



State of Oregon Department of Environmental Quality

Hearing Officer's Report and Response to Comments

Date: August 29, 2022
Hearing Officer: Melissa Hovey
Company Name: NEXT Renewable Fuels Oregon, LLC
Permit No.: 05-0030-ST-01
Application No.: 032808

Background

NEXT Renewable Fuels Oregon, LLC (NEXT), applied to DEQ for a Standard Air Contaminant Discharge Permit to construct a renewable diesel, naphtha, and jet fuel manufacturing facility, located at Port Westward in Clatskanie, Oregon.

DEQ prepared a draft Air Contaminant Discharge Permit and proposed it for public review and comment in a public comment period from Mar. 24, 2022, through May 26, 2022. In addition, DEQ held a virtual public hearing for the proposed permit on Apr. 27, 2022.

This report and Response to Comments provides DEQ's responses to the public comments submitted during the comment period and public hearings.

Public comment

DEQ received 6,993 written comments and 41 oral comments. Comments received during the public comment period as well as comments received at the public hearings are summarized or stated below. DEQ responses follow each comment or group of comments.

1.0 COMMENTS RELATED TO LAND USE & LOCATION

- 1.1. DEQ received numerous comments regarding the proposed location of NEXT. The following are provided as examples, but are not an exhaustive list of such comments:
 - a. *After reviewing many descriptive documents about this complex issue, I feel that for the future health of this ecologically fragile area the project permit should not be granted. I feel that this proposed facility is in the wrong place, has the wrong plan, and is being carried out by the wrong company (not reliable or honest).*

- b. *I strongly urge officials to protect this irreplaceable section of natural land. No amount of mitigation would ever restore this pristine area. Once it is gone, it will be gone forever.*
- c. *The planned site for the NEXT facility is too big to be supported by the infrastructure of the Beaver Diking Improvement Corp. District (BDIC).*
- d. *By allowing this facility to be built in the middle of a protected wetlands on unstable ground at the top of a 5-state water table, you are wasting the tax dollars of every US citizen.*
- e. *I support the local community members who are rightly concerned about seismic vulnerability, the risk of diesel spills, potential harm to the sensitive estuary, drainage systems and dikes, and local food supply/agriculture.*
- f. *This land is traditional active farmland supposed to be protected by Oregon's goals and values. This land is wetland connected with the Columbia river and home to salmon, and dotted with old growth Cottonwood trees. This land is also at risk to failing dikes which will never withstand geologically probable events predicted for our coastline. This land supports a local water district which could be destroyed by failings of this type of fossil fuel industrial development. This land is currently in use as farmland creating foods and jobs for local people. This county does not have adequate infrastructure to support this level of industrial development. In light of climate change the erratic weather patterns over this land will see more flooding, more eroding of county roads, land slides, and challenges to our outdated*
- g. *The scale of this facility is not appropriate for the location they chose at Port Westward, butting up against the already successful and nationally renowned farms that exist there.*
- h. *Beaver is a (sic) island. It is not a sustainable industrial area. It is farmland, my family's helped to settle it and I'm very upset that you are taking away over 800 acres additionally to put pavement and railroad tracks and pollutants right next to the Columbia River, to Beaver Creek and other people like that.*

DEQ response: Where industrial facilities are allowed to locate is a zoning issue and not within DEQ jurisdiction. DEQ received a Land Use Compatibility Statement from Columbia County that allows this type of operation to be located at the current site. DEQ does not have the authority to choose which types of projects are appropriate for economic development in an area; DEQ evaluates the air emissions for the type of activity or activities proposed for a certain facility and, when a facility can meet all applicable requirements in current environmental law, DEQ will issue a permit and continue to monitor the facility for ongoing compliance. In addition, NEXT has satisfied strict Cleaner Air Oregon permitting requirements for new facilities, demonstrating that its toxic air contaminant emissions will not create unacceptable risk in the area where it will operate (see the response to comment category 4.0 for more detail).

1.2. DEQ received the following comments regarding the ongoing appeal of Columbia County's land use approval.

- a. *The final permit, if any, must clarify that DEQ's approval of NEXT's facility is void if the Oregon Land Use Board of Appeals (LUBA) or other court invalidates Columbia County's land use approval for NEXT's proposed rail yard. The draft permit correctly*

states that local land use approval for NEXT's proposal, and an accompanying land use compatibility statement (LUCS), were granted by Columbia County. However, Columbia Riverkeeper, 1000 Friends of Oregon, and others are currently appealing that land use approval (and the LUCS it supports) before LUBA. If that appeal is successful, NEXT will no longer have the local land use approval that DEQ has acknowledged is required for an air permit. DEQ should make any final permit expressly conditional on the resolution of the dispute over Columbia County's land use approval for NEXT's proposed rail yard.

- b. *NEXT wants a 400-car capable rail yard for the plant. The Oregon Department of Land Conservation and Development, Oregon's lead land use agency, rebuked NEXT's approach to building the rail yard.*

DEQ response: OAR 340-018-0050(2)(a)(G) states: "If a local government land use compatibility determination or underlying land use decision is appealed subsequent to the Department's receipt of the LUCS, the Department shall continue to process the action unless ordered otherwise by LUBA or a court of law stays or invalidates a local action." DEQ will continue to process the permit application because the land use compatibility statement is still valid. However, NEXT must be aware that they must proceed with construction at their own risk, knowing that if the land use compatibility statement is revoked, DEQ will proceed to revoke or suspend the permit under OAR 340-018-0050(2)(a)(H).

2.0 EMISSION CALCULATIONS

2.1. DEQ received numerous comments regarding the use of Confidential Business Information in the emission calculation methodology. The following are provided as examples, but are not an exhaustive list of such comments:

- a. *I was completely shocked and appalled to read the term "CBI". How can DEQ even know that a permit is being violated if critical data is classified as confidential?*
- b. *How does a company get to claim that it's (sic) waste is confidential business information when it drifts onto my property? No. This is unacceptable behavior in 2022.*
- c. *Do you think that, we, the breathers of those emissions, have a right to know what they are?*
- d. *NEXT and DEQ's attempt to hide information about flare stack startup and shutdown emissions is illegal and undermines the public's ability to understand the permit's underpinning assumptions.*
- e. *Section 22 VOC According to Cleaner Air Oregon Table 3-2 and 3-12 they set a Flare stack height at between 350-418' tall. This is based upon VOC emission factors. When looking at NEXTs permit application, the "potential to emit table" under the section regarding Flare startup/ Flare Shut down instead of giving a value it says CBI. I want to know how DEQ arrived at the overall number of VOCs emitted per year if the data is not included in the permit application. Startup and shutdowns can and do cause spikes in*

VOC emissions and these can be significant depending on frequency and adding in an occasional flare incident. I think these merits further clarification.

- f. *The Emissions Inventory submitted by NEXT, and published by DEQ to support public review of the draft permit, does not provide values for the refinery's capacity to emit, or proposed limits on, flare stack emissions during startup and shutdown.*

DEQ response: Confidential business information is information that the company does not want made public and that would be exempt from disclosure under the Oregon Public Records Law, ORS 192.405 through 192.505. DEQ staff, however, do review and account for this information in their analysis. It is considered in the drafting of the permit.

NEXT Renewable Fuel's request for information to be considered confidential business information is in accordance with OAR 340-214-0130, under which material can be kept confidential if it meets the criteria to be considered a "trade secret." This makes it exempt from public disclosure if it meets the following criteria: (a) The information cannot be patented; (b) It must be known only to a limited number of individuals within a commercial concern who have made efforts to maintain the secrecy of the information; (c) It must be information that derives actual or potential economic value from not being disclosed to other persons; (d) It must give its users the chance to obtain a business advantage over competitors not having the information; and (e) It must not be emissions data.

NEXT submitted both confidential and public redacted versions of its applications, with emission calculations. DEQ staff reviewed the full set of calculations and determined that they were done appropriately. Hourly and annual emission rates for each emissions unit are included in the public versions of the air contaminant discharge permit applications.

DEQ acknowledges that the air contaminant discharge permit applications were not available on the DEQ's web page at the start of the public comment period. Upon being notified of the lack of available calculations DEQ included NEXT's air contaminant discharge permit application, with calculations, on DEQ's website.

2.2. DEQ received the following comments regarding the volatile organic compound emission calculations:

- a. *It's unclear how DEQ arrives at the 70 tons [per year of VOC emissions] calculation.*
- b. *Please require more explanation regarding volatile compounds released from waste water, waste water holding ponds, and through steam.*
- c. *Emissions from contaminated waste water, which has to be dealt by the sanitation district, must also be considered part of the project*

DEQ response: Full potential to emit calculations are included in NEXT's air quality permit application, including emissions from wastewater treatment activities at NEXT.

2.3. DEQ received the following comments regarding the volatile organic compound analysis:

- a. *However, atmospheric instrumentation, including the continuous emissions monitoring systems mentioned in the proposed permit, quantitatively detect only a subset of VOCs*

(Abeleira, 2015). Therefore, the calculated VOC reactivity underestimates the rate of total ozone production thus underestimating potential impact of VOC emissions on human health. ([1] Abeleira, Pollack, I. B., Sive, B., Zhou, Y., Fischer, E. V., & Farmer, D. K. (2017). Source characterization of volatile organic compounds in the Colorado Northern Front Range Metropolitan Area during spring and summer 2015. Journal of Geophysical Research. Atmospheres, 122(6), 3595–3613. <https://doi.org/10.1002/2016JD026227>)

- b. *The current permit only regulates a very small subset of VOCs. This list is insufficient to predict this facility's potential impact on tropospheric ozone pollution. The detection of a more complete list of VOCs would require instrumentation such as online gas chromatography systems or a Proton Transfer Reaction-Mass Spectrometry which is expensive and time intensive to use.*
- c. *Additionally, the DEQ should acknowledge that the short list of VOCs noted in the proposed draft air pollution permit does not capture the total VOC emissions from the plant. Therefore, given the proposed permit, we are unable to estimate total potential tropospheric ozone pollution and the subsequent human health and environmental impacts associated with the plant's VOC emissions.*

DEQ response: DEQ regulates volatile organic compounds (VOCs) in two ways: as precursors to ozone formation and a subset of VOCs individually under Cleaner Air Oregon for toxicity to near neighbors. As precursors to ozone, DEQ and EPA regulate them as a group. When regulating VOCs as precursors to ozone, the specific reactivity of an organic compound is taken into account when determining whether that compound is regulated as a VOC. Many compounds are not considered VOCs by DEQ and EPA because they have negligible photochemical reactivity. A list of these excluded compounds is available in OAR 340-200-0020 (191)(a).

CAO regulates a subset of VOCs for which we have toxicity information as they contribute to health risks. Our ability to include individual VOCs in risk assessment depends on whether there is available toxicity information.

The proposed permit requires NEXT to perform stack testing for VOCs from the thermal oxidizer and vapor combustion unit outlets using either EPA Method 18 or 25A. These test methods are two EPA-approved methods for measuring the concentration of VOCs in an exhaust stream.

- 2.4. Product Unloading:** The draft permit impermissibly fails to address the potential emissions from the unloading of trains at the facility. Biofuel feedstock, including rendered animal fats and other waste oils, may arrive via train and be unloaded NEXT's biorefinery. These substances may contain and emit VOCs that are released to the air during train unloading. Unfortunately, the draft permit makes no attempt to quantify or control such emissions (even though the draft permit estimates and requires control technology for similar VOC emissions from loading diesel into rail cars or trucks). This is especially glaring in a permit that includes many different types of potential feedstocks. The potential emissions from unloading activities must be included in the permit and controlled as appropriate

DEQ response: Emissions from the unloading of railcars is accounted for in the storage tank and equipment leak calculations. Storage tank emissions are the sum of working and breathing losses. Working losses relate to the emissions that occur during the loading and unloading process. The railcar tanks do not result in any additional emissions because the tanks are unloaded under neutral to negative (i.e., vacuum) pressure. If there is no positive pressure in the railcar tank, it will not emit outward vapors.

2.5. DEQ received the following comments regarding emissions from startup and shutdown:

- a. *The compliance monitoring formulas at Section 6.3 and the emission factors at Section 15.0 do not appear to account for higher-intensity VOC emissions that are likely to occur during startup and shutdown of the various VOC-emitting processes at the refinery (other than the flare). Therefore, the draft permit lacks information necessary to quantify these likely emissions, establish limits for startup and shutdown events, or anticipate the frequency and impact of these events. The draft permit's requirement that NEXT report the total hours of operation of each of these processes suggests that DEQ anticipates them intermittently starting up and shutting down rather than operating continuously. Especially during the first few years of refinery operation, it would be reasonable to expect frequent process interruptions as issues arise and are addressed.*
- b. *NEXT's refinery is reasonably likely to emit over 100 tons per year (TPY) of carbon monoxide (CO). While the draft permit purports to limit NEXT's CO emissions to 99 TPY, the compliance monitoring formulas at Section 6.3 and the emission factors at Section 15.0 do not appear to account for higher-intensity CO emissions that are likely to occur during startup and shutdown of the various CO-emitting processes at the refinery. Indeed, the draft permit's requirement that NEXT report the total hours of operation of each of these processes suggests that DEQ does not anticipate them to operate continuously and (especially during the first few years of refinery operation) it would be reasonable to expect frequent process interruptions as issues arise and are addressed. Even a minor increase in facility CO emissions above the permit limit resulting from startup and shutdown emissions would push NEXT over the major source threshold.*
- c. *While the draft permit at least acknowledges that VOC emissions from the flare would be more intense during startup and shutdown events, the draft permit does not explain [the following]. These numbers, and the assumptions behind them, are critical to determining NEXT's actual potential to emit and necessary pollution control requirements.*
 - i. how many startups/shutdowns are likely to occur each year;
 - ii. how long (hours) each startup and shutdown event would likely last;
 - iii. what number of startups/shutdowns DEQ used to calculate NEXT's potential emissions in the draft permit; or
 - iv. why DEQ's assumptions about the undisclosed number of startups/shutdowns are reasonable.

DEQ response: Detailed emission calculations for startup and shutdown events are included in NEXT's air contaminant discharge permit application. NEXT accounted for six hours of startup and six hours of shutdown emissions when determining the potential to emit from the flare. These calculations account for all ecofining vapors being routed to the flare. Emissions of carbon

monoxide and nitrogen oxides from the external combustion units (boilers, hydrogen plant, jet fractionator, and ecofining units) during startup and shutdown will be higher because the selective catalytic reduction and oxidative catalyst can't be utilized until the controls are at the appropriate design operating temperature. During these times NEXT will calculate nitrogen oxides actual emissions using continuous emission monitoring systems for the boilers, jet fractionator, and hydrogen plant. For the other external combustion units, NEXT will monitor and record the hourly fuel flowrates and total number of hours for startup and shutdown for each external combustion unit and use a nitrogen oxides emission factor of 100 lb/MMBtu from AP-42, Chapter 1.4, "Natural Gas Combustion." For carbon monoxide, NEXT will monitor and record the hourly fuel flowrates and total number of hours for startup and shutdown for each external combustion unit and use a carbon monoxide emission factor of 84 lb/MMBtu from AP-42 Chapter 1.4, "Natural Gas Combustion." DEQ included these additional requirements for carbon monoxide and nitrogen oxides emissions during startup and shutdown into the proposed air contaminant discharge permit.

NEXT must comply with the applicable plant site emission limits at all times. All emissions, including those during startup and shutdown must be accounted for when demonstrating compliance with a plant site emission limit. Exceedance of a plant site emission limit is a violation subject to DEQ enforcement.

2.6. DEQ received the following comments claiming the project would result in significant hazardous air pollutant emissions:

- a. *The draft [ACDP] shows the project will emit significant hazardous air pollution, particulate matter and smog forming volatile organic compounds.*
- b. *If my community must reckon with the possibility of being met with an enormous 350 - 418 foot tall flare stack every time they open their front door, they deserve to know how much extra hazardous pollution they would be breathing from it. Especially since these additional emissions warrant evaluation as a major emitter.*

DEQ response: Detailed hazardous air pollutant emission calculations are included in NEXT's air contaminant discharge permit application and Cleaner Air Oregon emissions inventory. As stated in Section 25 of the review report, "This source is not a major source of hazardous air pollutants. The potential to emit for hazardous air pollutants is 0.40 tons/yr with the largest single hazardous air pollutant emitted being Ethylbenzene with a potential to emit of 0.089 tons/yr." In addition, NEXT has satisfied strict Cleaner Air Oregon permitting requirements for new facilities, demonstrating that its toxic air contaminant emissions will not create unacceptable risk in the area where it will operate (see the response to comment category 4.0 for more detail).

3.0 COMMENTS REGARDING PERMITTING APPLICABILITY

3.1. DEQ received the following comments claiming NEXT should be classified as a Title V facility:

- a. *This project needs to be evaluated under Title V of the Clean Air Act if is not monitored.*
- b. *A Title V application should be required because the stated levels for multiple emissions are too close to limits which would require a Title V Permit.*
- c. *This project should be evaluated as a major source of emissions under the Title V of the Clean Air Act. The draft statement read: a major source is a facility that has the potential to emit 100/tons a year or more of any criteria pollutant.*
- d. *Short of rejecting the permit, DEQ should withdraw the proposed draft air permit for NEXT and provide additional information that demonstrates why the project will be a minor source of emissions when the potential clearly exists for the NEXT refinery to be a major source of air pollution*
- e. *This proposed permit allows the NEXT Renewables plant to emit levels of volatile organic compounds (VOCs) that approach the 100 ton/year limit, which would categorize this plant as a major source of emissions under Title V of the Clean Air Act.*
- f. *Taken together, these errors may mean that NEXT is illegally categorized as a synthetic minor source in the draft permit*
- g. *What is your margin of error for evaluating pollution given NEXT's proposal is a hair's width away from the Title V evaluation*

DEQ response: Detailed emission calculations, demonstrating that the potential to emit for all criteria pollutants are below 100 tons per year, are included in NEXT's air contaminant discharge permit application. As indicated by a commenter, the carbon monoxide plant site emission limit is set at 99 tons per year, just below the Title V threshold of 100 tons per year. The potential to emit for carbon monoxide is 61 tons per year but the plant site emission limit is set at the Generic plant site emission limit of 99 tons per year as specified in OAR 340-222-0040(1).

The proposed permit limits criteria pollutant emissions below the major source threshold of 100 tons per year. If DEQ discovers that potential and/or actual emissions exceed 100 tons per year NEXT would be in violation of the proposed permit, would need to be evaluated under Major New Source Review, and would be required to submit a Title V application within 12 months of becoming subject to Title V.

- 3.2. DEQ received numerous comments regarding the applicability of Secondary Emissions from trains, automobiles, and marine vessels. The following are provided as examples, but are not an exhaustive list of such comments:
 - a. *Emissions from rail yard operations necessary to the project are an integral part of the project and must be considered as part of the total emissions of the project.*
 - b. *DEQ arrived at 70 tons of VOCs in the permit as proposed. What is conspicuously absent from the data is the rail/truck and marine contributions. Just daily traffic in and out of the facility by full time employees will be approximately an additional 250-300 cars and trucks. This does not factor in a 400-car rail spur, who knows how many Semi-trucks hauling diesel from the facility and the major increase in ship traffic. The ships that travail the Columbia River are a constant source of emissions. I want to know why none*

of this vital and necessary component to NEXTs operation was not factored into the 70 Tons of VOCs in the DEQ permit?

- c. *In recent years the NEXT refinery changed their messaging about their use of long trains to bring in their ingredients for production - one that would require many more trains. Increased rail traffic would have a big impact on local towns.*
- d. *With the altering plans by NEXT to include more rail traffic than originally proposed, NEXT are admitting to at least 4 loaded and 4 unloaded trains per week, up to 100 cars in length which will carry feedstock and supplies through Columbia County and segments of Multnomah County. The potential for gridlock at the train crossings throughout the communities will be enormous. NEXT, at full capacity will produce 2.1 million gallons of fuel per day equals approximately 70 cars per day. The draft has failed to include the increased use of trains being powered by diesel locomotives, adding particulate matter into the atmosphere.*
- e. *I was unable to find an adequate assessment of the additional VOC data from supporting infrastructure like rail emissions, vehicle emissions and any associated pipelines. This facility will not exist in a bubble so what kind of impact will it have on the region as a whole?*
- f. *[NEXT is] not going to be able to do that for every vehicle and transportation method that this plant will be responsible for causing. It may not be creating that pollution, but it is causing it. Without the plant that wouldn't be happening and it must be considered, and it will be considered.*

DEQ Response: Although there are some Clean Air Act requirements related to emissions from the transportation sector, including in some instances, from trains. In general, DEQ does not have authority to regulate trains or railroad activities. Trains are regulated by the United States Department of Transportation Federal Railroad Administration and the Oregon Department of Transportation Rail Safety Division.

DEQ's permitting action and authority is confined to the equipment and activities of the NEXT stationary source that emits air contaminants. The proposed permit for the NEXT facility is an air contaminant discharge permit; its content is specific to the regulatory requirements of DEQ's stationary source air quality program. DEQ's authority in this permitting action is defined within the Oregon Administrative Rules. DEQ reviewed the NEXT facility's operations and design in a manner consistent with this defined regulatory authority. Our review did not find the facility's current or proposed operation to present an imminent danger to human health or the environment.

DEQ's Air Quality Program issues permits for stationary sources of air contaminant emissions. Trains and marine vessels are mobile sources. Emissions from trains and marine vessels that come to or from the proposed NEXT facility are defined in rule as "secondary emissions" [OAR 340-200-0020 (138)]. Secondary emissions are not taken into consideration when assessing a facility's "potential to emit" [OAR 340-200-0020 (124)(c)] and are only considered as part of overall emissions for sources subject to the Major New Source review provisions of OAR Chapter 340, Division 224. As stated in the review report, the proposed facility is not subject to the Major New Source Review provisions "because it is located in an area that is in attainment with all National ambient air quality standards and the requested plant site emission limits are less than the Federal Major Source threshold of 100 tons per year." DEQ has written the

proposed NEXT permit in accordance with the requirements of DEQ rules. As stated above, consistent with Oregon statutes and rules, DEQ does not withhold issuance of an air quality permit unless it is apparent that the proposed facility, as built, will fail to comply with air quality regulatory requirements to which it is subject.

For this action, DEQ is charged with writing an air contaminant discharge permit that includes all applicable requirements associated with the proposed facility. Permit requirements must have basis in rule; and DEQ cannot impose more or less stringent requirements on a facility without this regulatory basis. During preparation of the proposed permit for NEXT, DEQ examined the emission rates of regulated pollutants including hazardous air pollutants. The review report for the proposed permit outlines the emission units, processes and control devices that fall within DEQ's air quality authority and that were included in our review. The report identifies the maximum emissions allowed by the permit, which are established as plant site emissions limits, and the maximum actual emissions expected for the proposed facility. DEQ estimated the facility's maximum actual emissions based on its physical design. The maximum expected emissions did not exceed the allowable plant site emission limits, determined pursuant to DEQ rules, and were therefore approvable.

No applicable requirements associated with the Air Quality program pertain to the commenters' points of concern. The comments raise points and concerns outside of DEQ's authority and so, DEQ cannot act to deny or modify the proposed permit as requested.

3.3. DEQ received the following comments regarding the marine loadout activities that would occur at a separate source:

- a. *The draft fails to include emissions from the marine loading and unloading dock. Yes, Global Partners will also share the dock but what structure do you have in place that will identify the emissions from Global Partners, as well as NEXT? The greenhouse gas emissions from both entities must be recorded with exact data on the total emissions*
- b. *Before issuing a revised draft permit that estimates and controls air emissions from marine vessel loading and unloading to serve NEXT's refinery, DEQ should answer the following questions:*
 - i. *Would the third party dock operator be a subsidiary or a special purpose vehicle of NEXT Renewable Fuels Oregon, LLC?*
 - ii. *Would the dock operator be adequately capitalized and insured to address any health or environmental problems it could cause?*
 - iii. *Would the dock operator have an established track record and the ability to respond to potential spills or emergencies?*
 - iv. *Based on NEXT's predicted product output and proposed control technologies (if any), how many tons per year of VOCs and HAPs would be emitted during vessel loading and unloading?*
 - v. *If the Columbia Pacific Biorefinery/Global Partners LLC (Global) would be the "third party" loading NEXT's product onto vessels, does Global's existing air permit allow this source of VOC emissions? If so, would the VOC emissions from loading NEXT's product onto vessels cause Global to exceed the limits in its current air permit?*

- c. *The proposal states that the product would be shipped at a different facility. Emissions from the shipping of the product are integral to the project, would not occur without the project, are significant and should be analyzed as part of the project regardless of where shipping occurs*
- d. *How will the DEQ monitor marine loading and unloading (2 processes that may run at full capacity) emissions that are created may exceed pollution limits?*

DEQ response: As specified in NEXT’s air contaminant discharge permit application, “Product will be transferred via pipeline from the site to a third-party terminaling provider with existing infrastructure at the dock. The logistics provider will take control of the product at the pipeline confluence for loading of ships and barges at the existing dock.” At the time of permit issuance, the marine loading equipment at Port Westward is operated by Cascade Kelly Holdings, LLC (dba Columbia Pacific Bio-Refinery, or CPBR) and emissions are accounted for under its air contaminant discharge permits (05-0006-ST-01 and 05-0023-ST-01). Emissions from marine loadout of renewable diesel received from NEXT would be accounted for under CPBR’s transloading air quality permit (05-0023-ST-01) which currently allows for receipt and marine loading of renewable diesel. All sources with an air contaminant discharge permit must comply with their plant site emission limits at all times.

3.4. DEQ received the following comments regarding the State New Source Review Ozone Precursor Distance analysis:

- a. *22.c [of the Review Report] - The permittee was required to perform an Ozone Precursor Distance Calculation and they determined the distance to be 52.1 km. which is just under 8 km. from Portland Vancouver Maintenance Area. I find this very suspicious and would like to verify they took into consideration the prevailing winds. Someone more qualified than I should verify this was done properly and if not DEQ should at least release the report to the public for closer scrutiny. It is because, in part, of this Ozone Precursor Distance Calculation that emission offsets are not required.*
- b. *NEXT may emit over 80 TPY of VOCs, which would require NEXT to obtain emissions offsets and demonstrate a net air quality benefit in the Portland-Vancouver Interstate Air Quality Maintenance Area (Portland AQMA). As explained on page 14 of NEXT’s December 22, 2020, Air Permit Application, OAR 340-224-0520(1) requires VOC offsets for sources with an “ozone impact distance” that would overlap the Portland AQMA. According to the formula set forth in the OAR 340-224-0520(2)(a)(B), NEXT’s ozone impact distance will overlap the Portland AQMA if NEXT’s VOC emissions exceed 80 TPY, requiring NEXT to obtain offsets pursuant to OAR 340-224-0520(3) and (4). As explained below, the basis for the 70 TPY limit in the draft permit likely underestimates or ignores significant amounts of VOC emissions, and DEQ should re-evaluate NEXT’s need to obtain offsets after re-examining the likely VOC emission levels.*

DEQ response: As described in the review report, the facility’s proximity to the Portland-Vancouver maintenance area made it subject to the provisions of OAR 340-224-0520. As required by those rules, NEXT’s permit application included an Ozone Precursor Distance evaluation based on the facility’s requested volatile organic compounds emissions rate and its distance from the Portland – Vancouver Ozone Maintenance Area. Volatile organic compound emissions are a precursor of ozone. The Ozone Precursor Distance evaluation determines if a

subject facility must obtain emission offsets for its ozone precursors to prevent it from having an associated impact on the Maintenance Area. The NEXT facility is approximately 60 km (37.3 miles) from the boundary of the Portland – Vancouver Ozone Maintenance Area. With a volatile organic compound plant site emissions limit of 70 tons per year the ozone impact distance, calculated using the equation in OAR 340-224-0520 (2)(a)(B), is $(70/40) \times 30 = 52.5$ km. DEQ reviewed NEXT's evaluation and concluded it sufficiently demonstrated the facility to be located outside the Ozone Precursor Distance, so emission offsets were not required. No revision of the permit application or proposed permit is necessary.

- 3.5.** State New Source Review – Air Quality Analyses: The [2017 EPA-approved Oregon State Implementation Plan] states that if the [plant site emission limit] is greater than the [significant emissions rate], “an air quality analysis is required to evaluate whether ambient air quality standards and increments are protected.” Id. Further, the SIP states that “the air quality analysis results may require the source to reduce the airshed impact and/or comply with a tighter emission limit. Id. No where in the PSEL subsections of the Next Renewable permit is there an air quality analysis. However, the PSEL is greater than the SER for many pollutants including PM, PM₁₀, PM_{2.5}, VOCs and GHGs. Neighbors for Clean Air requests that DEQ performs the required air quality analysis.

DEQ response: NEXT performed air quality analyses for particulate matter that is less than or equal to 10 microns in size (or PM₁₀), particulate matter that is less than or equal to 2.5 microns in size (or PM_{2.5}), and nitrogen dioxide. DEQ's review of the air quality analysis, the January 19, 2022 modeling report, stated that the air quality analysis of the proposed NEXT Renewable energy facility at Port Westward, Clatskanie, Columbia County, using the emission rates, stack parameters, and unit locations provided in the analysis and as described above, shows that impacts from NEXT were below the Class II significant impact levels. If impacts are below the significant impact levels then the facility is not anticipated to cause or contribute to an exceedance of the national air quality standards (further discussion of significant impact levels is included in the response to comment category 5.2). The air quality analysis as submitted, demonstrates that the facility will not have adverse impacts from the Criteria Pollutants. The analysis was reviewed and approved by DEQ modeling staff and deemed to meet all requirements. An air quality analysis was not done for greenhouse gases because they are excluded from State New Source Review, under OAR 340-224-0010(2)(c). Air quality analyses for particulate matter (greater than 10 microns in size) and volatile organic compounds are not required because these pollutants do not have a national ambient air quality standard. The review report describes these analyses in Section 17 through 23 and includes references to the modeling report in Sections 21 and 23.

- 3.6.** DEQ received the following comments regarding the applicability of federal rules:
- a. *The draft permit improperly allows NEXT to avoid the Clean Air Act's pollution control requirements for refineries, as well as those for the synthetic organic chemical manufacturers. The draft permit allows NEXT to avoid the pollution control requirements applicable to other refineries by focusing on the definition of "petroleum" feedstock, even though much of the equipment at NEXT's refinery (e.g. hydrotreater, fractionator,*

product tanks containing diesel, diesel loadout emissions, and railyard) would be similar or identical to equipment at conventional refineries. The draft permit also allows NEXT to avoid pollution control requirements applicable to manufacturers of organic chemicals (“SOCMI” in Clean Air Act jargon) —even though NEXT is manufacturing organic chemicals, namely hydrocarbons in the diesel, naphtha, and kerosene ranges. DEQ is incorrect that NEXT must be selling a listed chemical under that chemical’s specific name to be subject to the SOCMI regulations; NEXT is subject to the SOCMI regulations because “40 CFR 60.667 lists several hydrocarbons that may be present in the renewable diesel produced at NEXT” and those chemicals are “use[d] in the production of other ... compounds,” namely NEXT’s diesel. At the very least, DEQ’s admission that 40 C.F.R. 60.667-listed hydrocarbons may be present in NEXT’s diesel means that those specific hydrocarbons are “[b]y-products, co-products, [or] intermediates” in NEXT’s diesel production process, making NEXT subject to the SOCMI rules.

- b. *Please take a close look at the sections which NEXT states are not relevant to the facility because it does not process naturally occurring fossil fuels. We all know that these rules were put in place before biodiesel was manufactured in quantities which would merit regulation and that it takes time to put new relevant rules in place. We all know that many of the same compounds of concern are present whether the compound is from a “crude oil removed from the earth” or manufactured. It is your job to consider the intent of the rules as their purpose applies to health and safety of the surrounding ecosystems even if they were written for naturally occurring rather than manufactured compounds. Do not let a technicality in the definition allow important safeguards to be ignored. Please take a look to make sure the following rules should not be applied:*
- i. 38. NEXT is not subject to 40 CFR Part 60, Subparts J or Ja, “Petroleum Refineries” ...
 - ii. 57. NEXT is not subject to 40 CFR 98, Subpart Y “Petroleum Refineries” because NEXT will produce renewable diesel, renewable jet fuel, and renewable naphtha which are not products listed in the definition of “petroleum refinery” in this subpart.

DEQ response: DEQ reevaluated NEXT’s applicability to New Source Performance Standards, which implement Clean Air Act section 111(b) and are issued for categories of sources which EPA has listed because they cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. After reviewing subparts Ja and NNN, and 40 CFR 98 Subpart Y, DEQ determined that NEXT is not subject to these rules. DEQ’s reasoning for each section is described below.

NSPS Subpart Ja “Petroleum Refinery”: While some of the equipment at NEXT is similar to equipment at a petroleum refinery, NEXT is not subject because it is not a “Petroleum Refinery” as defined by 40 CFR 60.101a. *Petroleum refinery* is defined in 40 CFR 60.101a as “any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, asphalt (bitumen) or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives. A facility that produces only oil shale or tar sands-derived crude oil for further processing at a petroleum refinery using only solvent extraction and/or distillation to recover diluent is not a petroleum refinery.” Petroleum is defined as “the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.” NEXT will not process any “crude oil removed from the earth” or “oils derived from tar sands,

shale, and coal.” The specificity of these definitions indicates that EPA did not intend for refineries processing renewable fuels to be subject to this subpart.

NSPS Subpart NNN “Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations”: The fact that a specific chemical is included in a mixture does not mean a source is subject to this subpart. As specified in the April 22, 1991, letter from John Rasnic to Deanna Lipnick (Control Number NS13), “If a mixture is produced as a “product” and contains a listed chemical which is intentionally included in the mixture for use of its chemical characteristics, the process would be subject to Subpart NNN. A mixture would not be subject if the listed chemical is included only as a contaminant, that is, the chemical is not produced for its specific chemical characteristics.”

A similar applicability determination is the April 6, 1994, letter from John Rasnic to Raymond Hilley (Control Number 9700142), which states, “The EPA considers the word “product” to also represent by-products, co-products, and intermediates. In determining whether a listed chemical is produced as a product, EPA considers either of the following downstream uses as indicative of the production of a listed chemical as a product: (1) Production for sale as that listed chemical, or (2) use in another process where that listed chemical is needed. However, if a listed chemical is only part of a mixed stream exiting a process unit and cannot be sold or used in another process as the listed chemical, then that chemical is not considered to be produced as a product.”

This determination is in line with similar renewable diesel manufacturing facilities permitted in California and Louisiana. The Martinez Renewable Fuels facility (Permit No. A0011) and Diamond Green Diesel, LLC (Permit No.: 2520-00158-V7) do not include any provisions from Subpart NNN in their respective air quality operating permits. As NEXT’s production process will be similar to these facilities, there is no reason for Subpart NNN to apply at NEXT when it does not apply to those facilities.

40 CFR 98 Subpart Y “Petroleum Refinery”: While some of the equipment at NEXT is similar to equipment at a petroleum refinery, NEXT is not subject because it is not a “Petroleum Refinery” as specified in 40 CFR 98.250(a); A petroleum refinery is any facility engaged in producing gasoline, gasoline blending stocks, naphtha, kerosene, distillate fuel oils, residual fuel oils, lubricants, or asphalt (bitumen) through distillation of petroleum or through redistillation, cracking, or reforming of unfinished petroleum derivatives, except as provided in paragraph (b) of this section. 40 CFR 98.6 defines petroleum as “oil removed from the earth and the oil derived from tar sands and shale.” NEXT will not process any “oil removed from the earth” or “oil derived from tar sands and shale.” The specificity of these definitions indicates that EPA did not intend for refineries processing renewable fuels to be subject to this subpart.

3.7. Reasonable Available Control Technology: NEXT disregards Reasonably Available Technology regulations instated in some urban areas in Oregon. Columbia County is especially important because of the sensitive ecosystems and fertile farmland in this area. Columbia County deserves the same protections. Please apply rules which are being observed in other areas of Oregon; it is wrong for rural areas to become victims just because they have not yet passed the rules.

DEQ Response: DEQ’s Reasonable Available Control Technology rules (OAR 340 Division 232) apply to volatile organic compound point sources in the Portland-Vancouver Air Quality

Maintenance Area, Medford-Ashland Air Quality Maintenance Area, and Salem-Keizer Area Transportation Study Area. NEXT will not be located any of these three areas and is therefore not subject to these requirements.

3.8. DEQ received the following comments regarding the use of Generic plant site emission limits, or PSELs:

- a. *Neighbors for Clean Air also requests that the DEQ reevaluate the generic PSEL limitations that it permitted the Next Renewable Fuel facility to make the PSEL more in line with “realistic emissions.”*
- b. *DEQ's proposed limits for perilous pollutants, such as nine tons per year of hydrogen sulfide, are too high.*
- c. *Why are your proposed pollution levels for NEXT's facility conveniently just under the levels of major emitters, especially regarding cancer-causing, smog-forming VOCs and carbon monoxide?*

DEQ Response: Per OAR 340-222-0040, Sources with capacity less than the significant emission rates will receive a generic PSEL unless they have a netting basis and request a source specific PSEL. The proposed permit includes generic PSELs for carbon monoxide, nitrogen oxides, sulfur dioxide, and hydrogen sulfide. DEQ’s current rules do not allow for sources to receive PSELs below the generic PSELs.

3.9. Plant site emission limits, or PSELs, and potential to emit, or PTE: Lastly, the permit is incorrect in asserting that the PSEL is a “federally enforceable limit on the potential to emit.” (PTE). By definition a PSEL is not the same as a PTE. PSEL’s rather are simply a numerical promise not to emit over a particular tons per year quantity of a pollutant mainly intended to ensure that a facility does not become major and thus subject to PSD. Neighbors for Clean Air requests that the DEQ revise the PTE section of the permit in order to more accurately describe the nature of the PSEL program in order to provide the public notice about the leeway that the PSEL gives to emitting facilities for their allowable pollution limits.

DEQ Response: As stated in OAR 340-222-0035(4), “Annual PSELs apply on a rolling 12 consecutive month basis and limit the source’s potential to emit.” To be federally enforceable, a limit on potential to emit must be subject to a public comment period, be established with an appropriate averaging time, and include appropriate monitoring, recordkeeping and reporting requirements. The plant site emission limits in the proposed permit meet all of these listed requirements. The commenter is correct that “potential to emit” and “plant site emission limit” do not share the same definition. Aside from establishing emission limits to avoid otherwise applicable requirements (e.g., reasonable available control technology, hazardous air pollutant major source thresholds), DEQ’s minor source permitting program utilizes the generic plant site emission limits as the lowest levels for source-wide emission limits.

3.10. DEQ received the following comments regarding the use of natural gas at NEXT:

- a. *When the facility's different gas-burning equipment's hourly use of fracked gas is added up, it appears the refinery would use over 26 million cubic feet of gas per day! How much of this staggering amount of gas will be fracked and how will DEQ hold NEXT accountable for limiting polluting methane leaks and emissions?*
- b. *The DEQ should provide a clear description of the gas use.*
- c. *DEQ should, but has not yet provided a description of this facility's overall fracked gas use. It appears that the facility could use over 26 million cubic feet of gas per day.*

DEQ Response: DEQ's stationary source permitting program regulates emissions from the combustion of natural gas at the facility. Production and transport of natural gas is outside the scope of this permitting action. Specific capacities for all combustion units at NEXT are included in Condition 1.0 of the proposed permit, Section 8 of the review report, and in the air contaminant discharge permit application.

- 3.11. Number of Process Lines:** DEQ's proposed approval of only three process lines—as opposed to the four process lines requested in NEXT's application—strongly suggests that NEXT's emissions (as currently calculated) are approaching a permitting threshold.

DEQ Response: NEXT provided DEQ with updated air contaminant discharge permit applications on June 24, 2021, (revision 1) and September 17, 2021, (revision 2). Revision 1 included a reduction in the number of ecofining trains from four trains to three trains because the proposed production goal could be met with three ecofining unit trains.

- 3.12. Jet Fuel and Naphtha Loadout:** **Section 8.0** I want to know how the NEXT proposes to loadout the Jet Fuel and Naphtha it will be producing at the Port Westward facility? This was not addressed in the proposed permit

DEQ Response: As specified in Section 13.b. of the review report, "The second special condition requires that NEXT loadout only renewable diesel from the truck and rail loadout. NEXT must transfer out all other products via pipeline." This pipeline will transfer the products to a separate facility which will handle all marine loading.

- 3.13. DEQ received the following comments regarding items outside the scope of Air Quality Stationary Source Permitting:**

- a. *Source of [feedstock] oil is not clearly defined. The production and transportation of virgin oil necessitates significant emissions which should be considered.*
- b. *There are multiple examples of integral parts of the project which are not counted in the emission including the treatment of waste water by Beaver Drainage District and the very impactful rail yard. The impact on Columbia County is significant.*
- c. *The emissions from the work force commuting to the site must be factored into the equation of increasing greenhouse gases.*
- d. *I heard that NEXT intends to use only 10% food oils; however, I didn't see in the draft permit where that limitation was listed. There is a large body of science and news*

reporting documenting how renewable diesel (and biodiesel) have now taken over 15% of the world food oil crop causing price rises and a loss of calories to people at risk for hunger.

- e. *Our community in Clatskanie lies in a potential hazard zone of carcinogenic particulate and noxious odors when you look at the big picture. One, which includes the current plants in Wauna and Longview, and combine them with a very large fuel-processing facility, a rail terminal and marine port, which brings in additional atmospheric pollution from their diesel-burning engines. Many of these ocean-going vessels will still burn heavy bunker fuel, a viscous, carbon-intensive petroleum product that is left over from the crude oil-refining process. NEXT wants DEQ to look only at its application. The community wants you to look at the total compounded effect, which will be greatly skewed by adding another very large polluter.*
- f. *I would like to ask why the wetlands are not being considered in DEQ's look at this permit.*
- g. *the state permitting process considers each one of these aspects, whether it's not just the DEQ permitting process, whether it's water quality permits, or air quality permits, or Division of State Lands decisions, all isolated. They do not act adequately consider the cumulative impacts of a facility like this*

DEQ Response: DEQ's permitting action and authority is confined to the equipment and activities of the NEXT stationary source that emits air contaminants. The proposed permit for the NEXT facility is an air contaminant discharge permit. Its content is specific to the regulatory requirements of DEQ's stationary source air quality program. DEQ's authority in this permitting action is defined within the Oregon Administrative Rules. DEQ reviewed the NEXT facility's operations and design in a manner consistent with this defined regulatory authority. Our review did not find the facility's current or proposed operation to present an imminent danger to human health or the environment.

4.0 CLEANER AIR OREGON

- 4.1. DEQ received the numerous comments regarding health impacts from the proposed NEXT facility. The following are provided as examples, but are not an exhaustive list of such comments:
 - a. *Homes, farms, businesses, wildlife habitat, and a nearby monastery are all vulnerable to potential pollution from the NEXT refinery and rail yard, and DEQ's current approach falls far short of offering the protection that the community deserves.*
 - b. *Mostly, I am worried about the air quality in my immediate vicinity. As a resident of the area, the pollution emitted by the NEXT could impact my health. Already, when the conditions are right, I can notice when emissions from industry in the area (even as far away as Longview) are present. Having another major source of emissions in the area would only exacerbate that. I would like the DEQ to consider the health of local residents before issuing a permit that allows chemicals such as toluene, naphthalene, and hydrogen sulfide to be released into our lungs.*

- c. *It is extremely disconcerting for the public to expect DEQ relying on NEXT's own hazardous pollutant modeling to conclude that impacts from this refinery will be minimal! Do benzene, naphthalene, toluene and hydrogen sulfide sound minimally impactful? Several are known carcinogens and all are life threatening or life altering! The realities of your agencies' proposed response to the threats of these hazardous pollutants are frustratingly inadequate and proposed pollution limits are set too high to protect the public and the environment.*
- d. *Based on the proximity of NEXT's proposed refinery to homes, businesses, and a Buddhist (sic) monastery, DEQ should—at the very least—better explain how NEXT's proposal satisfies the Cleaner Air Oregon program. Cleaner Air Oregon was recently developed to regulate emissions of toxic air contaminants based on local health risks and requires facilities like NEXT to report toxic air emissions and reduce air pollution when it exceeds health risk action levels. Given these goals, we are perplexed and disappointed by DEQ's approval of a major chemical manufacturing facility essentially across the street from homes, businesses, and a monastery. For instance, the Cleaner Air Oregon analysis for NEXT's proposed refinery and rail yard "did not identify any locations considered to be 'sensitive exposure locations' (e.g., schools, daycares, or medical facilities) within approximately 1-kilometer (sic) from the proposed facility property boundary." In reality, the Great Vow Zen Buddhist monastery—where people live, work, and study year-round—is well within 1 km of the proposed rail yard, refinery complex, and 416-foot flare stack pilot light and flare emissions. Accordingly, air pollution and the visual impact of NEXT's proposal seem likely to significantly harm the Port Westward community and the monastery. Because the goal of Cleaner Air Oregon was to prevent such impacts in communities near major air polluters, DEQ should at least do a better job of explaining in plain language why NEXT's proposal will not harm the people who live and work near Port Westward*
- e. *This facility besides emitting carbon monoxide and all the usual industrial petroleum fumes (nitrogen oxide, sulfur dioxide, hydrogen cyanide, vinyl chloride, formaldehyde, toluene, methane, benzene, chlorine...), this facility will be burning hazardous toxic chemicals (cobalt oxide, molybdenum oxide, alumina, nickel monoxide, hydrochloric acid, methanol...).*
- f. *Results of testing and surveys by the Health and Human Services, the CDC, the EPA, state that at the top of their list of triggers for asthma attacks is combustion byproducts, TAC as you called them. I would like you to be aware that every single day in America, 30,000 people have an asthma attack, 40,000 people miss school or work, 5,000 people visit the emergency room, 1000 people are admitted to the hospital and 11 people die every single day because of asthma. I do not wish to end up as one of those statistics.*

DEQ response: DEQ's Cleaner Air Oregon program requires new industrial facilities to perform a risk assessment in order to determine the potential health impacts from emissions of over 630 toxic air contaminants from their proposed operations and activities. Unless a proposed new facility can meet DEQ standards to protect human health and the environment, DEQ will not issue a permit.

NEXT analyzed all operations and activities at their proposed facility with the potential to emit toxic air contaminants - these activities are referred to as toxics emissions units in the Cleaner Air Oregon program- and worked with DEQ to develop an emissions inventory in order to assess

risk from these toxic emissions units. In determining their potential emissions, NEXT assumed their facility would operate at capacity, meaning the facility was assumed to be operating for 24 hours a day, 7 days a week, 365 days a year. Further, to ensure worst-case operating scenarios were captured for all activities and operations, NEXT also accounted for startup and shutdown operations – for example, flare emissions. NEXT’s proposed facility includes several pollution control devices that significantly reduce toxic air contaminant emissions. DEQ went through multiple rounds of review with NEXT to ensure that the inventory provided the most representative and accurate emissions information available.

NEXT also submitted a modeling protocol describing how an air dispersion model was used to translate toxic air contaminant emissions from all toxic emissions units on site into levels of pollutants in the air that people living or working nearby would potentially breathe. DEQ reviewed and verified input parameters like stack heights, exhaust temperatures, and facility layout prior to approving the protocol. DEQ scrutinized the modeling input and output files to ensure the model was run correctly, and agreed with the results.

DEQ assessed both cancer and noncancer risk from NEXT’s proposed operations, with noncancer risk including short-term (24-hour) and long-term (annual) risk. Risk was assessed on the potential exposure of residents, workers, and children in a large area surrounding the proposed facility, including in the vicinity of the Great Vow Zen monastery.

This assessment evaluated the combined risk from all toxic air contaminants emitted from this facility for which we have toxicity information. In other words, the assessment evaluated health risk from the overall mixture of toxic air contaminant emissions unique to NEXT’s operations. The health risk-based concentrations that emissions are evaluated against in the assessment are designed to be protective of the health of the most vulnerable members of our communities, including children, the elderly, and people with pre-existing disease or genetic susceptibilities to air pollution.

The assessment also took into account risk based on multiple routes of exposure for those contaminants that may persist in the environment and settle on the ground.

The risk assessment demonstrated that risk from this facility will be very low, and this is in part due to the combination of substantial pollution control technologies and tall flare stack that helps to emit toxic air contaminants as far away as possible from where people breathe.

NEXT’s risk assessment demonstrates that risk is below the threshold for which any **additional** permit conditions are required under the Cleaner Air Oregon program to mitigate potential risk from toxic air contaminant emissions. Risk, including cancer and noncancer chronic and acute, or short-term risk, to residents, children, and workers nearby the facility are all below the Source Permit Level, which is established in rule and is considered protective of health.

4.2. DEQ received the following comments regarding the impacts to flora and fauna:

- a. *Cleaner Air Oregon discussed risk assessment to health, but admitted that this risk applies to humans only. As a member of Audubon Society and an avid birder, I am concerned about the risks to the health of birds, wildlife, fish, and the habitat where particulates can circulate in the air and settle on the soil.*

- b. *I want to know why the Cleaner Air Oregon is a health basis risk assessment to ensure protection of public health, but it doesn't assess that bio accumulation in surrounding wildlife and livestock that enter our food system.*
- c. *It would seem a department funded by the people's dollar would have the highest standards designed for protecting the very people that fund its operation. Call it clean air Oregon. I would argue, however, your standards are severely lacking and obviously far more supportive of industrial development and promoting the diminishing of the real impacts to human health and our environment.*
- d. *But the certain air pollution maybe even more worrisome to our feathered friends, the Eagles and the Osprey, because these birds don't only obtain expelled gases and VOCs through breathing, they spend most of their time right there, literally living in the air amongst the trees and the water at Crims Island and along the banks of the Columbia River. Air pollution affects the water quality, the fish, the plants and trees, all of which service sources of food, shelter and breeding for these birds. Food stress affects the reproduction in Eagles and can mean not enough sources of food. But in this case, it means natural food sources that have also been affected by the same contaminants in their food and water sources. In the Quincy Mayger area, that means any number of fish species, as well as small mammals.*
- e. *What if contaminants accumulate as they move through the food chain and ultimately affect the larger wildlife? How much contamination will Eagles, Osprey, and even the protected white teal deer ingest by contamination that remains on the plants and trees?*
- f. *I ask you, you who have chosen to be the protectors of our environment, have you taken into consideration that this proposed plant and its rail yard may damage or even eventually destroy the flora and fauna in the immediate and surrounding areas or that these wild creatures will even remain in the area with such a huge monstrosity being built where they live?*

DEQ response: DEQ considers risk from toxic air contaminant emissions, including risk posed by compounds that are persistent, bioaccumulative, and toxic (i.e., compounds that break down slowly in the environment, can accumulate in humans and other species and can harm health). When these types of contaminants are emitted, it is important to consider exposure pathways other than inhalation from air, as is outlined in DEQ's [Recommended Procedures for Toxic Air Contaminant Health Risk Assessments](#). For these types of emissions, DEQ considered multi-pathway effects on residents in developing risk-based concentrations which are the regulatory target values used for all Cleaner Air Oregon risk assessments. DEQ considered inhalation of contaminants in air, deposition of airborne contaminants to backyard soil, contact with soil by incidental ingestion and dermal exposure, uptake into garden vegetables and ingestion of vegetables, and bioaccumulation into women and infant ingestion of breastmilk.

DEQ understands the community concerns about risk posed to birds, wildlife, fish and habitat. DEQ's Cleaner Air Oregon program rules were specifically developed to focus solely on human health risk - that is, wildlife and habitat risk are not considered under Cleaner Air Oregon rules. However, stormwater and wastewater discharge quality are considered by DEQ's Water Quality Program.

4.3. DEQ received the following comments questioning why a Cleaner Air Oregon analysis was required:

- a. *Did DEQ review the toxic air emissions from NEXT's proposed facility? If so, why does it not have a Cleaner Air Oregon permit?*
- b. *I understand toxic emissions from the NEXT facility will be so low that they don't need a Cleaner Air Oregon permit. If that's the case what right does DEQ have to include terms in the permit related to Cleaner Air Oregon? It seems DEQ is acting beyond its authority.*

DEQ response: DEQ performed extensive review of toxic air contaminant emissions from the proposed NEXT facility. NEXT completed a risk assessment to evaluate health impacts from their proposed facility, which DEQ reviewed and approved. The results of that risk assessment demonstrated that risk from this facility's air emissions is low, and there are no additional permit requirements needed to mitigate health risk from this facility. Permit conditions in the proposed permit ensure that emissions remain below the Source Permit Risk Action Level. The proposed permit includes specific operating conditions under which the facility's pollution control devices must operate to function properly. DEQ is acting within its authority to include general reporting and recordkeeping requirements in the facility's permit. Cleaner Air Oregon reporting requirements are outlined in OAR 340-245-0100(7) and OAR 340-245-0100(8), some of which apply to all sources that complete a risk assessment regardless of risk assessment outcome.

4.4. Cleaner Air Oregon Permit Requirements: Whose specific science are you referring to in classifying this facility as a de minimis source of hazardous pollution and therefore not requiring cancer and non-cancer risk limits in their permit?

DEQ response: This facility sufficiently demonstrated that its cancer and noncancer risk is below the source permit limits established in rule, which means the facility is not required to have any **additional** permit conditions to mitigate risk. The facility will install comprehensive pollution controls to reduce emissions and, as a result, shows de minimis health risk. There are several conditions in the permit, including operating requirements and testing requirements, to verify that control systems are operating as designed. DEQ relies on the science and research of several agencies including, but not limited to the United States Environmental Protection Agency, Agency for Toxic Substances and Disease Registry, and California Environmental Protection Agency. These agencies regularly carry out comprehensive literature reviews of the most recent toxicological studies on chemicals and develop health protective toxicity reference values. In many cases, DEQ increases the health protectiveness of these toxicity reference values by incorporating potential for bioaccumulation or settling or persistence on the ground after emissions migrate from air to other environmental medias (e.g., soil and garden vegetables). The adjustment factors DEQ uses come from California Environmental Protection Agency. These adjustments result in the risk-based concentrations that Cleaner Air Oregon requires facilities to use in their risk assessments.

The toxicity reference values and risk-based concentrations are designed to be protective of the most vulnerable members of our communities, including infants and children,

pregnant women, the elderly, people with pre-existing disease, and people with genetic susceptibilities to air pollutants.

5.0 DISPERSION MODELING & STACK PARAMETERS

5.1. DEQ received the following comments regarding the validity of the dispersion modeling analysis:

- a. *The DEQ relies on NEXT's own modeling (which may not be accurate). A (sic)*
- b. *DEQ relies on NEXT's own modeling and in their conclusions, the impacts would be minimal.*

DEQ Response: All sources that trigger a modeling air quality analysis submit a modeling protocol and modeling report to DEQ. DEQ reviews the protocol to ensure that the appropriate stack parameters, such as stack heights and exhaust temperatures, emissions, and layout are used. Once submitted, DEQ scrutinizes the input and output files from modeling to ensure that the model was run correctly, and determine whether we agree with the results. Permit conditions are then drafted to ensure the facility operates in a manner consistent with what was modeled. The recommended procedures for air quality modeling is available here:

<https://www.oregon.gov/deq/daq/cao/Documents/CAORP-AirQualityModeling.pdf>

5.2. Health Impacts: the proposed facility, and its associated rail/truck/marine transport links, would have adverse impacts on local air quality, and this air shed is already vulnerable because of other facilities in the region, forest fires, air inversions, and other local events;

DEQ Response: For Cleaner Air Oregon, the modeling determines the increased risk of health impacts from the proposed facility to the nearby community. The risk is determined based on the type of activity in each location. For instance, people living nearby would be exposed for longer periods of time than if people visited a park nearby for a few hours. For criteria pollutants, there are two stages to a modeling analysis. In the first stage, impacts from the facility are compared to a significant impact level. These significant impact levels are set at a fraction of the national ambient air quality standard. If all areas outside of the fence line are below the significant impact level, then the facility is not anticipated to cause or contribute to an exceedance of the national air quality standards. If any locations are above the significant impact levels, then a full cumulative analysis is required that would include contributions from nearby sources and including background values. In the case of NEXT, all pollutants were below significant impact levels, meaning that emissions from criteria pollutants were not expected to cause or contribute to a national air quality standards exceedance.

5.3. DEQ received the following comments regarding inputs to the dispersion modeling analysis:

- a. *What actual testing and daily wind flow patterns does DEQ use to determine “fallout” area of the currently existing industries sited nearby-pulp and paper mills, particleboard, sheetrock dusts, various particulates, and toxic fumes at Wauna, Oregon; Longview-Kelso, Washington?*
- b. *Do you have current wind flow charts for the Port Westward location and existing industries to show “fallout” area or where particulates “precipitate” into surrounding waterways and onto beach sediments and properties nearby?*

DEQ Response: The meteorology data incorporated into dispersion modeling is used to understand where and how emissions from the facility move in the nearby community. The best available data is considered ‘onsite’ data that is captured at the facility itself. Onsite data can most accurately capture local wind flow patterns. Without this data, the next best available data is typically airport weather observations, if it is deemed representative of the local terrain features of the site. The final option is modeled meteorology data that is computer generated in grid cells.

In the case of NEXT, onsite meteorology data was available from 1993 to 1994. More recent airport data, from Longview, Washington, was deemed unrepresentative of the local terrain due to the influence of the Columbia River and nearby mountains. The modeled meteorology data was also evaluated, but the location of closest available modeled meteorology grid cell was also deemed unrepresentative due to the complex terrain near the site. The older onsite data was determined to be the best option to capture the unique wind flow along that part of the Columbia River. While meteorology data does change over time, the prominent wind direction, especially if influenced by local terrain features, does not. It is the wind patterns that will determine where higher concentrations of pollution will be, both in the air and on the ground. In general, deposition follows a similar pattern to air concentrations, with the highest deposition areas being the same as the high concentration area. The onsite met data for NEXT indicates that the highest concentrations will be on the east, west, and south sides of the facility. The highest deposition is expected to be the same areas.

- 5.4. Interstate Regulation:** Do Oregon and Washington coordinate with each other on air quality assessments for the Columbia River airshed? If not, why? The Columbia River is Federal.

DEQ response: DEQ modeling included exposure locations in Washington state. DEQ evaluates the impacts, and if there is a concern, would notify the state of Washington. In this case, concentrations were below significant impact levels for criteria pollutants at all locations outside the facility’s fenceline, including in Washington state. All locations in Washington were below source permit levels under the Cleaner Air Oregon program.

- 5.5. DEQ received the following comments regarding the accuracy of computer models:**

- a. *State and Federal agencies’ dependence upon 30-40 years of COMPUTER MODELING ie. virtual reality or “guess-timates” has not protected humans nor our environment. We have a shorter life span with increases in lung diseases: asthma, reactive airway disease (RAD), cancers, etc.*

- b. *It kind of sounds like on all these virtual proposals and everything is modeled, computer modeled, you don't have any facts from any existing plants anywhere in the world. First of all, this is all virtual.*

DEQ response: While modeling is not perfect, it tends to overpredict rather than underpredict concentrations of air pollution near an industrial site. Modeling can identify areas where pollution may be a concern all around the facility, while monitoring is limited to the exact location the monitor is placed.

National ambient air quality standards have led to steady declines in air pollution since the Clean Air Act of 1977. This is in part due to industries needing to show compliance with these standards that have become more protective over time. Of course there is still more work to be done and we continue to require facilities to meet all air quality standards.

While modeling is the initial test to determine if a facility is meeting air quality standards, it does not end with modeling. Permit conditions are meant to show continued compliance with these standards. If activities at the facility do not match with what was modeled (emissions, layout, stack parameters), the facility is required to redo modeling.

- 5.6. **Inversions:** If there is no wind or worse yet, a temperature inversion, all of the particulates from the proposed NEXT refinery will be highly concentrated within the local area. Family residents, livestock, pets, and even employees of the businesses in Port Westward will be affected with breathing issues due to the highly polluted air quality in the Port Westward valley.

DEQ Response: Air dispersion models utilize historic meteorological data to represent the actual conditions present at a location. Low wind conditions result in the highest estimated air quality impacts near a facility and are generally used to show compliance with the National ambient air quality standards through modeling. Dispersion modeling, when compared to monitoring is more likely to overpredict than underpredict impacts, making it a useful tool to determine possible impacts from a facility and protect the public from those impacts. However, there are events, such as inversions or wildfires, which can cause criteria pollutants to be at levels above the national air quality standards. OAR 340 Division 206, Air Pollution Emergencies is designed to prevent the excessive accumulation of air contaminants during periods of atmospheric stagnation or at any other time, which if allowed to continue to accumulate unchecked could result in concentrations of these contaminants reaching levels which could cause significant harm to people's health. This division establishes criteria for identifying and declaring air pollution episodes at levels below the level of significant harm. Specific activity reductions and/or prohibitions can be required when DEQ issues certain air quality advisories. These rules are included in Emission Reduction Plans located in OAR 340-206-8010 through 340-206-8040.

- 5.7. DEQ received the following comments regarding the flare stack height:

- a. *The flair (sic) stack height is also a factor and since Oregon Cleaner Air table 3-2 and 3-12 give two different heights this needs to be clarified to properly give the VOC numbers.*

I want to know what the flare stack height is going to be that contributes to the VOC 70 tons number quoted in the DEQ proposed permit.

- b. *Oregon Cleaner Air gives two tables dictating flare stack height relative to the VOCs emitted; Table 3-2 says stack height is 315'; Table 3-12 says stack height is 418.6'. How tall is the stack going to be if the VOCs are increased when factoring in rail and truck impacts? Given the fact that there are only 4 buildings over 40 stories tall in Portland, this is a big concern for those of us that moved to the country to get away from this scenery.*

DEQ response: The reason for the two different stack heights is: one is for normal operations and one is for startup and shut down operations. Stack height for flares is more complicated than a typical stack. During normal operation, the flare is not expected to be used and the stack height modeled is equal to the actual stack height. During start up and shut down, the flare is expected to be operational and will combust a significant quantity of process gases. This means the stream of exhaust will extend far beyond the actual stack height before dispersion begins. To account for this NEXT energy calculated an 'effective stack height' as demonstrated here (section 2.1.7):

https://www.deq.ok.gov/wp-content/uploads/air-division/PG_Air_Dispersion_Modeling_Guidance.pdf

In the dispersion model, dispersion begins after the emissions leave the stack. Accounting for the increased distance (the effective stack height) before dispersion begins due to the high velocity and temperatures of the flare at full operation is a way of making the model more representative of actual conditions.

The flare at NEXT is necessary to combust process volatile organic compounds in the event of a process interruption, startup or shutdown. This combustion is necessary to reduce the quantity of volatile organic compounds released into the atmosphere. Without the flare, each startup, shutdown, and malfunction event could result in significant emissions of volatile organic compounds and hazardous air pollutants. The flare height at NEXT is based on safety considerations following guidance from American Petroleum Institute Standard 521. In particular, the flare height is set at a height that protects the workers from excessive thermal radiation. A thermal radiation limit of 1.58 kilowatts per square meter is considered the maximum level allowed for continuous personnel exposure equipped with the appropriate protective clothing. A flare height of 350 feet (107 meters) was required at this thermal radiation limit assuming the workers stay more than 300 feet from the flare.

DEQ does have the ability to limit many stack heights due to "Good Engineering Practice" (GEP), stack height guidance. For many stacks, DEQ can require them to be no taller than the GEP stack height, which is calculated based on nearby building heights. Flares, however, are not covered by GEP guidance due to their unique characteristics. DEQ does not have rules that would allow us to limit the height of a flare. In some cases, local zoning ordinances can limit the height of structures.

- 5.8.** DEQ received numerous comments questioning why a cumulative modeling analysis was not required as part of the permitting action. The following are provided as examples, but are not an exhaustive list of such comments:

- a. *There is no way that a refinery the projected size of Next Renewable Fuels can guarantee that this plant won't cause excess pollution that will harm both the flora and fauna in the surrounding areas, not to mention humans, like me, who have COPD.*
- b. *With the total compounded effects from the emissions from NEXT, the air quality will be degraded having damaging effects to the farmers, businesses and residents living near Port Westward.*
- c. *If the NEXT refinery, PGE plant, and Global Partners' terminal all operate at full capacity, the local airshed will become far more polluted than suggested by NEXT's own evaluation, in an airshed already heavily impacted by pollution from existing industry, Wauna, and Longview.*
- d. *I want to say that the project would dramatically impact an area far beyond Port Westward. Within Port Westward, obviously, the pollution, the particular matter or the toxic VOCs, this is going to come down and impact the community there, including monastery, farms, residences, but it goes far beyond just Port Westward. Within 13 miles, there's the area of Longview, which has very elevated levels of ozone, smog, and the environmental health disparities that go with it.*
- e. *Our crow's flight neighbors, Cowlitz County called wondering why their obviously overburdened airshed has been neglected in your assessments*
- f. *I am afraid that this next development would seriously undermine the monastery's ability to offer a beautiful, clean environment to all those who come here. I feel that if the air quality deteriorates and becomes smelly and unhealthy, it could be that the monastery, which is my home and the home to 25 people who have been living here for the whole time I've been here, might not be able to continue it's offering to the world. We really depend on offering a space that is beautiful and peaceful, and having clean air and healthy air is essential for that. And I'm afraid that I don't know what would happen. Maybe the monastery would shut down.*

DEQ response: For criteria pollutants, there are two stages to a modeling analysis. In the first stage, impacts from the facility are compared to a significant impact level. These significant impact levels are set at a fraction of the national ambient air quality standard (see Table below). If all areas outside of the fence line are below the significant impact level, then the facility is not anticipated to cause or contribute to an exceedance of the national ambient air quality standards. If predicted concentrations at any locations are above the significant impact levels, then a full cumulative analysis is required that would include contributions from nearby sources and background values. In the case of NEXT, all pollutant impacts were below significant impact levels, meaning that emissions from criteria pollutants were not expected to cause or contribute to a national air quality standard exceedance (see Table below).

Pollutant	Significant Impact Level (SIL) $\mu\text{g}/\text{m}^3$	National Ambient Air Quality Standard (NAAQS) $\mu\text{g}/\text{m}^3$	SIL as percentage of NAAQS
PM2.5 – 24 hour	1.2	35	3%
PM2.5 Annual	0.3	12	3%
NO2 – 1 hour	8	188	4%
SO2 – 1 hour	8	196	4%

Pollutant	Significant Impact Level (SIL) $\mu\text{g}/\text{m}^3$	National Ambient Air Quality Standard (NAAQS) $\mu\text{g}/\text{m}^3$	SIL as percentage of NAAQS
PM10 – 24 hour	1.0	150	0.1%
PM10 - Annual	0.2	50 (revoked)	0.4%
CO – 8 hour	0.5	10.4	5%

NAAQS Analysis at NEXT

NEXT Renewables								
Total Modeled concentrations compared to the SILs								
Pollutant	Averaging Period	Operating Scenario	Maximum Direct Impact $\mu\text{g}/\text{m}^3$	Secondary PM2.5 $\mu\text{g}/\text{m}^3$	Total Impact $\mu\text{g}/\text{m}^3$	Class II SIL $\mu\text{g}/\text{m}^3$	Exceed SIL y/n	
PM10	24-hr	Normal	0.96		0.96	1.0	n	
		Startup	0.94		0.94	1.0	n	
		Shutdown	0.92		0.92	1.0	n	
	Annual	Normal	0.11		0.11	0.2	n	
		Startup	0.11		0.11	0.2	n	
		Shutdown	0.11		0.11	0.2	n	
	PM2.5	24-hr	Normal	0.95	0.038	0.99	1.2	n
			Startup	0.94	0.038	0.98	1.2	n
			Shutdown	0.92	0.038	0.96	1.2	n
Annual		Normal	0.11	0.0019	0.11	0.3	n	
		Startup	0.11	0.0019	0.11	0.3	n	
		Shutdown	0.11	0.0019	0.11	0.3	n	
NO2		1-hr	Normal	7.89		7.89	8.0	n
			Startup	5.66		5.66	8.0	n
			Shutdown	5.23		5.23	8.0	n

5.9. DEQ received the following comments regarding allowable ambient impacts of criteria pollutants:

- a. *The World Health Organization (WHO) has noted in September of 2021 that “no threshold has been identified below which no damage to health is observed.” (1) Chronic exposure to these small particles in the air we breathe contributes to the risk of developing or dying from serious diseases including cancer, cardiovascular, and pulmonary disease. (2) We thus urge you to say no to the proposed 27 tons of particulate matter per year.*
- b. *VOCs propagate chemical cycles that lead to adverse atmospheric outcomes such as elevated tropospheric ozone concentrations, as well as the formation of secondary organic aerosols and particulate matter. Increased concentrations of tropospheric O₃ and PM have been shown to cause lung damage, worsen respiratory diseases, and have been associated with increased mortality.*

- c. *I live within sight of this facility. A 40 story tall flare stack, an additional 250-300 cars/trucks driving down our two lane road daily, a 400 car rail spur being added to our rural neighborhood, the massive amount of Semi trucks required to haul final product to market all concern me, but all of these pale in comparison to the amount of pollution that will be emitted over my crops, our livestock and our neighborhood. This facility is nestled into a little valley surrounded by hillside and the potential for lasting pollution is intimidating.*
- d. *The proposed VOC levels will contribute to the formation of ozone in the area, which is already problematic with Global Partners, the PGE plant, and the nearby pulp and paper mill in Longview industrial areas compounding air quality concerns.*
- e. *And I don't believe the standards we have currently are safe enough to help the public health that we are now dealing with.*

DEQ Response: EPA is responsible for setting national ambient air quality standards. These standards are reviewed on a regular basis and have been lowered over time as new scientific data becomes available. The PM_{2.5} standard is currently being evaluated by EPA and may change in the near future. When changed, facilities in Oregon must show compliance with new standards any time they undergo a modification or are asked to redo their analysis by DEQ.

<https://www.epa.gov/newsreleases/epa-reexamine-health-standards-harmful-soot-previous-administration-left-unchanged>

Cleaner Air Oregon reviews scientific data every three years to determine if lower risk-based thresholds are needed to protect public health. If changed, facilities must redo their risk assessment to ensure the risk values are still below risk action levels.

- 5.10.** DEQ received numerous comments regarding the deposition of emissions from NEXT. The following are provided as examples, but are not an exhaustive list of such comments:
- a. *We do not want that fine particulate matter settling on our crops, in the water or the food our animals eat*
 - b. *Pollution from the refinery would settle on local residences, a nearby Buddhist monastery, and high-value crops sensitive to hazardous chemicals, particulates and other pollution coming from the refinery and rail yard. The impacts to crops may be significant: local mint farmers have raised concerns about particulate matter diminishing the quality of their mint or rendering it unsuitable for food-grade uses.*
 - c. *This facility has an array of stacks to release gas and particles into the air. The particles, based on the laws of physics, will be forced up and out in a radius around the facility extending onto local farmland. Farmland that is currently owned by Seely Mint and Blue Horizons Blueberries (2 farms with national clients), along with numerous heads of cattle and an array of small private farms. The winds will carry these toxic particles throughout the Columbia River Basin, putting the endangered white-tailed deer and salmon populations further at risk. They will be ingested by the local livestock, infect crops, migrating birds and spawning fish throughout the region. This in turn will poison our food supply and destroy our land.*

- d. *A BASIC LAW OF PHYSICS: WHAT GOES UP MUST COME DOWN! WHERE???* That is the question local residents ask about assorted particulates that would be projected 300-400 feet into the air near homes, farms and pristine wetlands. *WHAT HAPPENS TO THE HIGHLY POISONOUS AND CAUSTIC GASES?* They do not mysteriously disappear into virtual reality- as the applicants seem to represent
- e. *From charts in the application: 1 million pounds of sulphur dioxide (?) per year is "guess-timated" to fill our airshed. (This is only 1 of hundreds of hazardous chemicals listed.) If it fell evenly across Beaver Island homes, farms, sloughs and ditches my guesstimate is that about 200 pounds per acre could cause significant damage to sensitive water species and/or their eggs or offspring.*
- f. *What are the safe levels for these pollutants on certified and non-certified organic farms and for the health of livestock?*
- g. *Plus the particulates. I did a quick calculation and I believe something like 32 pounds per acre if all of 5,000 acres on Beaver had particulates, maybe about 30 pounds or so would fall on each acre. What if more concentrations fall? What about my property? Will my plants and animals survive?*

DEQ Response: Due to the low anticipated air concentrations at the facility, deposition from particles is expected to be low, as typically only a fraction of air emissions deposit out close to the facility. In the absence of rain, most particles remain in the air for 10 to 100 hours and travel far from the facility. During rain events, deposition may occur closer to the facility. In addition, much of the toxic air contaminants being released from the facility are gaseous, not particles. In the atmosphere, these will travel much further and form other pollutants through chemical processes rather than deposit out on the soil near the facility.

<https://ui.adsabs.harvard.edu/abs/1971AtmEn...5..571E/abstract>

6.0 CLIMATE CHANGE/GHGS EMISSIONS

- 6.1. DEQ received the following comments regarding the greenhouse gas emissions from NEXT:
 - a. *The draft Air Quality Permit allows NEXT to emit over 1 million tons of greenhouse gases into the atmosphere each year. It appears that smoke stack, flue or facility exit Carbon Capture and Sequestration is not required, though it should be. These GHGs affect public health. I did not see in the draft permit consideration of how public health and my health will be protected from the huge amount of greenhouse gases.*
 - b. *The DEQ draft report has concluded, the potential emissions meet health risk standards for the community and do not require additional controls to be protective of public health but the significant emission rate analysis shows 1.152.905 million tons of carbon pollution each year for the NEXT proposed renewable refinery, making this project one of Oregon's largest emitters of greenhouse gas pollution.*
 - c. *NEXT Renewable Refinery is looking to be not only the largest refinery of its kind, but wanting to stay ahead of the curve in the production of Renewable fuel. THE LARGEST*

REFINERY! Not only in the State of Oregon, but the country! That means the largest producer of greenhouse gases, with a whopping 1.15 million tons of carbon pollution each year

- d. *Furthermore, CO2 emissions alone would be the equivalent of annually adding 2,500 cars in Clatskanie a small, rural community of just over 1,800!*
- e. *It will add 1.15 million tons of carbon pollution per year and be one of the largest emitters of greenhouse gas pollution in Oregon. Moreover, the fracked gas used to produce renewable diesel would be the largest contributor to the refinery's emissions. The dependence of this process on fracked gas will only serve to increase the demand for in production of fracked gas of fossil fuel.*
- f. *Large portions of fracked gas (1.15 million tons) would be used in the industrial process that would dramatically impact CO2 emissions.*

DEQ Response: DEQ's authority is defined within Oregon's Air Quality programmatic rules, most of which are contained in the EPA-approved State of Oregon Clean Air Act Implementation Plan which defines how the Clean Air Act is implemented in Oregon. This air quality permitting action is confined to the NEXT stationary source's air contaminant emissions. When DEQ writes an air quality permit it must include all applicable requirements of Oregon's Air Quality program in the respective permit. At the time of this permit action, as it pertains to these comments, NEXT is subject to greenhouse gas monitoring and reporting requirements under the Greenhouse Gas Program (OAR 340-215). The permit includes a site-specific plant site emission limit for greenhouse gas emissions in accordance with OARs 340-216-0066(3)(b) and 340-222-0040. A control technology analysis for greenhouse gases is required only if a source is subject to major new source review for greenhouse gases and at least one criteria pollutant. NEXT is not subject to a greenhouse gas control analysis because it is not subject to major new source review. Any future new, applicable greenhouse gas regulations adopted by the Environmental Quality Commission, DEQ's governing body, will be applied to this facility in the appropriate manner and as defined by the commission in rule. DEQ drafted the NEXT permit to appropriately address all applicable requirements to which this facility is subject.

6.2. DEQ received the following comments regarding Oregon greenhouse gas goals and greenhouse gas reductions:

- a. *The Oregon legislature and executive branch are working to reduce greenhouse gas in Oregon. A large new facility which requires these large amounts of methane is counter to Oregon goals.*
- b. *This proposal is inconsistent with Oregon's Climate Emissions goals because carbon combustion is carbon combustion, no matter the fuel source, no matter whether it is "renewable" or not. Oregon Governor Executive Order 20-04 directed the DEQ to, among other actions, "cap and reduce GHG emissions from large stationary sources of GHG emissions ..." (section 4.C(1)). Enabling a new carbon emitter to build a facility would be contrary to these mandated actions.*
- c. *On March 10, 2020, Governor Brown signed Executive Order No. 20-04 calling for the State of Oregon to reduce its GHG emissions levels "(1) at least 45 percent below 1990 emissions levels by 2035; and (2) at least 80 percent below 1990 emissions levels by*

2050.” *The Executive Order goes on to direct specific state agencies, including DEQ, to “exercise any and all authority and discretion vested in them by law to help facilitate Oregon’s achievement” of these GHG goals. DEQ apparently has the authority to prescribe what sources of energy NEXT may use to generate the heat required to drive NEXT’s processes; DEQ should therefore limit NEXT’s sources of energy to clean and renewable electricity such as electricity produced by wind or solar. Not only would such a permit requirement effectuate Gov. Brown’s directive to “exercise any and all authority and discretion vested” in DEQ to achieve Oregon’s GHG goals, it would lend substance to the oft-repeated claim that NEXT will produce “renewable” diesel. We reiterate that diesel or jet fuel produced using massive amounts of fracked gas is not “renewable” in any meaningful sense.*

- d. *the proposed facility, and its associated rail/truck/marine transport links, would generate high levels of greenhouse gas emissions, and would tie the state of Oregon into long-term use of what is acknowledged to be a very harmful fossil fuel – fracked natural gas;*
- e. *This entire NEXT idea is simply disingenuous on its face. It is long past time to stop combusting carbon any time we have the opportunity.*
- f. *The DEQ draft is very sparse on its included data, but it does show a massive amount of carbon pollution to produce an energy source which generates a massive amount of carbon pollution.*
- g. *The completed facility will raise our carbon emissions exponentially, opening up our community and the surrounding counties to a future of serious medical problems.*
- h. *DEQ should require NEXT to use truly clean, renewable electricity for process heating because of the significant greenhouse gas (GHG) impact of transporting and burning the fracked gas (or other petroleum products) that NEXT would use for fuel.*

DEQ Response: The majority of the greenhouse gases NEXT will emit are biogenic, meaning the emissions are generated as the result of biomass or biomass-derived fuel combustion. In addition, the renewable diesel produced by NEXT will result in a net decrease in GHG emissions by displacing fossil fuel-based diesel. As detailed in a January 25, 2022, letter from Brian Snuffer Zukas to Garret Stephenson, there will be a net greenhouse gas benefit from implementing this project because there will be a significant decrease in overall greenhouse gas emissions of approximately 5.4 million tons of greenhouse gases (as carbon dioxide equivalents). Using waste products such as tallow and used cooking oil to produce renewable diesel have the greatest reductions while vegetable oils are slightly less. NEXT has indicated they plan to use a combination of both types of feedstocks to produce fuel that is approximately 62% less carbon intensive than traditional fossil diesel.

6.3. DEQ received the following comments regarding methane emissions

- a. *Methane used in the production of hydrogen has more air quality consequences than calculated. Other equipment is also methane dependent. The additive amount of methane needed at full capacity could be over 26 million cubic feet of gas per day. It is now well recognized and precedent has been set that methane analysis must also take into account upstream emissions at the fracking site, leaking during pipeline transport and at pump stations. This project would lock in decades of methane emissions and harm from other*

volatile petroleum compounds before methane even gets to the project site. Increase in methane emissions is contrary to Oregon, US and world goals. Total methane use, emission and leakage should be carefully evaluated including both on site and all upstream as necessary for project.

- b. *When you consider the dire climate crisis we are facing, the climate killing ramifications of methane leaks and emissions can not be overstated! As the primary component of gas, methane has more than 80 times the warming power of carbon dioxide over the first 20 years after it reaches our atmosphere. Even though CO2 has a longer-lasting effect, methane sets the pace for warming in the near term. Considering at least 25% of today's warming is driven by methane from human actions (the largest sources are the oil/gas industry), climate scientists stress cutting methane emissions as the fastest opportunity we have to immediately slow the rate of global warming. I trust DEQ to take heed.*
- c. *How will hold NEXT accountable for limiting methane leaks and emissions?*

DEQ Response: DEQ's permitting action and authority is confined to the equipment and activities of the NEXT stationary source that emits air contaminants. Emissions from the production and transport of natural gas are not part of the NEXT stationary source. The permit proposed for issuance to NEXT is an air contaminant discharge permit; its content is specific to the regulatory requirements of DEQ's stationary source air quality program. DEQ's authority in this permitting action is defined within the Oregon Administrative Rules. DEQ reviewed the NEXT facility's operations and design in a manner consistent with this defined regulatory authority. Our review did not find the facility's current or proposed operation to present an imminent danger to human health or the environment. However, the renewable diesel produced by NEXT will result in a net decrease in GHG emissions by displacing fossil fuel-based diesel. As detailed in a January 25, 2022, letter from Brian Snuffer Zukas to Garret Stephenson, there will be a net greenhouse gas benefit from implementing this project because there will be a significant decrease in overall greenhouse gas emissions of approximately 5.4 million tons of greenhouse gases (as carbon dioxide equivalents).

- 6.4.** DEQ received numerous comments regarding a cumulative greenhouse gas analysis. The following are provided as examples, but are not an exhaustive list of such comments:
- a. *NEXT is developing a nearly 500-acre wetland area. Shouldn't DEQ account for the CO2 capture from that piece of the project? Why would DEQ NOT consider sequestered carbon in their analysis?*
 - b. *The renewable diesel produced at NEXT's facility is enough to replace ALL petroleum diesel used in Oregon. If that happens, millions of tons of local toxic tailpipe emissions are removed and millions of tons of CO2 are eliminated. Why does DEQ refuse to include these benefits in its analysis?*
 - c. *Studies have shown that getting deep carbon reductions in the immediate and near future provide much more climate and societal benefits than getting the same amount of reductions 20 or more years from now (sometimes referred to as the "time value of carbon").*
 - d. *renewable diesel compared to petroleum diesel emits 30% less black carbon. The IPCC states that reducing black carbon is one of the fastest and easiest ways to slow down*

local warming and protect our snow pack. Rarely do we get to use fastest and easiest in our conversations with our climate reduction.

- e. *The Oregon DEQ recently adopted the Climate Protection Plan, which clearly calls out renewable diesel as a beneficial and necessary green alternative fuel to replace petroleum diesel.*
- f. *Renewable diesel is questionable, even (sic) suspect, as an improvement over fossil diesel because its energy return on energy invested is so small (e.g. 1.3 barely more than a battery) when other alternative energy options such as solar and wind are much more efficient and because its carbon intensity is only lower than fossil diesel if its combustion is discounted; together those factors mean that any errors in calculations (or years where agriculture isn't as productive as expected) could make renewable diesel a net climate harm.*
- g. *In the environmentally conscious world we live in, there is nothing about this type of technology that makes sense. NEXT will be burning an enormous amount of fuel (creating air pollution in the process) to create a different fuel (that will also create air pollution). Why are we not learning from our past mistakes?*

DEQ Response: DEQ's permitting action and authority is confined to the equipment and activities of the NEXT stationary source that emits air contaminants. The permit proposed for issuance to NEXT is an air contaminant discharge permit; its content is specific to the regulatory requirements of DEQ's stationary source air quality program. DEQ's authority in this permitting action is defined within the Oregon Administrative Rules. DEQ reviewed the NEXT facility's operations and design in a manner consistent with this defined regulatory authority. Our review did not find the facility's current or proposed operation to present an imminent danger to human health or the environment. In addition, the renewable diesel produced by NEXT will result in a net decrease in greenhouse gas emissions by displacing fossil fuel-based diesel. As detailed in a January 25, 2022, letter from Brian Snuffer Zukas to Garret Stephenson, there will be a net greenhouse gas benefit from implementing this project because there will be a significant decrease in overall greenhouse gas emissions of approximately 5.4 million tons of greenhouse gases (as carbon dioxide equivalents). Using waste products such as tallow and used cooking oil to produce renewable diesel have the greatest reductions while vegetable oils are slightly less. NEXT has indicated they plan to use a combination of both types of feedstocks to produce fuel that is approximately 62% less carbon intensive than traditional fossil diesel.

6.5. DEQ received the following comments regarding the Clean Fuels Program

- a. *The DEQ Clean Fuels Program has stated that renewable diesel is an important liquid fuel to meeting that programs goals. Does DEQ support in-state production of renewable diesel more than the alternative of importing renewable diesel from the Gulf Coast or foreign countries? If DEQ does not support NEXT's proposal of in-state renewable diesel over other sources, how does DEQ justify importing renewable diesel with a higher Carbon Intensity score to meet the governor's mandate to transition the transportation sector to cleaner fuels by 2035?*
- b. *DEQ relies on renewable diesel, in part, to meet the Clean Fuels Program goals. According to DEQ's 2022 Clean Fuels Forecast, Oregon still uses 687 million gallons of petroleum diesel per year. The NEXT facility will be permitting for 750 million gallons of*

renewable diesel production, which covers the entirety of Oregon's petroleum diesel demand. Does DEQ acknowledge that the NEXT renewable diesel would be a significant contributing element in displacing petroleum diesel and a direct contributor to the success of DEQ's Clean Fuels Program?

DEQ response: DEQ's Clean Fuels Program conducted forecasts of future availability of various fuels in Oregon's market, including renewable diesel. This study found that renewable diesel could play an important medium- and long-term role for decarbonizing certain equipment and vehicles within Oregon's transportation sector. Renewable diesel is an especially important lower-carbon fuel for the heavy-duty vehicles that are hard to transition to battery electric or fuel cell technologies. The Clean Fuels Program is life-cycle based, so it naturally accounts for any differences in the amount of emissions associated with importing fuels from outside Oregon versus producing the fuels in state. DEQ's permitting action and authority is confined to the equipment and activities of the NEXT stationary source that emits air contaminants. Emissions reductions from the downstream use of renewable diesel produced at NEXT are not part of the NEXT stationary source. None of the commenters identified elements of the permit action that required change or re-evaluation. No further consideration by DEQ is necessary for this comment category.

6.6. DEQ received the following comments praising the production of renewable diesel:

- a. *Not only do renewable diesel and biodiesel provide substantial economic benefits, they also provide the single largest source of GHG reductions in the clean fuels programs in California and Oregon.*
- b. *The Oregon DEQ recently adopted the Climate Protection Plan, which identifies renewable diesel as a beneficial and necessary clean interim alternative fuel to replace petroleum diesel. It offers 60-80 percent lower GHG emissions than petroleum diesel and will drastically decrease particulate matter, nitrogen oxide and sulfur dioxide in our air. Communities throughout Oregon and along the West Coast will benefit from decreased toxic emissions, especially vulnerable communities along major traffic corridors. The fuel represents an important interim step to fully decarbonizing transportation up to and including the long-distance freight sector.*
- c. *In addition to GHG benefits, renewable diesel and biodiesel provide substantial reductions in co-pollutants, especially diesel particulate matter (DPM). As noted in the recent Trinity Study,¹¹ the replacement of petroleum diesel with biodiesel in 27 high-diesel use sites evaluated across the country can reduce cancer incidences by nearly 9500, premature deaths by more than 910 per year, asthma cases by over 456,000 per year, and other health benefits, all totaling \$7.7 billion annually from avoided health costs*
- d. *Two years ago, on the first day of use, this fuel [renewable diesel] enabled our company to reduce GHG by 60%. It also significantly reduced workplace and community pollution and poisons. In short, this fuel, by all comparisons to petroleum diesel, has been absolutely magic.*
- e. *Renewable diesel is 60 to 80 times cleaner than petroleum diesel and will drastically decrease particulate matter, nitrogen oxide, and sulfur dioxide in our air. Communities*

throughout Oregon and along the west coast will benefit from decreased toxic emissions, especially vulnerable communities adjacent to transportation corridors


DEQ response: DEQ acknowledges the support for the use of renewable diesel. DEQ's permitting action and authority is confined to the equipment and activities of the NEXT stationary source that emits air contaminants. Emissions reductions from the downstream use of renewable diesel produced at NEXT are not part of the NEXT stationary source. None of the commenters endorsing use of renewable diesel identified elements of the permit action that required change or re-evaluation. No further consideration by DEQ is necessary for this comment category.

7.0 GENERAL APPROVAL AND DISAPPROVAL

7.1. DEQ received the following comments opposing the proposed project:

- a. *It will emit significant pollution and endanger fragile estuaries.*
- b. *Why are we even considering giving NEXT permission to pollute? It is appalling to me that with the current knowledge we have on the damage of air pollution to our health, that a new industry (like NEXT) that will cause significant air pollution, would be allowed to be constructed, knowing that the pollution they will create will do harm to people, wildlife and the environment.*
- c. *Please deny an air quality permit for a proposed refinery on the Columbia River that could become one of Oregon's largest emitters of greenhouse gas pollution.*
- d. *I urge the DEQ to withdraw the proposed air pollution permit*
- e. *For the air and climate safety of all our children, I call on you to deny an air quality permit for the proposed refinery on the Columbia River that could become one of Oregon's largest emitters of greenhouse gas pollution.*
- f. *If the City of Longview, An Industrial community, turned this down I don't know how DEQ could possibly approve the permit in this location.*
- g. *This land is used by local farmers and will suffer irreparable harm from the inevitable pollution that will result in processing and distributing diesel fuel. All the residents I know who live near this property are strongly opposed to the project as it will adversely effect their lives both economically and physically.*

DEQ response: DEQ evaluates the air emissions for the type of activity or activities proposed for a certain facility and, when a facility can meet all applicable requirements in current environmental law, DEQ will issue a permit and continue to monitor the facility for ongoing compliance. In addition, NEXT has satisfied strict Cleaner Air Oregon permitting requirements for new facilities, demonstrating that its toxic air contaminant emissions will not create unacceptable risk in the area where it will operate (see the response to comment category 4.0 for more detail). None of the commenters identified elements of the permit action that required change or re-evaluation. No further consideration by DEQ is necessary for this comment category.

- 7.2. DEQ received numerous comments supporting the proposed project. The following are provided as examples, but are not an exhaustive list of such comments:
- a. *I am writing to express my strong support for NEXT Renewable Fuels and urge the Oregon Department of Environmental Quality to approve their Standard Air Containment Discharge permit (Application No. 32808). NEXT meets the stringent regulations for an air permit and in its public notice, the Department of Environmental Quality states that “NEXT Renewable Fuels Oregon, LLC is not a major source of EPA-listed hazardous air pollutants” and “DEQ has concluded the potential emissions meet health risk standards for the community and do not require additional controls to be protective of public health.”*
 - b. *In DEQ’s own words, “if a facility meets all legal requirements, DEQ will issue the facility’s air quality permit.” I firmly believe the NEXT Renewable Fuels clean fuels proposal meets all legal requirements – and goes above and beyond in design to protect air, water and health – and should be granted approval without delay.*
 - c. *NEXT is publicly committed to supporting green job training to maximize local participation in hiring, and the company has signed a Memoranda of Understanding with the Columbia Pacific Building Trades Council and Northwest Regional Council of Carpenters to use highly-skilled union labor to construct the facility. NEXT has also signed a Neutrality Agreement with United Food & Commercial Workers 555 if the facility workers choose to unionize. The growth of green jobs and incorporation of union labor is a model for 21st-century industry in Oregon, and it’s something Oregonians hear touted by Governor Brown, gubernatorial candidates, State Legislators, County Commissioners, City Councilmembers and thought leaders all the time. It’s time that DEQ and other decision-makers support what they preach.*
 - d. 
 - e. *Yes, (expletive) yes, This will not only be good for all that green (expletive), but great for Oregon workers, our farmers, and Trucking, which is the heart of our country, This is totally UltraMAGA... GET IT DONE!!!*
 - f. *I could say a lot about the project benefits, but something I am particularly focused on is the project’s developing partnership with the Clatskanie School District to create a new science program.*
 - g. *I really feel you, the DEQ, know rules better than we the people, you are the professionals we are not. Especially so many who base what they say on emotion- not rules. I have faith you know the rules that exist are correct and followed by NEXT Renewables. The permit has so many safeguards. There is no reason to deny the properly applied for permit.*
 - h. *The review of the permit application and development of the draft permit for NEXT Renewable Fuels by DEQ has been one of the most thorough of my 30-year career. The permit application was submitted way back in December 2020, and never have I seen it take almost a year and a half to get through the review and the draft permit process for a standard air contaminant discharge permit. But the DEQ thoroughly examined this project, the emissions and this draft permit application and in the draft permit. This gives me extreme confidence that this project has been fully vetted.*

DEQ response: DEQ acknowledges the support for the proposed air contaminant discharge permit. None of the commenters endorsing DEQ's issuance of the proposed permit identified elements of the permit action that required change or re-evaluation. No further consideration by DEQ is necessary for this comment category.

7.3. DEQ received numerous comments highlighting appreciation for specific conditions and requirements in the proposed permit. The following are provided as examples, but are not an exhaustive list of such comments:

- a. *The fact that NEXT is voluntarily planning to build the facility to best available technology (BACT) standards is a strong positive step and demonstration of commitment*
- b. *DEQ is doing the right thing by requiring NEXT to install many SCR and oxidation catalyst control devices, and the level of monitoring required, under condition 4.3.a and 4.3.b. That will be sufficient to reduce NOx emissions and confirm that the control devices are always operating as required under the permit.*
- c. *I like the internal floating roof and closure device/seals requirements for storage tanks under condition 3.4. Those requirements in combination should sufficiently limit volatile emissions during tank fillings and unloadings.*
- d. *I like that the DEQ required each pretreatment processing system and silo vent has an attached filtration unit to control dust emissions in condition 4.3.c. That should help limit potential dust emissions from the facility. I also like that condition 4.3.c.vi makes it so NEXT cannot substitute a bag or filter with a lower control efficiency specification than what was specified in the original system design.*
- e. *The DEQ requirement to implement a process component leak detection program at the facility per condition 4.4 protects the community's health and gives me a greater sense of confidence that the facility is designed with health and safety as top priorities.*
- f. *I feel protected knowing that the biggest combustion devices will have continuous emission monitoring systems and regular audit programs per condition 4.5. These systems will ensure that the control devices on the biggest equipment at the facility are always meeting control efficiency specifications and that they are not deteriorating.*
- g. *I appreciate the number of verification source tests required under condition 7.1. We also like that a number of the tests are required every year. This level of source testing will ensure emission limits are achieved and that control devices are not getting old or malfunctioning.*
- h. *From the outset, this project has been designed to exceed the strictest standards. In fact, the facility includes a very long list of emission controls which were discussed, many of which were not required by federal or state rules, including multiple selective catalytic producers and oxidizers to limit NOx and CO emissions. Throughout the process, DEQ required new, and sometimes unprecedented, reviews in air quality analysis, but potential emissions from the facility were below all the thresholds. When DEQ required the facility to submit a risk assessment for air toxics for the Cleaner Air Oregon process, which requires review of impacts from more than 600 air toxics, the facility was easily able to demonstrate that all of the risks were below the level that requires any permit. In fact, the facility was determined to be a de minimis source, as we've heard.*

- i. *This permit will implement some of the most stringent testing, monitoring and record-keeping requirements of any permit I'm aware of in Oregon*

DEQ response: DEQ acknowledges the support for the proposed air contaminant discharge permit. None of the commenters endorsing DEQ's issuance of the proposed permit identified elements of the permit action that required change or re-evaluation. No further consideration by DEQ is necessary for this comment category.

8.0 MONITORING OF EMISSIONS

8.1. DEQ received the following comments claiming that the proposed emission limits are inadequate:

- a. *The DEQ permit fails to establish adequate limits for particulate matter*
- b. *DEQ should establish enforceable limits on volatile organic compounds and include more robust, verifiable monitoring requirements.*
- c. *DEQ proposes inadequate constraints on the refinery's air pollutants, such as volatile organic compounds (VOCs) and hydrogen sulfide.*
- d. *DEQ should establish enforceable limits on volatile organic compounds.*
- e. *DEQ proposes inadequate constraints on the refinery's air pollutants, such as volatile organic compounds (VOCs) and hydrogen sulfide.*

DEQ response: All plant site emission limits were set in accordance with OAR 340-222-0040 and 0041. As specified in OAR 340-222-0040(1), sources with capacity less than the significant emission rate will receive a generic plant site emission limit unless they have a netting basis and request a source specific plant site emission limit under OAR 340-222-0041. The proposed permit included generic plant site emission limits for carbon monoxide, nitrogen oxides, sulfur dioxide, and hydrogen sulfide. The proposed permit includes source specific plant site emission limits for particulate matter, particulate matter equal to and less than 10 microns in size, particulate matter equal to and less than 2.5 microns in size, volatile organic compounds, and greenhouse gases. As stated in OAR 340-222-0035(4), "Annual plant site emission limits apply on a rolling 12 consecutive month basis and limit the source's potential to emit."

8.2. DEQ received the following comments claiming that the proposed monitoring requirements are inadequate:

- a. *The DEQ permit fails to establish adequate monitoring for particulate matter*
- b. *The draft permit fails to show how the DEQ will enforce limits on volatile organic compounds - we need estimates that estimate the startup and shutdown processes to quantify levels of VOC that will be created through the industrial process.*
- c. *This draft permit fails to show how DEQ will enforce limits or anticipate the frequency and impact of additional emissions during startup, shutdown, and process interruptions.*

- d. *The DEQ must put forth rigorous plans for how **total** VOC emissions will be **continuously** measured in order to enforce VOC emission limits at all times, including during startup and shutdown events.*
- e. *Can you confirm the robustness of the monitoring systems in place?*
- f. *DEQ should include more robust, verifiable monitoring requirements.*
- g. *DEQ does not propose real-time monitoring for VOCs.*
- h. *DEQ does not provide adequate permit conditions to ensure that the project will meet the plant site emission limits, including for VOCs.*
- i. *DEQ is not adequately limiting or monitoring pollutants spewed out in the process.*
- j. *How will you monitor [emissions] on a consistent basis to accommodate this razor-thin margin so dangerously close to major pollution?*

DEQ response: It is DEQ's responsibility to write the proposed permit to address all air quality regulatory requirements that are applicable to NEXT. To properly do so, the proposed permit must include appropriate and sufficient monitoring, recordkeeping, and reporting requirements to allow NEXT and DEQ to verify the company's compliance status.

Regarding particulate matter, a majority of particulate matter from NEXT is generated from combustion of fuel (e.g., natural gas, PSA tail gas, and renewable diesel). NEXT is required to monitor the quantity of each fuel combusted to calculate their actual emissions and ensure they remain in compliance with the particulate matter plant site emission limits.

Volatile organic compound emissions come from three main activities: combustion of fuel, equipment leaks, and storage tank losses. Similar to particulate matter, volatile organic compounds are formed during the combustion process. NEXT is required to monitor the quantity of each fuel combusted to calculate their actual emissions and ensure they remain in compliance with the volatile organic compound plant site emission limit. Equipment leaks and storage tank losses are considered fugitive sources of emissions because the emissions escape to the atmosphere from any point or area that is not identifiable as a stack, vent, duct, or equivalent opening. It's not possible to continuously monitor emissions from fugitive sources of emissions. Monitoring of equipment leaks is required by the leak detection and repair program, a typically achievable control technology requirement in Condition 4.4 of the permit. Similar leak detection and repair programs are considered standard for petroleum and chemical manufacturing industries. The proposed monitoring for storage tanks provides all necessary information to calculate volatile organic compound emissions. Calculating emissions from storage tanks is a complicated endeavor and the best available methodology is currently the equations included in AP-42, Chapter 7. This analysis requires site specific information (e.g., temperatures, tank parameters, volatile organic liquid properties) which NEXT must obtain either through manufacturers, government entities, and/or testing. The commenters did not identify any specific deficiencies in the proposed monitoring so no changes are being made to the proposed permit due to this group of comments.

8.3. DEQ received the following comments claiming that DEQ should not allow NEXT to self-monitor:

- a. *The company is tasked with self-monitoring and self-reporting -- which relies on the integrity of the company. Several attendees also raised the question of enforcement.*
- b. *There are too many sections in the present permit where monitoring data from NEXT Renewables must be trusted including checking for leakage on site at all pipe joints*
- c. *[The permit] relies on the company to monitor itself. And with billions of dollars invested in this project, true accountability from the company to identify transgressions is extremely unlikely.*
- d. *I do not think it is appropriate for us to approve a permit that would rely on the company's self-monitoring.*
- e. *Moreover, I am worried about how the DEQ is evaluating the volume of VOCs emitted by the stack at the proposed plant. DEQ seems to rely on NEXT to self-monitor, but this does not provide for increased emissions during startup, shutdown, and process interruptions.*
- f. *How is it that we would allow this massive industrial site to be constructed and then not demand very strict and continuous regulation around air pollution controls and not just rely on the company themselves to do those air pollution controls?*

DEQ Response: DEQ will review all reports and notifications submitted by NEXT. The self-monitoring and reporting requirements in the permit are representative of most requirements for all air, water and land permits issued by DEQ and EPA. DEQ staff will also perform on-site inspections to ensure that NEXT is complying with all applicable permit requirements. Periodic source testing (which tests air emissions at the source) is performed by an independent third-party company, and DEQ staff can witness this testing on site.

8.4. DEQ received the following comments regarding emission testing:

- a. *What actual testing of air quality has DEQ done to determine if current industries are within limits of their permits?*
- b. *HOW ARE ALL THESE AIRBORNE PARTICULATES and POISONOUS CHEMICALS BEING MEASURED? By Whom? How often?*

DEQ Response: Direct measurements of emissions is accomplished using continuous emissions monitoring system and periodic source testing. NEXT will continuously measure emissions of nitrogen dioxide from the boilers, jet fractionator, and hydrogen plant with a continuous emissions monitoring system that must be certified to EPA and DEQ standards. Periodic source testing (which tests air emissions at the source) is performed by an independent third-party company and DEQ staff can witness this testing on site.

8.5. Ambient Monitoring: What consideration is given to testing water and spawning sediments to determine existing levels of pollutants BEFORE ADDING MORE?

DEQ Response: DEQ monitors pollutant concentrations in ambient air through its ambient monitoring network to demonstrate compliance with the applicable national ambient air quality standards. The nearest DEQ monitor is located on Sauvie Island and measure meteorological data and concentrations of Ozone and particulate matter equal to and less than 2.5 microns in size. As part of the air quality permit application, NEXT provided dispersion modeling analyses

for particulate matter equal to and less than 10 microns in size, particulate matter equal to and less than 2.5 microns in size and nitrogen dioxide. The results of the modeling indicated that NEXT's maximum contribution are below the significant impact level, meaning that the facility is not anticipated to cause or contribute to any violations of the national air quality standards and that fence-line pollutant monitoring is not required.

8.6. Control Devices: I also fear the control measures relied upon might not be effective.

DEQ Response: The control devices required by the proposed air quality permit; selective catalytic reduction, oxidation catalysts, baghouses, dry sorbent injection, flares, and thermal oxidation are proven control technologies utilized by many sources throughout the world to control emissions of criteria pollutants. NEXT will utilize a continuous emissions monitoring system to continuously monitor nitrogen dioxide emissions and will be responsible to immediately engage in corrective actions if emissions are above the proposed emission action levels in Condition 4.3.h. of the proposed air quality permit. NEXT is also required to perform testing from multiple emissions units to determine if the control devices are adequately controlling emissions. If test results indicate that emissions are higher than expected then NEXT must determine if additional controls or operational requirements are necessary to maintain compliance with the plant site emission limits. As is the case with all facilities DEQ regulates, if a facility is out of compliance, DEQ will determine the appropriate enforcement response.

9.0 COMPLIANCE

9.1. DEQ received numerous comments regarding the history of key personnel involved with the proposed facility. The following are provided as examples, but are not an exhaustive list of such comments:

- a. *Executives at NEXT Renewables have a close relationship with Global Partners which has had violations with minimal consequences.*
- b. *NEXT has proven itself non-credible in another proposal that was rejected, the Waterside Energy LNG proposal in Longview WA. Further, according to Sightline, "Waterside Energy CEO Lou Soumas has been linked to shady dealings with similar projects, including failing to provide evidence of sufficient financial backing for a proposed oil refinery in Longview and abandoning a biodiesel plant in Odessa, Washington without paying for cleanup or outstanding taxes" (www.sightline.org/2019/06/12/lower-columbia-river-critical-front-on-the-thin-green-line/).*
- c. *Ascertaining the ownership and financing behind this NEXT proposal has been challenging, to say the least. More like analyzing a shell game. Research published in Works in Progress (<https://olywip.org/can-longview-oil-refinery-pass-due-diligence-an-examination-of-the-companies-and-individuals-behind-the-dubious-proposal/>) raises serious questions about the whole NEXT/Waterside Energy entity that DEQ must answer before issuing this permit.*

- d. See also (https://opencorporates.com/companies/us_de/5742382). NEXT officers Soumas, Pistulka, and Efir all are linked to the names of these companies: Riverside Refining, LLC; Evergreen Renewable, LLC; TransMessis Columbia Plateau, LLC; TransMessis Columbia Renewable Energy, a joint venture of Evergreen Renewable LLC and Access Global Investments LLC; Access Global Advisors, LLC; and Access America Fund, LP, and, most recently, Waterside Energy, LLC. I repeat: NEXT is a shell game.
- e. This plant has changed their feed stock and their story about where it's coming from multiple times.
- f. Since the folks at NEXT Renewables are Texas financiers, not neighbors, any fines or, quote, "waiting periods" imposed upon their proposed, but surely dubious, given their ignominious track record in Odessa, Washington, self-reporting of their inevitable leaks, errors, and accidents are accounted for as a cost of doing business here in sleepy Columbia County.
- g. The Port of Longview decided to not allow NEXT to build a plant there. "This decision is not about fossil fuels," Port Commissioner Doug Averitt said. "It's about the proponent not living up to his requirements and fulfilling his obligations."

DEQ Response: It is DEQ's responsibility to write the proposed permit to address all air quality regulatory requirements that are applicable to the NEXT facility as described in their permit application. NEXT may construct only those emissions generating units as described in the application and as included in the permit. NEXT must apply for and must receive approval for a permit modification or a notice to construct before operating any emission generating equipment that was not included in the permit. The proposed permit must include appropriate and sufficient monitoring, recordkeeping, and reporting requirements to allow NEXT and DEQ to verify the company's compliance status. DEQ staff also perform on-site inspections, both announced and unannounced, to ensure that NEXT is complying with all applicable permit requirements. Violations of the permit or other DEQ regulations would be addressed through DEQ's enforcement process and could result in civil penalties. Serious ongoing violations could result in DEQ revoking the permit should the company prove unable or unwilling to comply.

9.2. DEQ received the following comments regarding potential violations of the proposed permit:

- a. *What is done to stop violations of air permits?*
- b. *If startups or shutdowns or other VOC-emitting events occur more often than expected, the facility could exceed the plant site emission limit.*
- c. *And with billions of dollars invested in this project, true accountability from the company to identify transgressions is extremely unlikely.*
- d. *How can you be certain these numbers [i.e., emission rates] won't exceed original proposals after the facility's construction?*
- e. *Will you allow NEXT to apply for an amended permit if and when their pollution far exceeds this draft permit's assumptions and we are held hostage by the massive infrastructure at Port Westward?*

DEQ Response: DEQ's Office of Compliance and Enforcement has a set process used to determine the appropriate response for non-compliance with applicable permit conditions and environmental laws and permits. Exceedance of a plant site emission limit is considered a Class I violation and would result in DEQ enforcement. DEQ will review and appropriately respond to any air quality permit modification applications submitted by NEXT. The proposed permit limits criteria pollutant emissions below the major source threshold of 100 tons per year. If DEQ discovers that potential and/or actual emissions exceed 100 tons per year NEXT would be in violation of the proposed permit, would need to be evaluated under Major New Source Review, and would be required to submit a Title V application within 12 months of becoming subject to Title V.

9.3. DEQ received the following comments regarding odors from the proposed facility:

- a. *Another concern would be noxious odors that could come from the conversion of animal fats and products and waste oil into diesel.*
- b. *The proposed refinery will smell extremely bad, which is a direct attack upon the people living and working in Port Westward.*
- c. *DEQ does not adequately address the potential to emit noxious odors with a resolution process that provides little protection for the community, leaving complaint resolution to the polluter, itself, who has proven time and again to be unaccountable to the communities they've entered.*
- d. *The Oregon law covering odor emission has no teeth, from what we have heard, and we will have no effective recourse once the plant is up and running if there are noxious odors, as has occurred with other renewable biodiesel plants in the US.*
- e. *One really big objection that I have is that biofuel manufacturer often creates a certain noxious odor. One infamous example is the biodiesel plant in Carthage, Missouri in the early 2000s. The odor there was so strong and objectionable that the governor finally had to step in and shut the plant down because of its negative effects on the tourist trade and businesses. Does DEQ have a plan with teeth in it to address this problem? We can't just tell folks to hang onto those N95s because they might come in handy here. This will have an impact on the quality of life not only of people living in this area, but folks who come to the farmer's market and tourists and fishermen, visitors at the monastery and many others. It could affect real estate values on local businesses.*

DEQ Response: Issues associated with odors can be addressed through DEQ's nuisance rules in OAR 340 Division 208. DEQ is unable to include odor regulations beyond those provided in DEQ's rules.

10.0 OTHER COMMENTS

10.1. DEQ received the following comments requesting a thorough review of NEXT's air quality permit application:

- a. *NEXT Renewables proposal should go through careful review by our professional regulators to ensure compliance with existing laws.*
- b. *I urge you to apply due diligence to the oversight, (sic) see the compliance that NEXT Renewables offer, then embrace the opportunities they create for our fellow Oregonians.*
- c. *Why I'm concerned about this; I truly don't know. You know your state, it's people and it's constituents. I'm for fair wages, and being a true steward of the land. In writing this I do not advocate pro/anti union. Just make the most appropriate decisions, for the tax payers, the individuals involved; and most importantly the environment...*
- d. *Please provide an adequate response to my questions so that we, the residents of the area, can know that our rights to clean air are being taken seriously.*

DEQ Response: DEQ staff thoroughly reviewed the NEXT air quality permit application prior to placing the permit documents on public notice. DEQ staff read through all comments received during the public comment period, responded to each comment, and determined whether any revisions or additional clarifications were necessary.

10.2. DEQ received the following comments related to environmental justice:

- a. *DEQ should address the environmental justice implications of NEXT's ozone-producing volatile organic compound (VOC) pollution in the nearby town of Longview, WA. Washington's Environmental Health Disparities Map shows that Longview already has high rates of environmental health disparities caused by a convergence of factors, including elevated ozone levels. Despite the fact that Longview is less than 12 miles from NEXT's proposed refinery, DEQ's permitting documentation does not appear to consider any effects on nearby Washington communities already burdened with environmental health disparities*
- b. *Neighbors for Clean Air has concerns about the Environmental Justice issues that the Next Renewable Facility may cause. The Oregon DEQ adopted an Environmental Justice Policy in 1997 among other things to work with local environmental justice groups and others to reduce diesel emissions and improve air quality to protect those most at risk from air pollution. In concern to the Next Renewable, the facility may be making renewable diesel, but the raw oil feedstocks are planned to arrive primarily by diesel powered rail. The continued expansion of fuel by rail facilities along the Columbia River Gorge does not align with the DEQ's environmental justice policy to protect communities most at risk from air pollution.*

DEQ response: DEQ recognizes that low-income communities and communities of color are systemically more impacted by industry due to patterns of land use and economic inequality. The Environmental Quality Commission established the Cleaner Air Oregon program to ensure that all Oregon communities were equitably safeguarded from the risks of exposure to toxic air contaminants from permitted facilities. NEXT completed a Cleaner Air Oregon risk assessment as part of the permitting process indicating that risk is below the threshold for which any **additional** permit conditions are required under the Cleaner Air Oregon program to mitigate potential risk from toxic air contaminant emissions. NEXT demonstrated that, when operating at capacity, its cancer and noncancer chronic and acute, or short-term risk are all below the source permit level, which is established in rule and is considered protective of the health of residents,

children, and workers nearby the facility. Where facilities are allowed to locate is a local zoning issue and not within DEQ jurisdiction. DEQ received a land use compatibility statement from Columbia County that allows this type of operation to be located at their current site. DEQ evaluates the air emissions for the type of activity or activities proposed for a certain facility and, if the facility meets all applicable requirements in current environmental law, DEQ issues a permit and will then monitor the facility for ongoing compliance.

10.3. Federal Jurisdiction - I don't understand why the feds aren't looking at this because this is federally protected area. Our Native American populations all up and down the river are doing salmon and other species restoration here.

DEQ Response: EPA delegated authority of minor source air quality permitting in Oregon to the DEQ and Lane Regional Air Protection Agency. As part of the public notice, DEQ provided notice to the applicant; persons on a mailing list maintained by DEQ, including those who requested in writing to be notified of air quality permit actions; Local news media; and interested state and federal agencies as required in OAR 340-209-0060. In addition, DEQ notified the Columbia River Inter-Tribal Fish Commission, the Confederated Tribes of Warm Springs, the Confederated Tribes of Siletz Indians, the Confederated Tribes of Grand Ronde, the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, Portland Audubon, Columbia Riverkeeper, Envision Columbia County, 350PDX, Oregon Physicians for Social Responsibility, the Oregon Center for Sustainable Economy, Friends of the Columbia Gorge, Neighbors for Clean Air, NW Environmental Defense Center, the Great Vow Zen Monastery, and 1000 Friends of Oregon.

10.4. DEQ received the following comments regarding water and land quality issues:

- a. *The Beaver Drainage District opposes the project because drainage would be changed by building this refinery. NEXT wants to change the dyke system.*
- b. *Also, water sewage treatment amounts would be increased, and overflows would endanger the Columbia Estuary.*
- c. *The catalysts used in this process [hydrodeoxygenation] contain a variety of heavy metals and toxic chemicals.*

DEQ response: DEQ's permitting action and authority is confined to the equipment and activities of the NEXT stationary source that emits air contaminants. The permit proposed for issuance to NEXT is an air contaminant discharge permit; its content is specific to the regulatory requirements of DEQ's stationary source air quality program. While water and land quality are elements of DEQ's authoritative concern, DEQ is confined to our ability to regulate air contaminant emissions from the source under our regulatory authority for this permitting action.

10.5. DEQ received the following comments that were outside the scope of an environmental permit:

- a. *This, like numerous other issues (climate change, gun safety, immigration reform, prison reform, education reform, short-term lending regulation, healthcare reform, banking*

regulation, opioid regulation) remains a vexing problem primarily due to corporations' ability to curry favor with elected officials. The corrupting influence of money in our political system is undermining our democratic traditions and discouraging Americans from voting and/or running for office. This ominous development may well end our experiment in representative democracy unless we alter this decades-long trend. For the sake of the republic, we must amend the US Constitution to state that corporations are not people (and do not have constitutional rights) and money is not speech (and thus can be regulated by state and/or federal campaign finance laws). Short of accomplishing this, no other reform of

- b. ***Section 13.4** Masking of emissions: The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person. I want to use this language the next time Dr Fraud Chee wants to mask up civilization to further his agenda with the reptilian overlords that live under the ice in Antarctica. 😊*
- c. *I feel that we need simply more stringent regulations.*
- d. *There are 120 million acres of overgrown forests in the Western US. In order to make one of those acres fire resilient, you need to thin the small trees out, leave the big trees, and you've produced about 10 tons of three-inch diameter wood that for the most part, no mill wants. And therefore there is no present market for that wood product that you've pulled out of the forest. You could solve that problem by turning the 10 tons of small diameter material into a saleable product by converting it in the forest to other products, like wood vinegar, or biochar, or a woody biomass biodiesel, which is compatible, almost comparable to vegetable oil in terms of its heat content. And so if you had new technology, small distributed conversion plants in the forest, converting this waste wood into bio oil in the forest, and then trucking just the oil, not big long trees, just the oil, to a renewable diesel plant, you've got a formula for driving dollars back into the forest to cover the cost of fire mitigation.*
- e. *In reality, Next is planning to build the largest facility of Renewable Fuels, intended for an end product that is still experimental. They hope to produce synthetic diesel, naphtha (sic) and A1-jet fuel (SAF) derived from organic matter. These synthetic fuel products have exactly the same hydrocarbons as their petroleum-based originals, making it just as hazardous. We need to start thinking of sustainable fuel as synthetic fuel, because natural plant oils and animal tallow cannot be used as a fuel substitute without a series of harmful chemical reactions.*

DEQ Response: DEQ's permitting action and authority is confined to the equipment and activities of the NEXT stationary source that emits air contaminants. The permit proposed for issuance to NEXT is an air contaminant discharge permit; its content is specific to the regulatory requirements of DEQ's stationary source air quality program. DEQ's authority in this permitting action is defined within the Oregon Administrative Rules. DEQ reviewed the NEXT facility's operations and design in a manner consistent with this defined regulatory authority. Our review did not find the facility's current or proposed operation to present an imminent danger to human health or the environment.

10.6. Notifications - Section 10.1 I want to know how the surrounding community will be notified should excess emissions that could endanger public health be emitted?

DEQ Response: Significant and persistent violations of the facility's permit would result in enforcement. DEQ typically reaches out to local community and environmental groups to share information when such enforcement occurs. There is no specific direction in rule on formal notification of the public for permit violations. DEQ's excess emission provisions, OAR 340-214-0300 through 340-214-0360, include provisions for notifications to DEQ but do not require notifications to the public.

10.7. Wording and tone: The wording and tone of the presenters seemed to imply that this project will go forward. I would hope that DEQ's primary focus would be to protect residents and natural spaces in Oregon, rather than to accommodate fossil fuel companies. (I have seen how several fossil fuel companies have been trying to get a foothold in the Northwest. Here is yet another project for the Thin Green Line to oppose.)

DEQ Response: DEQ does not issue permits to facilities that cannot comply with their standards. DEQ staff thoroughly reviewed the NEXT air quality permit application and drafted a permit to ensure that the proposed operations would not result in any violations of the national ambient air quality standards and would not pose undue health risks to the surrounding population. During public hearings, staff strive to use language such as "the *proposed* project *would* create emissions..." to communicate that the project has yet to be approved.

10.8. DEQ received the following comments regarding NEXT's liability:

- a. *What extent of liability would a Limited Liability (sic) Corporation have to local farmers If crops are damaged or destroyed by air and water pollutants produced by "Next"?*
- b. *How will NEXT be held accountable if these pollutants cause a crop to fail or contaminate our local food supply or in the case of Seely Mint, our national food supply?*
- c. *DEQ fails to provide for a resolution process if the pollution has a negative impact on neighbors, health, and crops.*

DEQ Response: DEQ's Office of Compliance and Enforcement has a set process used to determine the appropriate response for non-compliance with applicable permit conditions and environmental laws and permits. DEQ's enforcement authority is limited under state law to assessing civil penalties, ordering a facility to operate in compliance with air quality rules, and, in extreme cases, revoking a facility's permit. DEQ also has authority under OAR chapter 340, division 208, to require a facility to correct any operations it undertakes that constitute a nuisance—a substantial and unreasonable interference with another's use of their property. When appropriate, DEQ exercises that authority to address the types of concerns raised in these comments. In addition, individuals also have the right to pursue their own legal remedies if a permitted facility's operations cause damages to their property.

10.9. Emergency Event - I am also very concerned about the volatility of all the various fuels located within the 5,000 acres. Natural gas, hydrogen, SAF, crude oil. What would the air quality be like if any of these fuels ignited? How devastating would that be?

DEQ Response: Air quality will be diminished during any catastrophic event. Facilities normally operate in a way to prevent catastrophic events, such as fires and structural collapses. There are regulatory entities, such as the occupational safety and health association, fire marshall, and Oregon state board of examiners for engineering and land surveying, that have rules and regulations meant to prevent these types of situations.

11.0 CONCLUSION

Based on the comments received during the public review process DEQ intends to issue the proposed air contaminant discharge permit with the following noted revisions:

11.1. Permit revisions:

1. The formatting in Condition 6.7 was revised to remove the “a.”
2. Condition 9.4.b. now specifies records for hours of normal operation.
3. A new condition, 9.4.c. was added requiring NEXT to maintain records of hours of startup and shutdown operation for Boiler 1, Boiler 2, ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, ECO3I, H2HTR, and JETFRAC.
4. Conditions 9.4.c. through 9.4.s. were renumbered to 9.4.d. through 9.4.t.
5. Condition 10.5.a.ii. now requires the annual report include hours of operation (both startup/shutdown and normal operations) for the associated combustion units.
6. Condition 15.0 now includes hourly startup and shutdown NO_x and CO emission factors for Boiler 1, Boiler 2, ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, ECO3I, H2HTR, and JETFRAC.
7. Condition 16.0 now includes clarification that records for hours of operation of Boiler 1, Boiler 2, ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, ECO3I, H2HTR, JETFRAC must include both startup, shutdown and normal operation.

DEQ would like to thank all individuals who took the time to review the proposed permit as well as those who attended the virtual public hearing and/or submitted comments.