:

As requested earlier, the material in Ecology's proposed amendments to the Washington State Implementation Plan (SIP) is extensive, and time has been short. Thus a two-week extension is requested and would be greatly appreciated in order to read and comment more closely.

At the very least, please accept this comment and add it to the voices that you have heard: I have read and concur with the comments and conclusions offered by Patty Martin of Quincy WA in her letter of September 16, 2013.

In particular, to quote:

"Please do not adopt any of the revisions that are less stringent than the existing SIP and do not remove any of the regulations currently in the SIP. We will all breathe easier with more options to ensure the air quality laws are properly implemented and enforced."

Thank you for your attention,
Yours truly,
Gretchen Brewer, Director
PT AirWatchers
PO Box 1653, Port Townsend WA 98368
360-774-2115
ptawdirector@zoho.com • ptairwatchers.org

From: [ptawdirector](#)
To: [ECY RE AQComments; Pritchett, Nancy \(ECY\)](#)
Subject: Request for Extension re Ch173-400WAC SIP Revision
Date: Friday, September 20, 2013 4:28:41 PM

Hello --

As an individual and on behalf of PT AirWatchers, I respectfully request a two-week extension to respond to the proposed revised Ch173-400WAC SIP.

Although the public comment period opened on August 9, many of us in the environmental community only learned of it in the week of September 9. In addition to learning of it a full month after the comment period opened, my agenda has been full enough to preclude giving the revisions any review, much less the review that they merit.

Others that I've communicated with express the same concern about learning of the period at this late date, and because the State's Implementation Plan directly affects work that we are involved in, want time to look more closely at the proposed plan.

At the very least, I would like to weigh in upon first scan, some of the revisions seem to unnecessarily weaken laws that should be strengthened, and look for stronger protections for the benefit of all.

Thank you for your attention,
Gretchen Brewer

Gretchen Brewer, Director
PT AirWatchers
PO Box 1653, Port Townsend WA 98368
360-774-2115
ptawdirector@zoho.com • ptairwatchers.org



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

September 20, 2013

Ms. Anya Caudill
Washington Department of Ecology
Air Quality Program
P.O. Box 47600
Olympia, WA 98504

Re: EPA's Comments on the Department of Ecology's Proposed SIP Submittal

Dear Ms. Caudill:

Thank you for the opportunity to comment on the Department of Ecology's proposal to submit portions of Chapter 173-400 WAC to EPA for approval into the federally-approved SIP.

For the reasons that are discussed on pages 33-35 in the proposed document entitled "SIP Revision: Including Revised Ch. 173-400 WAC in the Washington SIP" (August 2013 Public Review Draft), relating to Significant Impact Levels, we recommend that you not submit the second sentence of Section 173-400-113(3) WAC as a part of the SIP or in some other way demonstrate that the regulations the Department of Ecology is proposing to include in the SIP are consistent with the court ruling discussed in the proposed submittal.

Please note that EPA's final determination on Ecology's SIP submittal will be reached only through notice and comment rulemaking once it is submitted to EPA for approval as a SIP revision.

Again, thank you for the opportunity to comment. If you have any questions regarding this comment, please contact me at (206) 553-6706.

Sincerely,

A handwritten signature in black ink, appearing to read "Donna Deneen".

Donna Deneen
Environmental Engineer
Air Planning Unit
Office of Air, Waste and Toxics



Washington State's Chamber of Commerce

September 20, 2013

Ms. Anya Caudill
Washington Department of Ecology
Air Quality Program
P.O. Box 47600
Olympia, WA 98504

Dear Ms. Caudill:

The Association of Washington Business (AWB) is providing comments on a Department of Ecology (ECY) proposal to submit portions of Chapter 173-400 Washington Administrative Code for incorporation into the Washington State Implementation Plan (SIP).

Formed in 1904, the AWB is Washington's oldest and largest statewide business association, with more than 8,100 members, including the Western States Petroleum Association (WSPA) and the Northwest Pulp & Paper Association (NWPPA). AWB serves as both the state's chamber of commerce and the manufacturing and technology association.

AWB has reviewed the public comments submitted by WSPA and NWPPA and fully agrees with their positions.

More specifically, AWB recognizes and generally supports ECY's effort to update the rule and its application to the Environmental Protection Agency (EPA) for inclusion in the SIP. AWB also appreciates ECY's intent to omit several provisions "that are not related to criteria pollutants regulated under the SIP or not essential for meeting and maintaining the National Ambient Air Quality Standards (NAAQS)," and for ECY's overall support of the notion that non-criteria pollutant regulations cannot be part of the SIP.

Given recent court challenges over the SIP, AWB encourages Ecology officials to further clarify their intent by adding language that definitively limits the scope of the SIP to criteria pollutants. Confusion may continue to exist on whether non-criteria pollutants are regulated through the SIP.

ASSOCIATION OF WASHINGTON BUSINESS
Membership Government Affairs Member Services AWB Institute

T 360.943.1600 ✉ PO Box 658, Olympia, WA 98507-0658
T 800.521.9325 🏠 1414 Cherry St. SE, Olympia
F 360.943.5811 www.awb.org

AWB also requests that ECY officials limit the scope of the Prevention of Significant Deterioration (PSD) permit requirements by omitting the rules proposed for SIP incorporation paragraphs (i) through (v) of subsection (4) (a) of WAC 173-400-720. This section could be interpreted to expand PSD permit conditions beyond what has been approved in the SIP.

Thank you for your consideration of these requests. I am available if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Mi Ennis". The signature is written in a cursive, slightly slanted style.

Michael Ennis
AWB Government Affairs

September 19, 2013

Ms. Anya Caudill
Washington Department of Ecology
Air Quality Program
P.O. Box 47600
Olympia, WA 98504



Subject: Proposed revisions to the Washington State Implementation Plan (SIP)

Dear Ms. Caudill:

The Boeing Company is pleased to offer the following comments on a Department of Ecology proposal to submit portions of Chapter 173-400 Washington Administrative Code for incorporation into the Washington State Implementation Plan (SIP).

The Boeing Company employs approximately 85,000 people in Washington State at numerous facilities, manufacturing commercial and military aircraft, as well as other aerospace components and related products. Our facilities are subject to various provisions of Chapter 173-400 including the major new source review provisions.

The Boeing Company has reviewed the public comments submitted by other business groups, and the Association of Washington Business (AWB). We recognize a consistent message from the regulated community, consistent with the positions we provided in our August 21 meeting with the Department. We continue to endorse those recommendations.

We wish to underscore our support for Ecology's position that the State Implementation Plan is intended to include only those requirements necessary to achieve and maintain state and national Ambient Air Quality Standards, or to secure approval of Ecology's PSD program. Ecology has a long and consistent history of enacting regulations protecting Washington State's environmental legacy. At the same time, we recognize that many of these rules do not address air contaminants for which an ambient standard has been established, and therefore are not appropriate for inclusion in a federal program designed to protect those standards, or as required under EPA's PSD program approval regulations. Therefore we fully support continuing to limit the SIP to only those provisions necessary to assure attainment of the ambient standards and satisfy PSD.

We also suggest the addition of a narrative statement in the SIP transmittal reinforcing that for the purposes of the plan the rules are intended to apply only to criteria contaminants or as necessary to implement PSD. We look forward to working with the Department to provide further clarification in future rulemaking.



On a related front, we ask that Washington requirements that are not part of the federal PSD program and are not necessary to achieving the objectives thereof, not be included in the SIP package. Minor NSR requirements and/or rules that would be included as "applicable requirements" in Title V operating permits, but are not relevant to the emission increase triggering PSD review, are not appropriate for inclusion in PSD permits. Clearly, these requirements must be complied with by the source. However, specifically articulating each one as conditions to a PSD permit, or stipulating in the permit the means of assuring compliance with these extraneous requirements, is redundant and does not advance attainment / maintenance of ambient air quality standards. We ask that Ecology not submit WAC 173-400-720(4)(a)(i) through (v) in this SIP package until that rule is revised.

Thank you for your consideration. If you have questions, please contact David Moore at 425-237-1972, or david.w.moore@boeing.com.

Sincerely,

A handwritten signature in blue ink that reads "Thomas G. Fairley".

A handwritten word "for" in blue ink, positioned to the left of the typed name.

Terry Mutter, Director,
Enterprise Strategy and Global EHS

cc: Stuart Clark, Air Quality Program Manager



Northwest Pulp & Paper
ASSOCIATION



Western States Petroleum Association

September 20, 2013

Ms. Anya Caudill
Washington Dept. of Ecology
Air Quality Program
P.O. Box 47600
Olympia, WA 98504-7600

Re: Proposed Revisions To The Washington State Implementation Plan

Dear Ms. Caudill:

The Western States Petroleum Association (“WSPA”) and the Northwest Pulp & Paper Association (“NWPPA”) are pleased to provide the following comments on Ecology’s August 2013 proposal to submit various WAC ch. 173-400 amendments to EPA for incorporation into the Washington SIP.

WSPA is a non-profit trade organization representing 27 companies that explore for, produce, refine and market petroleum, petroleum products, natural gas and other energy products in Washington and five other western states. WSPA members own and operate each of Washington’s five petroleum refineries.

NWPPA is a non-profit trade association representing 13 member companies and 17 pulp and paper mills in Washington, Oregon and Idaho. Nine of these 17 mills are located in Washington State. NWPPA members produce approximately 8 million tons of various paper products per year. NWPPA members own and operate each of Washington’s nine member mills.

For clarity, we refer to the package of WAC ch. 173-400 amendments proposed for SIP incorporation together with Ecology’s explanatory statement as the “2013 SIP Update Proposal” or just “the Proposal.” WSPA and NWPPA support Ecology’s broad objectives underlying the Proposal: to secure a SIP-authorized PSD program, to secure SIP authorization for the rules required to permit major new sources and major modifications in a nonattainment area, and to

remove obsolete provisions from the SIP. Moreover, WSPA and NWPPA appreciate the care with which Ecology selected provisions of ch. 173-400 for SIP incorporation, while omitting other provisions that are not part of the State's program to attain and maintain the National Ambient Air Quality Standards.

Several elements of the 2013 SIP Update Proposal reflect Ecology's commitment to limit the SIP to NAAQS attainment measures. These include:

- the statement in the Executive Summary that "Ecology is proposing to include in the SIP the portions of the revised Chapter 173-400 that are necessary to ensure Washington complies with the federal Clean Air Act;"¹
- the statement in which Ecology asks EPA to "Remove currently SIP-approved rules that are not related to the criteria pollutants regulated under the SIP or not essential for meeting and maintaining the National Ambient Air Quality Standards (NAAQS);" ²
- The omission from the Proposal of all subsections of WAC ch. 173-400 that reference the requirements of ch. 173-460, the new source air toxics rules; and
- The inclusion as Appendix D of EPA's 1985 letter affirming that measures regulating non-criteria pollutants cannot be part of the SIP.

While these elements of the Proposal leave no doubt as to Ecology's intent, WSPA and NWPPA recommend that Ecology revise the Proposal in one additional way to ensure that the approved SIP implements state policy. In the narrative portion of the Proposal or in an accompanying transmittal letter Ecology should include the following statement, or analogous language to the same effect:

Ecology seeks to limit the scope of the Washington SIP to attainment and maintenance of the NAAQS, and to implementation of the PSD program. Toward this end, Ecology drafted the current Washington SIP to regulate only criteria pollutants, consistent with guidance Ecology has received from EPA over the years. See, e.g. the 1985 letter attached as Appendix D to this submittal. The current Proposal limits the SIP to control measures that target criteria pollutants, except as specified in the EPA PSD rules. Ecology asks EPA to apply this limitation in its approval of the Proposal.

This clarification would be valuable in resolving ambiguities brought to light by recent litigation over the scope of Washington SIP. In addition, it would foreclose difficult legal issues

¹ Proposal at viii.

² Proposal at 8.

about whether the Clean Air Act limits the scope of any SIP to attainment and maintenance of the NAAQS as a matter of law. Ecology recently presented a persuasive case to the United States Court of Appeals for the Ninth Circuit that the Clean Air Act precludes SIP regulation of non-criteria pollutants.³ It would be unnecessary to reach that issue, however, if Ecology clarifies, as it did for the Ninth Circuit,⁴ that Washington intends to limit the scope of the SIP to regulation of criteria pollutants to achieve and maintain the NAAQS.

WSPA and NWPPA also recommend that Ecology omit from the rules proposed for SIP incorporation paragraphs (i) through (v) of subsection (4) of WAC 173-400-720. WAC 173-400-720 was first adopted in 2005,⁵ and amended most recently in 2012. It has never been proposed for SIP incorporation. The stated purpose of WAC 173-400-720(4) is to specify the content of PSD permits. In the 2012 amendments Ecology revised subsection (4) to state:

(4) Applicable requirements.

(a) A PSD permit must assure compliance with the following requirements:

(i) WAC 173-400-113 ~~((3) and)~~ (1) through (4) ;

(ii) WAC 173-400-117 – Special protection requirements for federal Class I areas;

(iii) ~~((The proposed major new source or major modification will comply with all applicable new source performance standards (40 CFR Part 60), National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61), and emission standards adopted under chapter 70.94 RCW that have been incorporated into the Washington state implementation plan))~~ WAC 173-400-200;

(iv) WAC 173-400-205;

(v) Allowable emission limits established under WAC 173-400-081 must also meet the criteria of 40 CFR 52.21(k)(1) and 52.21(p)(1) through (4); and

~~((iv))~~ (vi) The following subparts of 40 C.F.R. 52.21, in effect on ((July 20, 2011)) August 13, 2012, which are adopted by reference. Exceptions are listed in (b)(i), (ii), ((and)) (iii), and (iv) of this subsection:

[list of 40 CFR 52.21 subsections follows]

³ *Washington Environmental Council v. Bellon*, Nos. 12-35323 et seq., Opening Cross Appeal Brief of Defendants-Appellants Theodore Sturdevant, Mark Asmundson and Craig Kenworthy, Section C at 19-41 (filed Sept. 4, 2012).

⁴ *Id.* at 36-38.

⁵ WSR 05-03-33, filed 01/10/05.

Through a series of small deviations from the template of EPA's PSD rules,⁶ this subsection as drafted could be construed to require Ecology to include as permit conditions in a PSD permit all RCW ch. 70.94 requirements (whether or not SIP approved), all local air authority emission standards, all applicable NSPS, Part 61 NESHAP and Part 63 MACT requirements.

- Subsection (4) begins by stating: "A PSD permit *must assure compliance with* all the following requirements . . ." No parallel provision appears in 40 CFR 52.21. The analogous EPA rule could be satisfied by findings of fact in a permit or a technical support document stating that a particular project will comply with NSPS and SIP requirements, or that those requirements will be applied to the source in a Title V permit.⁷
- The 2012 amendments add to the list of requirements for which a PSD permit must assure compliance the elements of WAC 173-400-113(1) and (2). WAC 173-400-113(1) lists all applicable NSPS, NESHAPs, MACT standards, emission standards adopted under Ch. 70.94, and emission standards adopted by a local air authority. Prior to the 2012 amendments, the old subsection 720(4)(a)(iii) (now deleted) omitted MACT standards, limited state and local standards to those that are SIP-approved, and limited the applicability of these requirements to "the proposed major new source or major modification";
- WAC 173-400-113(2) states (emphasis added):
The proposed new source or modification will employ BACT for all pollutants not previously emitted or whose emissions would increase as a result of the new source or modification.

Prior to 2012, WAC 173-400-720(4) did not reference the minor NSR BACT requirement. WAC 173-400-113(2) does not by its terms limit the BACT requirement to pollutants for which a project causes a significant net emissions increase, nor does the term "pollutant" in WAC 173-400-113 refer only to the EPA term "regulated NSR pollutant." To the contrary, WAC 173-400-030(3) states that "'air pollutant' means the same as 'air contaminant.'"

⁶ This comment cites EPA PSD rules to 40 CFR 52.21. The same requirements appear in 40 CFR 51.166 for SIP-approved state PSD programs.

⁷ The closest parallel to WAC 173-400-720(4) in EPA's PSD rules is 40 CFR 52.21(a)(2)(iii), which states that no new major stationary source of major modification to which PSD requirements apply shall begin actual construction without a permit stating that the major stationary source or major modification will meet the requirements of paragraphs (j) through (r)(5) of the PSD rules.

- Subsection (4) is titled, “Applicable requirements.” This term has no defined meaning in the PSD program, but the Title V rules use the term “applicable requirements” to mean substantive requirements that must be applied to a source through a Title V permit. By using the same term in 720(4) Ecology reinforces the impression that a PSD permit must contain all of the federal, state and local provisions of law that regulate a source.

WSPA and NWPPA believe that it would be inappropriate for Ecology to seek SIP approval for a rule that could be read to require that a PSD permit contain all of the applicable requirements that belong in a Title V permit, especially when every source that receives a PSD permit will also receive a Title V permit.⁸ We do not assume that Ecology will interpret the language of Subsection (4) in this manner, but the wording of the rule is susceptible to the interpretation outlined above.

One problem with including all federal, state and local applicable requirements in a PSD permit is that the PSD permit would either supplant or duplicate the content of the facility’s Title V permit. The PSD permit also would supplant or duplicate the minor NSR approval order that Washington permitting authorities issue today in conjunction with a PSD permit. There would be no point in issuing an approval order for a project if the PSD permit included minor NSR BACT determinations and all other “applicable requirements” for the project.

In addition to specifying that a PSD permit must “assure compliance” with all of the federal, state and local requirements referenced in WAC 173-400-113(1) through (4), WAC 173-400-720 includes four more paragraphs that cross reference to various provisions of WAC ch. 173-400, none of which specifically regulate major NSR permitting. For instance, WAC 173-400-205, referenced in paragraph 720(4)(a)(iv), prohibits intermittent operation of controls based on atmospheric conditions. Paragraph (v) is especially problematic. It reads: “Allowable emission limits established under WAC 173-400-081 must also meet the criteria of 40 CFR 52.21(k)(1) and 52.21(p)(1) through (4);” WAC 173-400-081 authorizes permitting authorities to set less stringent BACT limits for startup and shutdown conditions than those imposed for steady state operations. Most such limits appear in minor NSR approval orders, not PSD permits. Paragraphs (i) and (v), taken together, arguably would require Ecology, when issuing a PSD permit, to include minor NSR BACT limits for pollutants for which the project is not major,

⁸ See WAC 173-401-300(1)(a)(i) (every “major source” requires a Title V permit) and WAC 173-401-200(19)(b) (“major source” includes every PSD source).

and to show that those limits would protect the NAAQS and “air quality related values,” including visibility.

Nothing in the PSD rules demands special analysis for startup or shutdown limits, especially not limits imposed through the minor NSR process. The EPA PSD rules incorporated by reference in paragraph (vi) contain everything that a SIP-approved PSD program must satisfy for protection of the NAAQS and Class I areas. By incorporating those provisions in WAC 173-400-720(a)(vi), Ecology’s PSD program by definition satisfies all applicable SIP approval requirements.

Ecology intends to reopen WAC ch. 173-400 in the near future to address discrete deficiencies caused by recent federal court decisions.⁹ At that time, Ecology could refine WAC 173-400-720(4) to clarify the provisions of federal, state and local rules that must be imposed through the conditions of a PSD permit. For now, WSPA and NWPPA recommend that Ecology omit from its SIP submittal WAC 173-400-720(a)(i) through (v). The omission of these paragraphs should not delay SIP approval of the Washington PSD program, because the EPA PSD rules that Ecology proposes to incorporate in paragraph (vi) contain all of the elements that mandate the content of a PSD permit. Specifically:

- Ecology proposes to incorporate 40 CFR 52.21(j), the PSD BACT requirement;
- Ecology proposes to incorporate 40 CFR 52.21(k), the requirement that a project must not cause or contribute to pollution in violation of NAAQS or increments; and
- Ecology proposes to incorporate 40 CFR 52.21(p)(1) through (4), the requirements for projects impacting federal Class I areas.

These provisions prescribe most of the content of a PSD permit. While certain other features of the PSD rules occasionally influence permit content, paragraph (vi) of WAC 173-400-720(4)(a) incorporates those provisions as well.

A program based entirely on the PSD rules incorporated into paragraph (vi) meets the minimum requirements for SIP approval. WSPA and NWPPA support Ecology filling in certain details through its own rules, but the omission from the Proposal of paragraphs (i) through (v) should not delay SIP approval of the Washington PSD program.

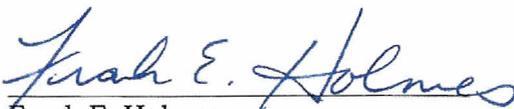
⁹ E-mail of August 8, 2013 from Nancy Pritchett to Matt Cohen (copy attached) (Ecology anticipates opening ch. 173-400 for revision “within the next few months”).

Ms. Anya Caudill
September 20, 2013
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In summary, WSPA and NWPPA support Ecology's plan to submit the Proposal for SIP incorporation, with two caveats. First, we recommend that Ecology include language in its support document further clarifying Ecology's intent that EPA limit the SIP to regulation of criteria pollutants to achieve and maintain the NAAQS. Second, we urge Ecology to omit from the proposal WAC 173-400-720(4)(a)(i) through (v), until Ecology has a chance to revise these provisions to limit the scope of the Clean Air Act requirements that must be enforced through PSD permit conditions.

Thank you for considering these comments. We respectfully request you to urge EPA to expedite review of the SIP submittal according to the schedule provided in Section 110(k) of the CAA. Please call either of the undersigned representatives if we can provide any additional information in support of the recommendations described in these comments.

Very truly yours,



Frank E. Holmes
Director, Northwest Region
Western States Petroleum Association
(360) 352-4506



Christian M. McCabe
Executive Director
Northwest Pulp & Paper Association
(360) 529-8638

Cc: Maia Bellon
Stu Clark
Alan Newman

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Cohen, Matthew

From: Pritchett, Nancy (ECY) <npri461@ECY.WA.GOV>
Sent: Thursday, August 08, 2013 10:40 AM
To: Cohen, Matthew
Subject: follow up to you VM

Hi Matt,

Regarding your request to revise 173-400-720, we don't currently have 173-400 open for rule making. But we will consider your proposed changes the next time we revise the rule. While I don't have a set date for the next rule revision for 400, I would anticipate that we will open it within the next few months. We will let you know when we are getting ready to open 400 for revisions.

Please let me know if you have any questions.

Thanks,
Nancy

Nancy Pritchett

Rules and Planning Unit Manager
Air Quality Program
Washington State Department of Ecology
360-407-6082
Fax 360-407-7534
nancy.pritchett@ecy.wa.gov

 Please consider the environment before printing this e-mail

Melanie Forster:

I'm Melanie Forster, hearings officer for this hearing. This evening, we are to conduct a hearing on including revised or updated chapter 173-400 WAC, general regulation for air pollution sources in the State Implementation Plan, or SIP. Let the record show it's 6:11 p.m. on September 11th, 2013 and this hearing is being held at the Department of Ecology headquarters, room 36, at 300 Desmond Drive, Lacey, Washington 98503. Notices of the hearing were sent by e-mail to 20 interested people subscribed on the project's e-mail distribution list and a news release was issued on August 9th, 2013. Notice was also published in the Daily Journal of Commerce on August 9th, 2013 and on Ecology's online public involvement calendar.

I will be calling people up to provide testimony based on the order your name appears on the sign-in sheet. Once everyone who has indicated that they would like to testify has had the opportunity, I will open it up for others. When I call your name, please step up to the front, state your name and address for the record. Please speak clearly so we can get a good recording of your testimony.

So the only person I have on the list who wishes to testify is Kathryn VanNatta. Would you like to use the microphone? It's not necessary for the recording.

Kathryn VanNatta:

For the record, Kathryn VanNatta, director of Government and Regulatory Affairs for the Northwest Pulp and Paper Association, a position that I've held for the last 18 years. I, on behalf of Northwest Pulp and Paper, thank the department for all of their work on this rule, a lot of work went into this. And the documents and the outreach that the agency has taken upon themselves, we very much appreciate that, and especially the time that the department has spent with me, chatting with me about this issue.

The Northwest Pulp and Paper Association is a regional technical trade association composed of pulp and/or paper facilities in the states of Washington, Oregon, and Idaho. We're about 58 years old and we work in the intersection of environmental, regulatory, legislative issues that affect mill operations. The Northwest Pulp and Paper Association will be submitting written comments on the SIP revision for the Washington Administrative Code 173-400 division and for the State Implementation Plan.

We sincerely thank the department for the opportunity to testify today and the hard work on the presentation. And we welcome the opportunity, after the submittal of our comments, if you have any questions, please reach out to us and we'll try to explain our positions and our concerns better. By the 20th, we will be submitting our comments for your consideration.

Thank you once again.

Melanie Forster:

Is there anyone else who wishes to provide testimony? All right. If you would like to send Ecology written comments, please remember they are due September 20th, 2013. You may send them to Anya Caudill, PO Box 47600, Olympia, Washington 98504-7600, or you may e-mail comments to AQComments@ecy.wa.gov. You may also fax comments to 360-407-7534. All testimony received at this hearing, along with all written comments postmarked no later than September 20th, 2013 will be part of the official hearing record for this proposal. Ecology will send notice about the response to comments to everyone that provided written comments or oral testimony on this rule proposal and submitted contact

information, everyone that signed in for today's hearing that provided an e-mail address, other interested parties on the agency's mailing list for this rule. The response to comments will, among other things, contain the agency's response to questions and issues of concern that were submitted during the public comment period. If you would like to receive a copy but did not give us your contact information, please let one of the staff at this hearing know, or contact Anya Caudill at the contact information provided for submitting comments.

The next step is to review the comments and make a determination whether to submit the proposed SIP revision to EPA. The response to comments will be posted on Ecology's website. Ecology director, Maia Bellon, will consider the SIP submittal documentation and staff recommendations and will make a decision about adopting the SIP revision. Ecology will submit the proposed SIP revision to EPA after adoption. EPA will then accept public comments before making a decision to approve the SIP revision.

If we can be of further help to you, please do not hesitate to ask, or you can contact Anya Caudill if you have other questions.

On behalf of the Department of Ecology, thank you for coming. Let the record show this hearing is adjourned at 6:17 p.m.

Attachment A: September 29, 1994 Ecology's Letter to EPA



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

September 29, 1994

Mr. Chuck Clarke
U. S. EPA Region 10
1200 Sixth Avenue
Seattle, Washington 98101

Dear Mr. Clarke:

The purpose of this letter is to formally submit several additional documents related to Washington's air operating permit program. These materials supplement the documents submitted in November and December 1993.

As background, the Department of Ecology and seven local air agencies have worked closely with Region X staff to develop an operating permit program that fulfills the requirements under Title V of the Federal Clean Air Act. During this three year effort, we have established the necessary statutory authorities, prepared permitting regulations, developed permit fee schedules to fund the program and invested in staff and resources that will be necessary to implement an effective program.

The enclosed documents represent the final elements needed by EPA to grant interim approval of the Washington program. It includes each of the items identified in the August 18, 1994, Federal Register notice as prerequisites for interim approval. These include:

1. Insignificant Emission Units: Chapter 173-401 WAC, Operating Permit Regulation, contains revisions to address insignificant emissions unit and activities (sections 173-401-530 through 533). This rule was revised as of May 7, 1994. It updates and supersedes our submittal of November 1, 1993. Please incorporate this version of Chapter 173-401 WAC into our delegation package. Also note that this document was submitted to EPA by the Air Quality Program on May 24, 1994.
2. Interim Procedures under Section 112(g) of the Federal Clean Air Act: Chapter 173-460 WAC, Controls for New Sources of Toxic Air Pollutants contains Washington's review requirements for new sources of toxic air pollutants. It will be used as an interim mechanism for establishing federally-enforceable restrictions to implement section 112(g) of the Federal Clean Air Act. This interim approval would be effective during the transition period between Title V approval and final federal



Mr. Chuck Clarke
September 29, 1994
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approval of Washington's program to implement section 112(g). Please incorporate this version of Chapter 173-460 WAC into our delegation package. We are making this request on behalf of Ecology and all local air authorities except the Puget Sound Air Pollution Control Agency (PSAPCA) and the Southwest Air Pollution Control Authority (SWAPCA).

3. PSAPCA and SWAPCA Section 112(g) Interim Delegation Packages: Also enclosed is a copy of SWAPCA board minutes reflecting SWAPCA's adoption by reference WAC 173-460 for their 112(g) interim approval. We are requesting on behalf of SWAPCA that this regulation be included in their Title V delegation package. PSAPCA requested that their regulations be used to implement 112(g) in the November 1993 submittal. Ecology understands that you already have a copy of the most recent PSAPCA Regulations 1 and 3. We are likewise forwarding a request on behalf of PSAPCA that these regulations be included in their Title V delegation package.
4. Revisions to Local Regulations: The last two enclosures are revised Air Operating Permit Program regulations from the Yakima County Clean Air Authority (YCCAA) and the Benton Franklin Counties Clean Air Authority (BFCCAA). These regulations were revised in accordance with the conditions of interim approval, published in the August 18, 1994 Federal Register notice. The BFCCAA regulation change was passed by their Board on August 18, 1994, and became effective on September 23, 1994. The YCCAA regulation change was passed by their Board on September 14, 1994, and will be effective on or about October 22, 1994.

We look forward to working with Region X staff as we work to obtain full approval of the Title III and Title V programs. If you or your staff have any questions about this submittal, please contact Mr. Tom Todd at (206) 407-7528.

Sincerely,



Mary Riveland
Director

Enclosures

MR:TT:gk

Attachment B: November 1, 2013 Ecology's Letter to EPA



Bob Ferguson
ATTORNEY GENERAL OF WASHINGTON

Ecology Division
2425 Bristol Court SW 2nd Floor • Olympia WA 98502
PO Box 40117 • Olympia WA 98504-0117 • (360) 586-6770

November 1, 2013

Dennis McLerran, Director
U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

RE: Washington State Department of Ecology Submittal of Provisions in the Current Version of WAC 173-400 for Inclusion in Washington's State Implementation Plan

Dear Mr. McLerran,

The Washington State Department of Ecology (Ecology) has determined not to submit a portion of WAC 173-400-720 (WAC 173-400-720(4)(a)(i) through (iv), concerning permitting requirements for prevention of significant deterioration (PSD) sources), for inclusion in the state implementation plan (SIP) at this time. It has come to Ecology's attention that the language of these provisions could be interpreted in a manner not intended by Ecology. Ecology plans to propose amendments to the rule provisions to clarify the meaning of the language, and will submit the revised provisions for inclusion in the SIP once they have been finalized. Ecology believes this action will not cause any gaps in either the SIP or the PSD program in the interim, as each of the provisions listed in WAC 173-400-720(4)(a)(i) through (iv) is required independently of its listing in WAC 173-400-720(4)(a), and is also being proposed for adoption into the SIP independently of its listing in WAC 173-400-720(4)(a).

As currently written, WAC 173-400-720(4)(a)(i) through (iv) states:

A PSD permit must assure compliance with the following requirements:

- (i) WAC 173-400-113(1) through (4);
- (ii) WAC 173-400-117 – Special protection requirements for federal Class I areas;
- (iii) WAC 173-400-200;
- (iv) WAC 173-400-205

ATTORNEY GENERAL OF WASHINGTON

Dennis McLerran
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Ecology interprets this provision to require sources with PSD permits to comply with the requirements listed in subsections (i) through (iv). Some of these requirements are met through conditions in PSD permits, but others are met through conditions in minor new source notice of construction approval orders (NOCs) or through conditions in air operating permits. For example, WAC 173-400-113(2) requires all new and modified sources of air pollutants in Washington to use best available control technology (BACT) for all pollutants. While a PSD permit requires all new and modified major sources to employ BACT for the pollutants for which the PSD permit is required, the use of BACT for non-PSD pollutants is required in NOC orders issued to the source.

It has come to Ecology's attention that the language of WAC 173-400-720(4)(a) could be interpreted to mean that a PSD permit itself must include conditions that ensure compliance with each of the requirements listed in WAC 173-400-720(4)(a)(i) through (iv). Ecology believes such an interpretation is not warranted, and leads to the absurd result of requiring the PSD permit to duplicate requirements in NOC approval orders and air operating permits. Moreover, this interpretation is not consistent with Ecology's intent in listing the requirements in WAC 173-400-720(4)(a). However, in an abundance of caution, Ecology has decided to address the question as part of future rule-making, with a proposal to amend the language of WAC 173-400-720(4)(a) to clarify that it is each major stationary source or major modification that must meet the requirements in subsections (i) through (iv), rather than each PSD permit.

Consequently, Ecology has determined not to submit WAC 173-400-720(4)(a)(i) through (iv) for approval into the SIP at this time. Ecology will submit these provisions for inclusion in the SIP once the rule language has been amended.

Omitting these provisions from the SIP at this time will not leave any loopholes in the SIP, as each of the WAC provisions listed in subsections (i) through (iv) is being proposed for inclusion in the SIP independently of its inclusion in WAC 173-400-720.

Nor will the omission of these provisions leave any loopholes in the PSD program: Each provision in WAC 173-400-720(4)(a)(i) through (iv) is independently applicable to PSD sources in Washington regardless of whether it is listed in WAC 173-400-720(4)(a).

- WAC 173-400-113, referenced in WAC 173-400-720(4)(a)(i), states that before a permitting authority may issue an air permit to a source in an attainment or unclassifiable area, the proposed project must meet all the requirements listed in WAC 173-400-113(1) through (5).
- WAC 173-400-117, referenced in WAC 173-400-720(4)(a)(ii) directly imposes requirements on PSD permit applicants as well as on applicants seeking permits for major stationary sources or major modifications in nonattainment areas. WAC 173-400-117(2).

ATTORNEY GENERAL OF WASHINGTON

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- WAC 173-400-200, referenced in WAC 173-400-720(4)(a)(iii), directly imposes stack height requirements on all sources except those specifically exempted. WAC 173-400-200(1).
- WAC 173-400-205, referenced in WAC 173-400-720(4)(a)(iv) directly prohibits all sources from varying the rate of emission of an air pollutant according to atmospheric conditions or ambient concentrations of that pollutant. WAC 173-400-205.

Thus, all of these conditions apply to a PSD source regardless of whether or not they are listed in WAC 173-400-720(4)(a). As noted above, the WAC provisions referenced in subsections (i) through (iv) are being submitted for inclusion in the SIP. Therefore, the omission of WAC 173-400-720(4)(a)(i) through (iv) will not cause any loopholes in either Washington's SIP or its PSD program during the period before Ecology submits revised language of WAC 173-400-720(4)(a)(i) through (iv) for inclusion in the SIP.

Please feel free to contact me if you have any questions or concerns about this matter.

Sincerely,



KATHARINE G. SHIREY
Assistant Attorney General
(360) 586-6769

cc: Stu Clark, Department of Ecology
Julie Oliver, Department of Ecology
Al Newman, Department of Ecology
Nancy Pritchett, Department of Ecology
Anya Caudill, Department of Ecology