

August 15, 2020

Hon. Robert S. Duchesne, Presiding Officer
Maine Board of Environmental Protection
17 State House Station
Augusta, ME 04330

File No: A-14-781-A-N
 L-28319-26-A-N
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 L-28319-L6-D-N
 L-28319-TW-E-N-N
 W-009200-6F-A-N

RE: Air Permit Application Process Logistics Questions

Dear Presiding Officer and Board of Environmental Protection:

We have gone over each of the three sections of the Findings of Facts and find that section II, the Best Practical Treatment Section, is very well done. This section is the heart of the requirements for Chapter 115. The engines selected are state-of-the-art, especially with respect to their Tier IV air emissions control. The emission calculations seem reasonable and fitting for the one scenario examined and modeled.

While it is questionable why one would want eight engines when one could get larger CHP units and have fewer units to maintain that will provide lower overall emissions, that is design decision and not a permitting issue. It is simply a financial decision to delay initial capital costs and transfer them to maintenance costs over time at the expense of some added air emissions during operation. When an Applicant decides to maximize their emissions from a power plant such as this one to just under the allowable limit, this financial decision does have some other air permitting consequences.

The application seems to have been processed in a manner simply for compliance with the Maine SIP as if it were a “true” minor source and the only source, but not for demonstrating compliance with the state ambient air quality standards as one of many sources in the area. Therefore, the statement in the standard Order, which comes directly from 38 M.R.S. Chapter 4, Section 590: “***...the Board concludes that the emissions from this source...will not violate applicable ambient air quality standards in conjunction with emissions from other sources***” cannot be validated based upon the information in the record.

While it is understood that in many cases, sources labeled as “insignificant activities” for SIP compliance may also be insignificant contributors to ambient air quality as well, it is only the case if there is sufficient buffer remaining in allowable emissions after the sources that trigger a license have been evaluated. In this case, the facility has equipment in sufficient quantity and size to be considered a major source of air pollution if operated continuously. The Applicant has elected to take a “synthetic minor” to reduce the annual emissions to levels below the major source threshold for nitrogen dioxide (NO₂) and carbon monoxide (CO) as these two compounds are inversely related. However, in doing so, the annual fuel limitation only restricts annual emissions and not short-term emissions, so the eight ancillary power plant engines will use up nearly all, and possibly more than (with final design structures considered for downwash), the allowable emissions for 1-hour NO₂, even with the very low engine-specific emissions

data from the manufacturer. Initially, the Application used generic emission rates, then specific Tier IV emission rates, and finally now, it uses engine-specific data. While this data is representative for the engines running with a single fuel type in a controlled test environment, it is much, much less conservative. As a result, fuel flexibility, monitoring requirements, emissions from start-up and shut-down all come into play as necessary additions to the discussion. When the generic emission factors were proposed initially, one could easily suggest that start-up/shut-down emissions were included, as well as normal drift from the setpoints with the very complicated air pollution control equipment required to meet the emission rates proposed, and also for an array of “distillate fuels”. As with all environmental disciplines, if one eliminates overly-conservative assumptions then it complicates the emission estimating, and the requirements for demonstrating compliance. This is not specific to this Applicant or this Application, but is simply a fact known among the environmental consulting industry.

Also, if one decides to consume nearly all of the allowable short-term emission standards in their Application due to their design decisions, the result may not leave enough room for the remaining sources that are categorized as “Insignificant Sources” in Appendix B or Chapter 115. In this particular case, on a short-term basis, (when secondary emission sources such as temporary, portable, and mobile sources will often run continuously during the averaging time), there is very likely no such thing as an “Insignificant Source” with respect to maintaining ambient air quality standards when the primary source(s) already consume nearly all of the standard.

The Intervenor is in agreement with DEP that this is an unusual case. It is not one DEP often needs to address. The simple reason is because 99+% of the time, this location would be deemed unsuitable by a developer for a multi-engine power plant during their site selection process. This simply may be another example of the Applicant’s lack of Technical Ability to visualize and develop a site to their vision. Unfortunately, the design as proposed is what it is, and everyone needs to adjust accordingly.

As EPA has explained in the attached guidance, facilities where they have one major emitting activity and then lesser activities, can use the ‘cutoff’, (i.e. the “Insignificant Activities” in Appendix B of Chapter 115) for purposes of defining the source as “synthetic” or “true” minor source, but EPA also asserts: ***“Note that EPA does not mean to imply that overall these types of co-located sources are not environmentally significant - - just that they probably have little bearing on whether a source is major or minor.”*** They actually use an example of ***“small portable generators”*** as something that typically could be insignificant, but may not be if there is little-to-no remaining allowable emissions.

Please note that this is an application for a large fish farm with a power plant (and other major ancillary utilities) and not simply a power plant in a vacuum. This point was raised by one of the Board members during deliberations on May 20th as well, and should be part of the Findings of Fact.

The Chapter 115 License Application is deficient not because the Applicant has not provided the proper application materials per 06-096 C.M.R. 115, 2(B) for the ancillary power plant, but because the Applicant has not provided the proper application materials per 06-096 C.M.R. 115, 2(B) for all of the other significant or insignificant sources from the primary fish farm, other ancillary utility sources on-site, secondary emissions, construction emissions, odor control unit emissions, direct vent emissions, etc. that may, either on their own or combined with this ancillary power plant, have compliance concerns, and are necessary to condition the “source” (i.e. the overall facility). Often, part of the confusion with air quality permitting and compliance is the word “source”. “Source” in air quality has two broad definitions that are simply analogous to individual “air contaminant sources” within a site under common control that have the potential to produce air pollution, and the classification of the facility as a whole with respect to air permitting requirements, and SIP compliance. In this case the engines are being permitted as a “synthetic minor source”, but they are individual “air contaminant

sources” as well. It is important to remember that the facility is being permitted within the air quality region for SIP compliance AND within its ‘fenceline’ for local compliance.

One thing is certain with this facility as proposed in the Application(s); it will consume most of, all of, or more than, the immediate areas allowable short-term nitrogen dioxide (NO₂) air concentration when operating. As a result, sources that may be “insignificant sources” for regional air quality compliance, simply cannot be “insignificant” for local air quality and public health concerns.

Comments Outline

These comments are broken up into multiple parts. Please note that double quotes used for words or phrases are defined later in the document, and single quotes are used for common air quality ‘slang’. These comments are present with the following outline:

- (1) A discussion of the air quality dispersion modeling information missing from the Findings of Facts that are relevant to this Application.
- (2) A number of laws and regulations that are pertinent to this particular synthetic “minor source” Application for the Nordic Aquafarm facility that are missing from the Findings of Facts.
- (3) A chronological discussion of the Findings of Facts and some individual concerns with things that have been omitted or could be revised for a clearer finding; some with recommended conditions or required assessments.
- (4) An example from EPA from a 1998 memorandum that is still pertinent today, and listed on the EPA website for guidance. Although the pollutant in the example is sulfur dioxide and not NO₂, the important distinction of SIP compliance emission source considerations and consideration for the same sources with respect to their need to meet ambient air quality standards is completely applicable. This document is included for clarity of the permitting requirements only. There is no intention to suggest any of the calculations are pertinent to this Application.
- (5) A summation of our comments and concerns.

Intervenors Demonstrated Potential 1-hour Nitrogen Dioxide (NO₂) Exceedances on Three Occasions

Intervenors on three separate occasions demonstrated exceedances of the 1-hour nitrogen dioxide standard simply by considering more detailed information readily available from the application materials in the record, but not provided by the Applicant to the DEP as part of the response to the DEP air dispersion modeling information data request. These three instances should be part of the Findings of Facts to demonstrate that the “synthetic minor source” itself may or may not ultimately be in compliance, but the process of modeling clearly demonstrates that there is little to no room for other emissions.

The potential modeling exceedances in the Intervenor’s analyses are not for lack of examination on DEP’s part, as DEP made multiple requests for site specific information, and for any potential additional air contaminant sources of potential air pollution. In fact, for the last round of modeling, DEP actually contacted the engine manufacturer themselves to obtain specific engine air emission data for the proposed engines burning diesel fuel, but again unfortunately, even with the lower, very site specific air emissions, the site design data was still incomplete, and as a result, both times DEP modeled the facility it demonstrated compliance but only with the very basic data provided by the Applicant.

Each round of Intervenor air dispersion modeling is discussed below and should be added to the Findings of Facts to demonstrate how little room there is for additional “air contaminant sources” for this proposed facility and for the immediate area surrounding it.

Intervenor Initial Air Dispersion Modeling

In the first dispersion modeling exercise, the Intervenor presented air dispersion modeling results via the current EPA approved model to DEP, prior to a BEP hearing that was held to discuss the inclusion of air quality, noise, odor and dust in the formal hearing process, as these are all “air contaminant sources”, interrelated, and potential sources of air pollution as defined by Maine laws. The formal State of Maine definition of these terms are defined in the next section of these comments, but make no mistake, the omission of these items in this draft Fact of Findings, draft Order, and specific permit conditions for a fish farm, slaughterhouse, power plant, wastewater plant, solid waste handling facility, and water treatment plant, ensures that this air permitting process is incomplete, and since the Applicant did not present specific process information for these “air contaminant sources”, the Applicant has not met its burden of proof for compliance and conditioning, and therefore cannot receive a permit at this time. This lack of required information to properly condition the permit should be added to the Findings of Facts.

The Intervenor air dispersion modeling was limited to ONLY the operation of the engine plant. The Intervenor repeatedly asserted that the ALL sources needed to be modeled to determine compliance potential for the source (that includes this proposed synthetic minor source), but could not include information that was not part of the record supplied by the Applicant.

The initial modeling results for only the “minor source” showed clear exceedances of the 1-hour NO₂ with the original stack height of 45-feet as shown in the plans submitted as part of the applications in a vacuum with no other on-site source, off-site source, or even background emissions. The source emission alone exceeded the ambient air quality threshold. The Intervenor modeling files were offered to DEP, if desired, but DEP chose to model the proposed land-based aquafarm facility directly, by requesting model input information directly from the Applicant.

It is important to note that any need for additional data specifically for dispersion modeling only reinforces the obvious incompleteness of the original applications. This dispersion modeling summation, the need to request additional data for DEP to perform in house modeling, and this potential exceedance with the maximum 45-foot stack heights needed to comply with the City of Belfast’s zoning requirements, should be included in the Findings of Facts.

This first modeling exceedance for short-term ambient air limits, was not unexpected given the heights of the surrounding buildings, and the fact that the “synthetic minor” fuel restriction of a maximum number of gallons of fuel on an annual basis does nothing to reduce the potential or actual short-term emissions from any facility. This large facility would greatly exceed the “major source” facility threshold if it were to be operated continuously (without this synthetic minor annual fuel restriction). As the Intervenor has said all along, there is no problem permitting this source as a synthetic minor source per Maine’s SIP program, but that does not mean that the facility does not need to be scrutinized, as one would scrutinize a major source of this size facility with respect to short-term emissions.

The fact that the annual “synthetic minor” restriction does little-to-nothing to reduce short-term air emissions should be included in the Findings of Facts.

This original stack height was shown on the Applicant’s plans because this maximum height is necessary to meet the Belfast zoning height requirements for this industrial power plant at this site. When DEP made their request for information to the Applicant, somehow the stack height was changed in a manner that was in direct conflict with their own drawings in the record. It went from 45 feet to 65 feet without any explanation to the DEP about how this stack height exceedance was going to be exempted

from the local zoning requirements. Even with this newly added 20-feet of stack height, in the second round of modeling, (this time performed by DEP), there were still inconsistencies with conflicting and incomplete data provided by the Applicant in their response to the data request. These inconsistencies were obvious from the testimony at the formal hearing in February 2020. The Applicant's lack of consistency is acknowledged in the current draft Findings of Facts.

Intervenor Second Round of Air Dispersion Modeling

Prior to the hearing the Intervenors requested and received the actual dispersion modeling files used by DEP in their first round of modeling. A second round of dispersion modeling by the Intervenors, with these DEP files, and only simple corrections for the inconsistencies from the response to data request and the actual application materials, once again demonstrated short-term exceedances of the ambient air quality standards with the emission factors presented by the Applicant and in the record. These results were offered to DEP for review as part of the draft and final pre-hearing testimony. The inconsistencies included:

- (1) An assumption of a fence completely around the facility. DEP made this assumption because the information provided by the Applicant to DEP did not properly explain the minimal fencing plan in the record, even though the DEP information request clearly required it. The Applicant could have asked DEP to correct this obvious error and omission prior to the hearing, but chose not to do so.
- (2) The building height data provided to DEP did not include the roof-top equipment 'doghouses' shown on the plans, even though DEP clearly needs the maximum building heights. When this issue came up at the hearing, the Applicant defended the height provided data as "sufficient" because modeling with specific doghouses is not typically undertaken by DEP. No. That is not correct. DEP typically models the maximum heights supplied by the Applicant. The Applicant chose not to provide these added heights for the structures on the roofs for the rooftop equipment, even though their information in the record clearly shows these structures.

As noted through testimony at the hearing the Applicant had opportunities to either request DEP model with the higher height or to do their own modeling with the proposed locations of the individual doghouses. Since they chose not to do it, a second round of DEP modeling was required and the Intervenors completed a third round of modeling with DEP's actual revised second round files and other remaining inconsistencies from the hearing. These facts should be included in the Findings of Facts.

Intervenor Third Round of Air Dispersion Modeling

The Power Plant was remodeled by DEP after the hearing with the doghouses on the large fish tank buildings, but the structures on the engine buildings themselves were not included. The inconsistencies this time included:

- (1) The engines all have cooling towers on the roof tops, which were not formally specified in the materials provided to DEP but are in the Drawings and were discussed by the Intervenors previously.
- (2) The exhaust stacks were shown as rectangles enclosing four groups of two stacks on the newer plans, but there was no elevation information or exhaust detail information included to DEP.

These two additional elevated structures will further increase downwash, and as a result the third round of Intervenor dispersion modeling again demonstrated potential exceedances from the power plant “minor source”. The engine and stack buildings have their own HVAC equipment and doghouses as well. Furthermore, there was no dispersion modeling of the facility without Phase 2 construction.

The final comments from the Intervenors, after the Intervenors completed their third round of modeling, noted that for the third time, the facility could exceed the ambient air quality standards with the information in the record. Again for a second time, the Intervenors completed the modeling with all of DEP’s assumptions, in the actual DEP modeling files provided by DEP, with only a few changes to address inconsistencies in the record. Surprisingly, BEP chose to not request that DEP revise its modeling again to address the obvious inconsistencies, and closed the record on this Application instead. These facts should be included in the Findings of Facts.

At the hearing, the Applicant attempted to assert that this industrial power plant was going to emit their exhaust from architectural ‘chimneys’ instead of stacks to allow them to exceed the local zoning requirements. Even DEP air quality staff acknowledged during deliberations that this power plant is larger than what would be required for emergency power plants at most wastewater treatment plants, so this seems like a serious stretch of the imagination. But hypothetically, if one assumes they are ‘chimneys’ for a moment, there was no design or permitting information provided with respect to how these stacks would be fitted with the proper architectural enclosures, caps and screens as required for NFPA 211 for Chimneys, Fireplaces and Vents, as required by the state Fire Marshall. There was also no explanation or justification about how this chimney classification typically reserved for residential furnaces or fireplaces made sense for these very large industrial stacks, or how this unusual ‘chimney’ designation had been, or would be, approved by the City.

While it is understood that City permitting and DEP permitting issues are separate, restrictions or requirements in one permitting area that affect the other, must be incorporated, especially in this case as the ‘chimney’ enclosure requirements will drastically impact the exhaust release. The Applicant would need to meet chimney aesthetic and enclosure requirements, which would further restrict emissions and lead to higher concentrations off-site. The DEP modeling was not revised to reflect these restricting structures, as they were never provided by the Applicant. These relevant facts should be included in the Findings of Facts.

What did the Multiple Rounds of Air Dispersion Modeling Demonstrate?

Although the staff comments during deliberations, the Applicant’s testimony, and the draft Findings of Facts, refer to the dispersion modeling as “not required for minor sources” that simply is not the case. Dispersion modeling may not be required for all minor sources, but compliance demonstration is most certainly required for projects that propose to consume such a vast percentage of the allowable emissions for an area.

Compliance determinations (with dispersion modeling as one possible tool for that compliance determination) must be considered for ALL projects whether proposed as major or minor. And while major sources require modeling, it should be considered for all minor sources, and then, where it is clearly not a concern, it could be eliminated. The deliberation discussion seems to be centered on the process being the other way around, where a compliance determination is not required, unless someone suggests it may be necessary. It is the Applicant’s burden of proof to comply with ambient air quality standards, and not the Intervenors to demonstrate that they do not comply. The Applicant simply has not done that to-date.

With such an obvious consumption of the allowable limit demonstrated by this source through the dispersion modeling, without a proper site-wide compliance demonstration, the Findings cannot justify compliance with the requirements of the second bullet in the Order ***“the Board concludes that the emissions from this source...will not violate applicable emission standards...”***

There are four things that these multiple air dispersion modeling iterations have confirmed.

- (1) There is absolutely no doubt that if this facility were installed at the original stack heights proposed of 45 feet, prior to the Intervenor’s dispersion modeling submission to BEP, that the project as proposed would have been in violation of the state ambient air quality standards and therefore the National Ambient Air Quality Standards (NAAQS) for 1-hour NO₂ simply with the 7 of 8 engines running from the power plant, AND without including any of the other sources OR any background.
- (2) This “minor source” will consume all, or nearly all, of the short-term allowable NO₂ air emissions downwind when operating. The short-term emissions are the same as if the power plant were categorized a “major source” based upon its size and throughput without the annual fuel restriction. Therefore, a detailed demonstration of future air quality compliance from the Applicant is simply not optional, but it is required for the short-term emissions in particular that are only nominally restricted by an annual fuel limitation.
- (3) Simply stating the facility must also still comply with state and federal air quality requirements in the Findings of Facts, the Order, and the Conditions, as DEP typically would do for a true minor source is no longer sufficient. There is adequate discussion and testimony in the record, that simply making this general statement will not ensure compliance with ambient air quality standards.
- (4) When other sources, typically considered “insignificant sources” with respect to the Maine SIP, are added to the proposed short-term “minor source” emissions, they likely will cause exceedances of ambient air quality standards without the proper conditions.
- (5) And once a detailed demonstration is required, ALL sources of air pollution at the facility need to be incorporated into the compliance demonstration before any possible conditions could be discussed. Unfortunately, the Applicant chose to respond to information requests for all potential “air contaminant sources” with minimal and incomplete responses, so adequate conditions cannot be applied to Nordic Aquafarm’s proposed “air contaminant sources” with the information in the record.

Please note that one may still argue at this juncture, based upon DEP rules and the minor source classification, that the act of air dispersion modeling itself may not be required for demonstrating ambient air quality compliance, but EPA-approved air dispersion modeling is typically considered the simplest, readily-accepted, most efficient way to do so. It does not matter to the Intervenor how the Applicant demonstrates that it will be in compliance, but it needs to do so for adequate conditions to be incorporated based upon the demonstration. These relevant facts should be included in the Findings of Facts.

It is the Intervenor’s opinion that based upon their own detailed assessment of the facility that the site is likely not suitable for this facility. As discussed below, this facility has not demonstrated that this is a

suitable site from an air quality perspective, as it has not demonstrated that it can comply with basic air quality rules regulation for its proposed air contaminants.

Please note that a compliance demonstration for this one-of-a-kind complex needs to be extremely site and proposed process specific, and cannot be driven by what DEP has done at other facilities, or what it required for determining the facility classification for air permitting. As a result, the Findings of Facts must result in a conclusion that the facility, as proposed in the record, cannot be properly-conditioned. Therefore the draft Order is deficient, and the air permit must be denied, based upon the record.

The draft Order is deficient, because of the deficiencies in the Findings of Facts. With items missing from the Findings of Fact, it is not possible to satisfy the criteria in this Draft Order which are taken verbatim from Section §590, Item 2:

- A. Receive the best practical treatment; [PL 1991, c. 658, §1 (NEW).]*
- B. Not violate or be controlled so as not to violate applicable emission standards; and [PL 1991, c. 658, §1 (NEW).]*
- C. Either alone or in conjunction with existing emissions, not violate or be controlled so as not to violate applicable ambient air quality standards. [PL 1991, c. 658, §1 (NEW).]*

It is impossible to issue draft Air Permit Conditions, when Nordic has not demonstrated compliance with Section 590. And without proper conditions, the air permit must be denied, based upon the missing information in the record.

Applicable Emission Standards

There is a difference between what is required for permitting at each and every proposed air emissions facility based upon the National Ambient Air Quality Standards (NAAQS), and what is required by DEP to comply with its State Implementation Plan (SIP) as required under the Clean Air Act and its Amendments (CAAA).

Maine is one of the many states that has adopted the NAAQS as its maximum air quality standard requirement. The title of Maine's Air Laws, located in Title 38, Chapter 4, is: PROTECTION AND IMPROVEMENT OF AIR.

In Section §584 it states:

§584. Establishment of ambient air quality standards

The board may recommend to the Legislature reasonable standards, in this chapter called "ambient air quality standards," within a reasonable air quality region regulating and limiting the amount and types of air contaminants which may exist in the ambient air of the region. The standards shall be designed to preserve or enhance the quality of ambient air within the region and to prevent air pollution. The board shall determine by rule the extent to which those standards apply within those areas to which the public does not have general access.

This section requires that the air quality standards be met to prevent air pollution in all areas where the public has access.

In Section §584-A it states:

§584-A. Ambient air quality standards

For purposes of statutory interpretation, rules, licensing determinations, policy guidance and all other actions by the department or the board, any reference to an ambient air quality standard is interpreted to refer to the national ambient air quality standard...

Clearly, based upon this section Maine has adopted the NAAQS as its state's ambient air quality standards.

In Section §591 it states:

§591. Prohibitions

No person may discharge air contaminants into ambient air within a region in such manner as to violate ambient air quality standards established under this chapter or emission standards established pursuant to section 585, 585-B or 585-K.

Please note that Section 585 refers to NAAQS, 585-B to Hazardous Air Pollutants, and 585-K to Greenhouse gases. This facility has not demonstrated that it will not exceed these standard emission criteria under any of these subsections.

In Section §590 it states:

§590. Licensing

1. **License required.** *After ambient air quality standards and emission standards have been established within a region, the board may by rule provide that a person may not operate, maintain or modify in that region any air contamination source or emit any air contaminants in that region without an air emission license from the department....*
2. **Applications.** *Applications for air emission licenses must be made in a form prescribed by the commissioner and contain the information related to the proposed air contamination source and emission of air contaminants required by rule of the board.*

In Section §582. Definitions there are a number of definitions that are pertinent to support the statements in this letter that the Applicant has not provided sufficient information to properly condition a license or meet the burden of proof with respect to demonstrating compliance. They are extracted and inserted here for context with a brief discussion of their rationale for their inclusion in this draft Findings of Facts, draft Order, and draft Air Permit Conditions.

In Section §592-A. it states:

§592-A. Soiling of property; nuisance

1. Total suspended particulate matter. *No person may discharge total suspended particulate matter to the ambient air in an amount or concentration that soils property or creates a nuisance condition. Total suspended particulate matter concentrations of less than 150 micrograms per cubic meter for any 24-hour period in the ambient air are presumed not to constitute soiling or nuisance conditions. Any person who demonstrates on the basis of total suspended particulate ambient air quality monitoring information acceptable to the commissioner that emissions discharged by that person have not substantially caused or contributed to total suspended particulate matter concentrations in excess of 150 micrograms per cubic meter over a 24-hour period at any applicable location may not be held in violation of this subsection.*

2. Fugitive emissions. Any commercial and industrial source or facility, all municipalities and all state or federal facilities, whether or not requiring a license pursuant to this chapter, that cause or contribute to the discharge of fugitive emissions that the commissioner determines to constitute a nuisance are required to establish and maintain a continuing program for best management practices for suppression of fugitive emissions during any periods of construction, renovation or normal operation. The commissioner shall determine those procedures which constitute best management practices. A description of a source's program for suppression of fugitive emissions must be made available to the commissioner upon request. Public or private roads that are not part of a commercial and industrial source or facility are not subject to the requirements of this subsection.

Both of these sections under §592-A require DEP to address the potential for “air pollution” that is defined fully below, and includes **“air contaminants in sufficient quantities and of such characteristics and duration as to be injurious to human, plant or animal life or to property, or which unreasonably interfere with the enjoyment of life and property.”** The facility has a significant potential for fugitive emissions of dust (both respirable and nuisance), odor from the wastewater vents, fish processing vents, waste storage area, storage tanks, dead fish, water and wastewater treatment residuals, and vehicle emissions of both on-road and off-road construction, operations, and maintenance equipment, etc, and noise from all of the above and also just about everywhere onsite, vibrations, etc.

NO odor, NO noise, and NO dust data was provided for any source other than the 8 engine plants. Although a noise study was performed, it must be considered deficient for this Application as NO DEP information requests with respect to equipment that is located outside, or inside that could directly contribute to noise through vented emission outside. Although the Applicant claimed that the sound study provided with the Application was comprehensive, it included:

- (1) NO sound source input data,
- (2) NO sound output data,
- (3) NO equipment listed, and
- (4) NO modeling assumptions.

According to the Applicant, this initial study was never out of date, or in need of updating, and always included every possible sound source. This statement was not even believable at the start of the application process, as the graphical output figure provided from the generic sound study actually shows the wastewater and water treatment building and associated pump stations actually shielding (reducing) sound from the site and not adding to it. Anyone that has ever been to a wastewater treatment plant or a 14 million gallon pump station (please note that this facility is pumping their 7+ millions of gallons of water both ways - - in and out of the facility) knows that sound does not get absorbed in a pump station or treatment plant. It emits sound. These facilities emit sound at levels much greater than background and therefore should show increases not decreases in sound. When the Applicant was prompted for these and other sound sources, they refused to provide the information on multiple occasions. This decision to ignore DEP's request for the required information with respect to being able to develop conditions for health, safety, and the welfare of the sensitive receptors in the area should be included in the Findings of Facts.

Of the 8 engine sound sources that were included, the sound study was never updated to account for the 20 feet of added stack height which would definitely increase sound as it increased the line of sight to many sensitive receptors.

§582. Definitions [excerpts]

1. Air contaminants. *"Air contaminants" includes, but is not limited to, dust, fumes, gas, mist, particulate matter, smoke, vapor or any combination thereof.*

Please note that air contaminants are not limited to emissions from combustion or stationary sources.

2. Air contamination source. *"Air contamination source" means any and all sources of emission of air contaminants, whether privately or publicly owned or operated. Without limiting the generality of the foregoing, this term includes all types of business, commercial and industrial plants, works, shops and stores; heating and power plants and stations; buildings and other structures of all types, including single and multiple family residences, apartments, houses, office buildings, hotels, restaurants, schools, hospitals, churches and other institutional buildings; garages and vending and service locations and stations, railroad locomotives, ships, boats and other water-borne craft; portable fuel-burning equipment, indoor and outdoor incinerators of all types, refuse dumps and piles; and any machinery, equipment, stack, conduit, flue, duct, vent, chimney or other apparatus leading out of any of the foregoing.*

Again, please note that an air contaminant source is any and all sources of emission of air contaminants. Non-stationary sources, intermittent, or temporary sources, are not excluded from the total actual air emissions or exempt from compliance with the NAAQS. Furthermore, in 45 Federal Register 52676, temporary emissions "...generally would last no more than two years at one location..." Therefore, it is unclear how facility's several year construction phase has been categorized as "temporary". Just because the construction of much smaller and shorter duration projects have been granted this "temporary" status, does not mean that it should be granted for all projects, and especially not when the construction phase is longer than the form of the air quality standards that it threatens.

3. Air pollution. *"Air pollution" means the presence in the outdoor atmosphere of one or more air contaminants in sufficient quantities and of such characteristics and duration as to be injurious to human, plant or animal life or to property, or which unreasonably interfere with the enjoyment of life and property throughout the State or throughout such areas of the State as shall be affected thereby.*

In this particular case an area that includes part of Northport, Belfast, Islesboro, Searsport, etc. would be impacted by its emission of air contaminants. It is not possible to determine whether there are sufficient quantities of air contaminants from the facility as a whole to determine whether they would be **"injurious to human, plant or animal life or to property"**.

Furthermore, the air pollution definition includes the statement **"which unreasonably interfere with the enjoyment of life and property"** which verifies that any and all nuisances ARE to be considered when exploring air pollution. For this facility, as proposed, possible nuisances may include, but are not limited to noise, odor, dust, vibration. Just because DEP suggests that they do not have any specific rules or formal licensing requirements associated with respirable dust, odor or noise, does not mean that an Applicant can avoid providing specific source emission information of these sources so that a determination with regard to the potential for air pollution exceedances can be made prior to any draft Order or Conditions.

Other than the eight (8) internal combustion engines for the power plant, the Applicant has provided NO other air emission source specific information, NO other noise source specific information, NO other

dust source specific information, NO other vibration source specific information and NO other odor source specific information.

NO air contaminant emission sources have been provided by the Applicant from the fish hatchery, the fish rearing tanks, the slaughterhouse, the education center, the fish packaging and storage area, the waste storage area, the wastewater treatment plant, the three water treatment plant processes, a cement plant, odor control units, heating and ventilation, heat relief, emergency operations, and normal operations and maintenance activities.

NO air contaminant emission sources have been provided for areas where the chemicals will be used to maintain ideal fish tank water living conditions, disinfection needs of a food processing facility, the odor control units, wastewater plant, the three water treatment process, slaughtering, packaging, solid waste, and solid waste leachate control, and pathogen control and virus control.

NO air contaminant emission sources have been provided from the dredging operation, excavated spoils, dewatering of spoils, barging of spoils, disposal of spoils, blasting of ledge, crushing of ledge rock, an on-site cement plant or the trucks necessary to haul the cement instead, a concrete batch plant or the trucks necessary to haul the concrete instead, excavation and removal of millions of cubic feet of unsuitable soil and sufficient gravel to replace the unsuitable soil, trucking of excavated soil, deforestation process, exposed land stripped of vegetation, excavated soil stockpiles, gravel stock piles, dropping of excavated soil on to piles and then into trucks, dropping of gravel from trucks on to stockpiles, moving and grading soils, moving and grading gravel, hauling soil off-site, and hauling gravel on-site.

The Finding of Facts must include what is missing from the Facility's Application as well as what is included. DEP asked for many of the missing items above on more than one occasion and the Applicant made a conscience decision to not provide this information. Without this information, it is impossible for DEP to make a determination with respect to air pollution or to develop conditions that would prevent air pollution.

7. Emission. *"Emission" means a release of air contaminants into ambient air or the air contaminants so released.*

"Emission(s)" is both the act of releasing the air contaminants into the air and the air contaminants themselves. During the DEP information requests, the Applicant responded that the non-combustion emissions were going to be emitted from vents, and not stacks so they are not relevant, and therefore they made a deliberate decision to omit this requested information from their responses. This simple definition of emission clearly does not distinguish between stacks and vents because anything released into the ambient air is an "emission" of "air contaminants".

7-A. Emission source. *"Emission source" means any and all sources of emissions of air contaminants, whether privately or publicly owned or operated.*

A facility can have many processes or activities. Each one of the main processes or ancillary activities on-site, like wastewater treatment, fish processing, etc., can have multiple sources of emissions. Source information was requested repeatedly from the Applicant, but it was not provided.

In Section 1 of DEP Chapter 115 item B is states:

B. General requirement. *An air emission license is required for the sources or emissions units listed below. Once a source requires an air emission license, all emissions units which emit regulated pollutants at the source must be included in the license, except the following: insignificant activities listed in Appendix B of this Chapter; activities which the Department has determined in writing on a case-by-case basis to be substantially equivalent to the insignificant activities specified in Appendix B of this Chapter; and those activities which are clearly trivial.*

It is not sufficient to simply state, as the Applicant has, that all other sources will be insignificant activities with respect to either the Chapter 115 air license AND the facility's ability to comply with the NAAQS. **A determination of insignificance for both Chapter 115 and NAAQS compliance can only be made once the "Emission Source" information is provided in the Application, or in response to the DEP information requests.** Again, it is extremely hard to believe that all other activities at a \$500,000,000 facility will be entirely insignificant. It simply defies logic, and as a result, this application is incomplete, the draft Order has not been verified, and the permit must be denied.

7-C-1. Fugitive emissions. *"Fugitive emissions" means emissions of air contaminants which do not pass through a stack, flue, chimney or vent.*

The Applicant has stated that any and all processes are contained within buildings to control odor and noise, therefore, there are no fugitive emissions from the multiple processes proposed. But the buildings must be ventilated somehow, so there clearly are other emission sources.

There are many mobile activities that will occur throughout this facility during construction, operation, and maintenance that are still "emissions of air contaminants" even if they are also fugitive emissions.

In 06-096 C.M.R. Chapter 100 there are three other definitions that are relevant as well:

137. Potential to emit. *"Potential to emit" means the maximum capacity of a stationary source to emit any regulated pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a regulated pollutant, including air pollution control equipment, and restrictions on the hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable as a practical matter. Secondary emissions do not count in the determining the potential to emit of a source.*

Secondary emissions are not included in the Potential for Emit (PTE), as the goal of the PTE is to help regulators determine the overall potential for a facility to have an adverse impact on regional air quality per the requirements of the CAAA and the Maine SIP. Secondary emissions are more of a local concern, than a regional concern.

This definition specifically excludes secondary sources from the potential to emit calculations to determine source major or minor source classification, but this definition does not exclude, or preclude, a facility from examining, calculating, reporting, controlling or limiting these emission in a manner necessary to meet the ambient air quality standards.

152. Secondary emissions. *"Secondary emissions" means emissions which occur as a result of the construction or operation of a source or modification, but do not come from the source or modification itself. Secondary emissions must be specific, well defined, quantifiable, and impact the same general areas as the source or modification which causes the secondary emissions. Secondary emissions include, but are not limited to: (1) emissions from any offsite support facility*

which would not be constructed or increase its emissions except as a result of the construction or operation of the source or modification; (2) emissions from ships, trains, trucks or other mobile sources associated with the new source or modification.

This definition does three things: (1) it clearly incorporates all emissions associated with a facility regardless of whether they are on-site or off-site, (2) it clearly indicates that construction emissions matter, and (3) any emissions from other facilities regardless of whether they are covered administratively under this facility's permit, or a separate air permit, they are part of this facility's emissions.

72. Insignificant Activities. *"Insignificant Activities" means activities at a facility that the Department specified in Appendix B of Chapter 140 for the purpose of Chapter 140 and the activities at a facility that the Department specified in Appendix B of Chapter 115 for the purpose of Chapter 115. A source must include emissions from insignificant activities in determining if the source is a Part 70 major source.*

Within both Chapter 140 Appendix B and Chapter 115 Appendix B, the very first thing noted within Insignificant Activities is: **A unit or activity may be considered insignificant, but may still be subject to applicable requirements.** Essentially for the calculation of fees and for items that must be monitored, these activities do not need to be added into any permit license. They are still part of the facilities emissions and therefore that means (1) they must be included in the Application and NO other sources other than the eight engines were included, (2) it is not possible to determine whether the proposed facility would trigger de minimis thresholds for criteria or hazardous air pollution emission thresholds without them being included in the application or in the responses to DEP for this information.

Comments Specific to the draft Findings of Facts

Again, as stated above in the discussion of definitions, what is NOT in the findings of Facts is as important as what IS in the Draft Findings of Facts. This section focuses more on the latter as well.

The first item in the July 17, 2020 draft Findings of Facts in Item I., Registration is:

"A. Introduction

Nordic has applied for an air emission license for the operation of emission sources (equipment) associated with its land-based salmon aquaculture farm."

This statement is incomplete as it only discusses the eight combustion sources from a peak shaving power plant that is ancillary to the primary purpose of the "land-based salmon aquaculture farm" which includes many, many other processes.

While the Chapter 115 licensing process may consider some of the many other sources insignificant and therefore not relevant to this permit application classification, the third bullet in the draft order **"Either alone or in conjunction with existing emissions, not violate or be controlled so as not to violate applicable ambient air quality standards"** cannot be verified without including all *"emissions of air contaminants"*.

Please note that it is very possible for a proposed project to meet the SIP requirements for a Chapter 115 source, but still exceed ambient air quality standards when all *"air contaminant sources"* are examined. Non-combustion *"Air Contaminant Sources"*, *"Secondary Emissions"*, *"fugitive Emissions"* and *"Air Contaminant Sources"* that may be considered *"Insignificant Sources"* for Chapter 115 but still add to off-

site air impacts, but be included with the Chapter 115 emissions before one could make a statement with respect to compliance with the **ambient air quality standards** for this particular Application given its size, multiple *“adjacent”* processes that are all ancillary to the *“land-based salmon aquaculture farm”*, and its proximity to areas open to the public and sensitive receptors.

Proposed Action Item: Withhold redrafting the Findings of Facts, Order, and any permit conditions for the Chapter 115 “air contaminant sources” until the Applicant has provided information from all “air contaminant sources” of air, odor, noise, and dust emissions that could cause “air pollution”. And also until the Applicant demonstrates compliance with “ambient air quality standards” in a study that incorporates the Chapter 115 air emissions, the “secondary emissions”, the “fugitive emissions” and Chapter 115 “Insignificant Sources” emissions for the “land-based salmon aquaculture farm” as a whole. Or simply deny the air permit.

The third item in the July 17, 2020 draft Findings of Facts in Item I., Registration is:

C. Emission Equipment

The stationary engines table lists low sulfur distillate fuel, but the application and modeling was for engines burning diesel fuel only. While this broader category may be allowed on projects where the generic Tier 4 emission factors are incorporated, this project must now use the very site specific information gathered from actual test data from the manufacturer, or 7 of 8 of these engines alone will violate the ambient air quality standards. These distillate fuels, while similar, will burn differently and effect the very sensitive air pollution control equipment required. As a result, only the fuel burned in the specific test data DEP used for the air modeling can be allowed.

Proposed Condition: Add a Specific Condition that limits the fuel to low sulfur #2 diesel fuel only.

Also within C., there is an allowance for operating small stationary engines with a reminder that these are Insignificant Sources with respect to Chapter 115. These sources were not identified in the Application. As a result, DEP could not request any additional information, as needed, and therefore they cannot be properly conditioned. In fact, at the hearing the Applicant reiterated that ALL power, heat and air conditioning sources would be electric and there would be no combustion sources anywhere outside of the 8 engines. There was no mention of the multiple type of temporary, portable, etc., sources added to the permit conditions.

This is a very large site with many, many processes that could require power. It would not be unusual for a wastewater treatment plant of 7.7 million gallons per day to have many of these available on-site for wastewater processes alone. Please note that at most wastewater plants water flows into the plant by gravity or is pumped off-site. This facility needs power to get its seawater up and out of the ocean and to treat and pump it back into the ocean. It is not enough to simply suggest that this large power plant will do this task, and all the other tasks around the site, without any calculations submitted of electrical load. There is insufficient information in the record to suggest that ANY added source, much less undefined ones would not cause an exceedance of the ambient air quality standards.

It is unclear how many maintenance or emergency units there may be, what ignition type they may be, their location, etc. It is therefore impossible to know how they add to the full emission profile from the facility. Simply labeling them “portable” does not exempt them from the NAAQS. Furthermore, it is extremely likely that when the portable “emergency” engines are operated, power from the plant would be needed as well. The ambient air quality limit of concerns here are 1-hour and 24-hour based limits, so

any ambient air quality compliance demonstration must assume all of these engines are operating simultaneously and at 100% power, unless the Application notes otherwise. It is not sufficient to simply add a disclaimer line that says *“However, they are still subject to applicable State and Federal regulations.”* without requiring the facility to include these in its facility-wide ambient air quality emissions assessment.

Proposed Action Item: Remove all small stationary engines and all portable engines from this Chapter 115 license unless the Applicant provides specific information on the engines proposed, demonstrates what, where, and how many can operate with all of the other sources operating on-site as well via a compliance demonstration, and then properly condition these sources to match the compliance demonstration. Or simply deny the air permit.

The fourth item in the July 17, 2020 draft Findings of Facts in Item I., Registration is:

D. Definitions

Proposed Action Item: Remove the definition of “Distillate Fuel” in the Findings of Facts as it is not part of the record, or defined in 06-096 C.M.R. Chapter 100, in 38 M.R.S. Chapter 4, or by EPA with respect to this Application.

Proposed Action Item: Remove the definition of “Portable or Non-Road Engine” in the Findings of Facts as it is not part of the record, or defined in 06-096 C.M.R. Chapter 100 or in 38 M.R.S. Chapter 4, or by EPA with respect to this Application.

Proposed Action Item: Add the definitions of Title 38, Chapter 4, is: PROTECTION AND IMPROVEMENT OF AIR 582 for 1. Air contaminants, 2. Air contamination source, 3. Air pollution, 7. Emission, 7-A. Emission source, and 7-C-1. Fugitive emissions.

Proposed Action Item: Add the definitions of 06-096 C.M.R. Chapter 100 for 137. Potential to emit, 152. Secondary emissions, and 72. Insignificant Activities.

Proposed Action Item: Add the definitions of Major Sources, True Minor Sources, and Synthetics Minor sources per EPA. <https://www.epa.gov/sites/production/files/2015-07/documents/lowmarch.pdf>

The fifth item in the July 17, 2020 draft Findings of Facts in Item I., Registration is:

E. Applicable Classification

In the second paragraph is states:

A new source is considered a major or minor source based on whether total licensed annual emissions exceed the “Significant Emissions” levels as defined in the Department of Environmental Protection’s (Department) Definitions Regulation, 06-096 Code of Maine Rules (C.M.R.) ch. 100.

This statement needs some modification, as there are actually three general source types per EPA (<https://www.epa.gov/sites/production/files/2015-07/documents/lowmarch.pdf>):

- (1) Major sources - those that actually emit major amounts of air pollutants, or have the potential to do so;
- (2) “True minor” (also called “natural minor”) sources - those that do not have the physical or operational capacity to emit major amounts (even if the source owner and regulatory agency disregard any enforceable limitations); and
- (3) “Synthetic minor” sources - those that have the physical and operational capability to emit major amounts, but are not considered major sources because the owner or operator has accepted an enforceable limitation.

The peak-shaving power plant is actually a “synthetic minor” source, not a “true” or “natural minor” source. This distinction was discussed in the pre-filed testimony and at the hearing. This is a very important distinction, as (1) it acknowledges that any limitation must be enforceable throughout the life of the facility as proposed, and (2) it must be a practical method to limit emissions. The draft Order or Conditions do not ensure this requirement.

Proposed Action Item: Add this discussion to the Findings of Facts and require a Compliance Demonstration consistent with the major source emission rates on a short-term basis. Or simply deny the air permit.

F. Timeliness of the Proceedings

In the fifth paragraph is states:

During a pre-hearing conference on November 7, 2019, the Board heard oral arguments from the applicant and intervenors about adding the air emission license application as a public hearing topic. Intervenors made this request due to concerns over potential impacts of air emissions from the proposed facility and associated construction activities that had been raised by an intervenor’s ambient air dispersion modeling results purporting to show emissions from the project causing ambient pollutant concentrations greater than national ambient air quality standards (NAAQS). Department staff could not confirm the validity of the intervenor’s modeling results, however, as neither the modeling inputs nor the protocol explaining the modeling methods were available for Department staff review. Because the proposed project emissions did not exceed thresholds for mandatory modeling under Chapter 115, the Department had not previously performed modeling for this project, nor had it required the applicant to perform modeling as part of the air emission license application. After hearing oral arguments and consulting with Department staff, the Board voted to add the air emission license application as a public hearing topic, limiting the scope of the air emissions hearing topic to licensing criteria set forth in Chapter 115.

This paragraph needs some significant revisions to adequately portray the conference. The revisions needed are summarized in the bullets below. After the bullet there is a general summation of the rationale and need for these edits.

- (1) The Intervenors did not request that the air application be part of the hearing process, but that the topic of air quality be included as a hearing topic. The specific argument was that all aspects of air quality that may affect health and welfare were interrelated.

- (2) The Department could have easily confirmed the Intervenors' modeling with the information provided, but chose not to confirm the validity of the Intervenors' modeling, and instead made a new data information request of the applicant for information that was already available and had already been used by the Intervenors for the dispersion modeling from the plans in the record.
- (3) At the hearing, and based upon the transcript created, it was the Intervenors understanding that the topic of air quality, based upon the Intervenors' submission of potential ambient air quality exceedances, was to be added to the hearing process. In no way, shape, or form, was the goal to get a hearing topic for just operation of 8 engines for an ancillary utility plant, across this massive site.

Again, it is about what is missing as much as it is about what is in the Findings of Facts and Application information. This decision to restrict the hearing discussion to the Chapter 115 source meant that it was impossible to discuss the specifics of the land-based aquafarm air emissions at the hearing. Of course hearing topics and other required non-hearing topics must still be considered together for ambient air compliance, but for some reason, this decision to restrict the hearing topic to the 8 engines has transformed into a discussion of all that is required for air quality compliance. The omissions identified above should be incorporated into the Findings of Facts.

In the sixth paragraph is states:

On November 8, 2019, Department staff requested the applicant provide equipment specifications and site-specific inputs for the Department to conduct modeling. Upon receipt of the requested information, Department staff conducted ambient air dispersion modeling for the project in accordance with all applicable BAQ and the United States Environmental Protection Agency (EPA) requirements. The results from the Department's modeling were entered into the record on December 19, 2019.

Clearly, based upon the fact the DEP had to model again, the Applicant did not provide the proper response to the information request, or DEP would not have had to remodel again after the hearing. This further example of incomplete data responses by the Applicant should be noted in the Findings of Fact.

During the public hearing, specific information relating to building profiles and fence lines for the project was presented by the applicant that conflicted with information the Department had earlier received from the applicant and used as modeling inputs. Department staff therefore requested that the Board keep the hearing record open so that Department staff could perform additional modeling using updated information. After the public hearing, the Board closed the record on February 18, 2020, on all but four specific topics, one of which was ambient air dispersion modeling. Department staff performed a second modeling analysis using updated information and submitted results into the record on March 13, 2020. Parties were subsequently provided opportunity to submit comments on the updated modeling.

During the pre-filed and oral testimony, the Intervenors discussed the deficiencies in the Application with respect to other concerns that needed to be considered along with this source as part of any air quality Application process.

- (1) There was NO analysis of the potential exposure from dust from this facility as a whole and its potential exceedances of the ambient air quality standards.

- (2) There was NO discussion of how these 8 engines' air emissions would combine with construction air emissions.
- (3) There was NO discussion about how the 8 engines' air emissions would be impacted if Phase 2 was never developed.
- (4) There was NO discussion about how secondary emissions would combine with the 8 engines' air emissions and affect overall air quality in the residential and protected hiking area near the site.
- (5) There was NO discussion about how portable, temporary, or smaller but not insignificant (from an emissions standpoint, not a major/minor source classification), would combine with the 8 engines' air emissions and affect overall air quality in the residential and protected hiking area near the site.

It seemed like at this juncture it was an excellent opportunity for the Applicant to request a delay to provide this missing information. They did not, so the record was only kept open for a revision to the air dispersion modeling. When the Intervenor requested a meeting to discuss what may, or may not be in the dispersion modeling exercise, based upon concerns raised during the testimony, it was denied. This information should be noted in the Findings of Fact.

Furthermore, a revision of the dispersion model with engine emission factors that were not in the record, or formally recommended by the Applicant as representative for this project, was made to the record. This change opens a whole new "can of worms" with respect to site-specific conditions associated with very specific assumptions after testimony concluded. While the Intervenor applauded DEP for doing the work that is the responsibility of the Applicant, it seems that changing the air emission rates and philosophy with respect to conservatism in those estimates, after the hearing and opportunity for testimony is completed, does not satisfy due process.

In the last paragraph it states:

On May 20, 2020, the Board held a deliberative session with Department staff to review project applications and discuss evidence in the record.

At no time during that deliberative session was there any indication that the air quality concerns still outstanding, such as mobile sources, other construction sources that may apply for their own permits, etc. were addressed. In fact, these items were tabled for the next deliberation session immediately following the air permit discussion, but were never discussed again that day. There were no other formal deliberative sessions. Based upon the draft Findings of Facts and the draft conditions, they were not addressed directly, but appear to have been skirted instead. This information relative to the air permit application deliberation process should be added to the Findings of Facts.

Proposed Action Item: Add this discussion to the Findings of Facts and require a Compliance Demonstration for each of the five bullets above. Or simply deny the air permit.

G. Analysis of Evidence and Issues Raised by Parties

In paragraph 1 it states:

The relevant statutory and regulatory criteria for review of the Nordic air emission license application are Protection and Improvement of Air, 38 M.R.S. §§ 581-610-D, and Department regulations adopted pursuant to the above laws, including Chapter 115.

Please note that the referenced relevant sections include all of the definitions and sections quoted above in these comments. Furthermore, it is the obligation of the DEP to consider EPA rules and regulations and compliance with the Federal Clean Air Act, and to consider any potential conflicts with local laws or rules that may not properly protect the citizens of Maine with respect to the requirements in 38 M.R.S. Chapter 4.

In Item 1. Air Dispersion Modeling, it states:

In pre-filed testimony, in person at the hearing, and in other submissions, Upstream Watch asserted that emissions from alternative operating scenarios for the generators (e.g., startup/shutdown events), emissions from mobile sources (exhaust from construction equipment), and emissions from fugitive sources related to the construction, operations, and maintenance of the facility had not been adequately represented in the modeling conducted by Department staff. (See Section III below for a summary of the Department's modeling efforts and results.) The Board finds that the Department staff's model was correctly done, and the inclusion of these other sources was not required or warranted for the following reasons:

- (1) The Department was conservative in its approach to evaluating potential ambient air quality impacts from the proposed facility by modeling all seven generators operating at maximum load for 24 hours per day and 365 days per year. This scenario over-predicts the likely short-term emission rates and long-term ambient air quality impacts from the generators, even after consideration of different operating loads and startup/shutdown events.***
 - a. As engine emissions are a function of the amount of fuel fired, engines operating at lower loads would consume less fuel and result in lower emissions.***
 - b. Each generator will be installed as an independent unit with its own stack designed for its range of flow conditions. Therefore, the temperatures and flows of one generator's exhaust emissions would not be affected by the emissions, or lack thereof, from another unit.***
 - c. The engines will be subject to an annual fuel limit of 900,000 gallons per year, equivalent to combined operating time for all engines of approximately 900 hours per year running at 100% capacity. This equates to the units running for slightly over 10% of the time. In the Department's modeling analysis, however, seven of the eight engines were assumed to be operating 100% of the time.***
- (2) The Department obtained information on exhaust flows and temperatures directly from the proposed engine manufacturer. This data was used in the second ambient air dispersion modeling run by Department staff and the Board finds that it is more accurate than values originally included.***
- (3) Mobile sources used during the construction phase are considered intermittent, temporary sources and have not historically been included by the Department in either ambient air quality demonstrations or air emission licenses for minor sources. Chapter 115, Appendix B – Insignificant Activities, Section A - Categorically Exempt, Item 114 exempts "Temporary air emission related activities which are granted approval from the Department." Consistent with its longstanding practice for minor sources, the Department did not consider mobile sources in the modeling for this project due to their intermittent,***

temporary operation. These activities are addressed by the Board in its consideration of the application for a Site Location of Development Act (Site Law) permit pursuant to the Board's authority set forth in Chapter 375 of the Board's rules, No Adverse Environmental Effect Standard of Site Location Law, 06-096 C.M.R. ch. 375.

(4) *The sources that produce fugitive dust (such as roads and stockpiles) are easily identified, but their emissions are not readily quantifiable. Every Chapter 115 air emission license issued addresses fugitive dust in a Standard Condition requiring the licensee to establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust.*

In the actual draft BEP document these bullets were proposed without numbers. They are changed herein so they can be readily referenced and addressed one at a time. Please note there are a few general comments to the general statements made in the introduction to the bullets and the conclusion.

- (1) **First paragraph:** The Intervenor's concur with the statement that the modeling was done correctly, but the modeling is only as relevant as the inputs provided by the Applicant.
- (2) **First paragraph:** The Intervenor's acknowledge that the goal is not to consider EVERY possible scenario, but that does not mean one scenario is sufficient to represent the reasonable worst case for this particular facility with so many moving parts.
- (3) **Bullet 1:** The Intervenor's request that this statement be clarified. This statement mixes emission rates and ambient impacts into each sentence. While operating at the maximum potential-to-emit is not only required, it is what is used to size the exhaust equipment. Loading is how much comes out at any one time and ambient impact is what affects the area. These two items are interrelated but not directly proportional. The loading for evaluating short-term concerns is the same as if the facility is a major source of air pollution. It is not over-predicted and that leads to one of the primary deficiencies in the air permitting approach to date. It is not conservative for just these 8 engines, and it is definitely not conservative for the facility as a whole. The consideration of start-up and shut down was discussed as minimal in time and limited to about ½ hour per event, but ½ an hour can be significant for averaging times of 1-hour and 24-hours. There is the potential for many start-ups and shut-downs as the facility is proposed to provide "peak-shaving", which by definition only operates for the period of a day where power grid demand is at its highest, which can happen a few times in a single day.
 - (1) **Sub-bullet 1a:** These engines are using very engine-specific emission rates now. The general trend will be lower overall emission loading with lower fuel, but not necessarily lower off-site emissions as the dispersion parameters change with the varying exhaust flow through the fixed stack diameter.
 - (2) **Sub-bullet 1b:** While this statement would be clearly applicable for truly independent sources, the drawings show these stacks grouped together in sets of two. It is unclear how these grouped stacks will interact with themselves and the enclosure shown as an outline on the revised plans, but not defined. There is insufficient information presented to confirm or deny this statement.
 - (3) **Sub-bullet 1c:** Yes, this is true the engines will only operate for 10% of the time, but the times for peak shaving typically correspond with the worst dispersion times of the year, so this annual restriction has little effect on hourly or daily air emission impact potential.

- (4) **Bullet 2:** This engine data change is actually a step backwards in conservatism. While it may be more representative of these exact engines operated in optimal or reasonable conditions at a time of testing, this change no longer covers all types of distillate fuel and all types of operating scenarios. This change is actually countering the claim made in the opening paragraph.
- (5) **Bullet 3:** This bullet is a major concern. The temporary or intermittent nature of mobile sources during construction phases has nothing to do with whether they need to be considered as part of an ambient air quality assessment in all cases. Using the EPA's definition in 45 Federal Register 52676, temporary emissions "...generally would last no more than two years at one location..." Considering the applicant's construction schedule, it is unclear how any of the construction sources could be considered temporary when they are expected to last several years for each phase. While the Department can and should argue that for a small facility, or even for a larger facility that may have higher stacks and/or more land buffer (so that it is not going to add emissions that are very close to, up to, or potentially over, the allowable ambient air quality levels), that "insignificant activities" for determining source classification should also be insignificant for ambient air quality compliance. This bullet essentially says there is no threshold of concern, and that if this facility were to emit 10 times, 100 times, or 1,000 times the expected temporary emissions (whatever they may be), then temporary emissions would always be exempt. The allowable amount is related to the potential temporary emissions, and the remaining incremental amount available after the power plant has been considered. There is a significant difference between what works most of the time, and therefore has been the dominant and reasonable historical trend, and what is absolutely necessary some fraction of the time. The facility is the perfect storm of millions of cubic feet of inadequate soils that must be removed, short stacks required for FAA and local zoning, a facility that has processes right up to the allowable edge of the property's required buffers, and a massive energy loading for all its activities. It is the exception and not the norm. Many would consider a site that needs to examine air emissions to this level unsuitable, but it is a proponent's prerogative to develop a plan to make unsuitable conditions suitable, but they cannot ignore them based upon the required Order.
- (6) **Bullet 4:** This bullet is categorically false. Not only is there an EPA database of sources of fugitive emissions (AP-42), there are many studies that have been done with data available as Mr. Lannan testified specifically on projects where fugitive dust was a concern for human health and welfare. While some of the AP-42 data has been overly-conservative over the years, it has been updated with better data over time. Even if some of the remaining data has less than an "A" rating it does not mean that it cannot be used for a conservative analysis in a "readily quantifiable" manner. And of course, AP-42 is just one resource, there are many other resources available that can be used to "readily quantify" respirable dust emissions. Please note, again, per the testimony that there is a difference between respirable dust and fugitive dust. Fugitive dust is defined by the State of Maine as TSP or total suspended particulate. If it gets airborne it is TSP. BMPs are good for lowering TSP, but it does not ensure compliance with ambient air quality standards. Conversely, respirable dust has size limitations. One of the respirable fraction of concern for this project is the NAAQS ceiling limit of 150 ug/m³ for PM₁₀ average over 24 hours. This ceiling limit cannot be exceeded more than once per year over a three year period. So essentially, on the fourth day of an exceedance anytime in three years, the facility will be in violation of EPA's NAAQS and DEP's ambient air quality standard, which has adopted the NAAQS as the state ambient air quality limits. The reason why there is an EPA database, other databases and studies to reference, is because it is a requirement for large facilities that display this type of

potential. It is not sufficient to simply have a dust BMP, or decide that Tier II engines are all that should be employed during construction to do the best they can, as Tier IV engines are very expensive, as discussed during deliberations. The Tier classification is just one piece of the puzzle with respect to on-road and non-road vehicle and equipment emissions. It all comes down to the planned equipment, usage factors, proximity to receptors and the sheer volume of material to be removed and replaced. The only way to understand the potential implications of the construction process is to model it, and THEN, and only then, could DEP consider project-specific conditions or the construction operational limitations that will be necessary to ensure consistent compliance with the ambient air quality limits locally. Based upon the record, the original schedule proposed has not been altered to account for the massive unsuitable soils issue that materialized after the applications were filed. As a result, a serious excavation project with many, many pieces of on-road and non-road vehicles and construction equipment operating concurrently can only be assumed. The third bullet in the Order (discussed in more detail below) simply cannot be satisfied without this analyses and the proper resulting conditions. This concern should be added to the Findings of Facts.

In Item 2 Noise and Odor, it states:

Prior to the public hearing, the intervenors questioned whether noise and odor impacts would be considered during the evaluation of Nordic's Chapter 115 air emission license application. Chapter 115 has no provisions or requirements for regulating noise or odor. While this air emission license does not address either noise or odor, those issues may be considered by the Board in its analysis of the Site Law permit application.

The initial request from the Intervenors was for all air related activities to be included as a hearing topic. The second request was that they all be considered together. While Chapter 115 does not formally discuss noise or odor, they are potential conditions of air pollution. Furthermore the facility has discussed the potential for odor control units and therefore "Odor Control" is not insignificant per Appendix B in Chapter 115. There is an exemption that bundles water and wastewater together, but it does not specifically exempt wastewater, solid waste, water and wastewater residuals and sludge for vapor phase odor control. The Applicant's testimony, the Intervenors' testimony, and deliberations discussed the need for odor control. (Please note that there is an exemption in Appendix B for "taste and odor" control but this is obvious and common terminology for employing water treatment additives in the liquid stream that address potable taste and odor concerns, not odor control for "air contaminant emission" units.) The odor emissions from vents and exhaust from odor control units are not exempt from permitting or conditioning, but since no equipment, exhaust, vent type or location information was provided for these sources, it is not possible to condition these sources appropriately. This concern should be added to the Findings of Fact.

Suggesting that nuisance air, odor, noise, and dust conditioning will be handled under site law creates a "chicken and egg" problem. Site law must determine whether the potential emissions as conditioned will create an unsuitable or adverse site condition. There are really only two ways to properly condition this facility for odor, noise, dust vibration, and other nuisances:

- (1) The specific nuisance emission information could have been provided in the air quality application process first, and then the conditioned air emission units from the facility could be examined for overall adverse impact as part of the SLODA process.

- (2) The second way is if these two draft permits were issued in tandem, so that one could comment on the information in one versus the other simultaneously, and the potential for air pollution could be qualified in a nested discussion.

It is not possible to properly examine the potential for air pollution for either permit properly with a staggered comment approach, unless of course there is no desire to address comments provided.

3. Portable Concrete Batch Plant

Intervenors asserted that a portable concrete batch plant may be sited at the proposed project location during construction and its emissions should be addressed in Nordic's air emission license. Such a concrete batch plant would be required to be licensed by the batch plant owner/operator independently of the Nordic license, via either a Chapter 115 air emission license or a Chapter 164 general permit. The licensing of any portable concrete batch plant at Nordic's facility would generally be the responsibility of the batch plant owner/operator and is therefore not required to be a part of Nordic's air emission license application.

The Applicant first discussed the possibility of portable concrete and cement batch plants as an option to address the vast number of truck trips planned for the site. It was asserted by the applicant that fewer truck trips would mean less traffic and less air pollution. Once again, this comment is only applicable in a vacuum because any addition of either of these types of facilities would drastically change the potential air emissions from the construction operations on-site, whether there is a separate air permit application, a permit-by-rule, or there is a modification to this Chapter 115.

The reason why it seems insignificant if the facility gets a separate air permit is the exact reason why all sources on the site must be examined together now, as part of this application process. With no current baseline for air emissions, it is not possible now or later to determine whether additional emissions from a future concrete or batch plant would be significant enough to cause an exceedance of the ambient air quality standards. DEP cannot possibly determine the potential for adverse emissions simply by the fugitive dust best management practices requirement.

In Item 5 (please note that there is no Item 4 in the draft document) it states:

5. Wastewater Treatment plant, fish Processing, and HVAC System

In its post-hearing brief, Northport argued that in addition to mobile sources and the concrete batch plant, the license should address air emissions from the wastewater treatment plant, the fish processing facility, and the HVAC system for the facility. The Board finds that any potential emissions from those components of Nordic's facility are not required to be addressed in an air emission license.

While the potential for a concrete batch plant discussion was raised by the Applicant well after the application was submitted, the requirement for the addition of "secondary sources" (which include mobile sources), has been argued as far back as prior to the selection of the BEP formal hearing topics. As stated in 38 M.R.S. section 590, Item 2 which is repeated in the draft Fact of Findings and draft conditions, as the traditional air license order:

2. ...The department shall grant the license and may impose appropriate and reasonable conditions as necessary to secure compliance with ambient air quality standards if the department finds that the proposed emission will:

A. Receive the best practical treatment;

- B. Not violate or be controlled so as not to violate applicable emission standards; and***
- C. Either alone or in conjunction with existing emissions, not violate or be controlled so as not to violate applicable ambient air quality standards.***

It is simply impossible to “***impose appropriate and reasonable conditions as necessary to secure compliance with ambient air quality standards***” on a facility if there is a strong potential that the “synthetic minor source” restrictions will result in the permitted source consuming most or nearly all of the allowable emissions for the area. One cannot consider the potential compliance with the third bullet without including other emissions that will be existing at the time of construction operation, operation, or maintenance. To do so would be to suggest that items labelled “insignificant” for source classification make their actual emissions “insignificant” to public health.

It is important to remember the purpose of the “Insignificant Source” classification. This type of classification was developed many years ago by EPA as a method for states to more quickly and more easily classify new or modified potential sources of air pollution with respect to major or minor source classification, and ultimately how a proposed project would fit into the SIP. It was never an attempt by EPA to eliminate potential compliance with the ambient air quality standards for all sources at a facility. In fact EPA still has a document available on its website that explains this concern. It was referenced before with the three types of source classifications. It is still referenced as part of the New Source Review Process on the EPA website, as the purpose is still valid, as well as the limitations. This discussion has its own section later on, as there are a number of lengthy references to the document included.

Proposed Action Item: Add this discussion to the Findings of Facts and require a Compliance Demonstration so that it is clear that the facility complies with the draft order and 38 M.R.S. section 590, Item 2. Or simply deny the air permit.

H. Facility Classification

With the annual fuel use limit on the engines, the Board has reviewed and is licensing the facility as follows:

- ***As a synthetic minor source of air emissions, because Nordic is subject to license restrictions that keep facility emissions below major source thresholds for criteria pollutants set forth in Definitions Regulation, 06-096 C.M.R. ch. 100; and***
- ***As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP set forth in 06-096 C.M.R. ch. 100.***

There are two separate classifications herein. The first is for criteria pollutants and the second is for HAPs. There was NO equipment information provided, NO estimates of expected HAP emissions, and NO discussion of HAPs that can be created through natural degradation of the byproducts and products of rearing, slaughtering, and removing 73,000,000 pounds of fish a year. As the Intervenor has noted repeatedly, one does not need a large fraction of a product or byproduct to be emitted in order for there to be an exceedance of the reporting threshold, but how does one know what needs a reporting threshold when the Applicant simply says they will be below the thresholds, without providing any calculations, studies, or rationale? There has been no analysis of the potential for triggering the HAPs threshold and there has been no analysis of the HAPs with respect to monitoring requirements for a “major source” under Chapter 115 subpart D. Again, this is a minor source, but all of its short-term emissions are that of a major source, and all of the listed criteria and HAPs thresholds are for short-term

(less than 24 hour limits) with the exception of one. The missing emission units for HAPs are not “insignificant activities” and therefore should be part of the application review process. None were provided, so there is an expectation that NO HAPs will be emitted, and this should be added to the Findings of Fact.

Proposed Action Item: Add this discussion to the Findings of Facts and require a Compliance Demonstration so that it is clear that the facility complies with the draft order and 38 M.R.S. section 590, Item 2. Or simply deny the air permit.

II. BEST PRACTICAL TREATMENT (BPT)

B. Facility Overview

Nordic is requesting approval for a salmon aquaculture facility that is an end-to-end operation, from eggs to market-size salmon, using Recirculation Aquaculture System (RAS) tank technology for maintaining optimal water quality for fish production. When completed, the plant will be designed to produce up to 33,000 tons of salmon per year.

The RAS utilizes mechanically forced cleaning and degassing/aeration to replace carbon dioxide with oxygen that is vital for fish health and growth. The RAS modules’ water circulation, cleaning, degassing, and aeration systems require electricity to operate. Plant electrical needs will be mainly supplied by the local utility; however, Nordic proposes to supplement this with up to 14 MW of electrical capacity provided by on-site generators driven by distillate fuel-fired reciprocating engines. Building and process heating for the facility will be provided by electrical heaters.

Please note that these engines are proposed as non-emergency peak-shaving units but according to the Applicant’s testimony and the recent deliberations, these units may be used for emergency power as well. It is unclear how much power the plant requires to run. The 14 MW power factor was developed before the facility decided to switch from propane-fired heaters to all electric heaters. The Findings of Facts should note that the Applicant provided no schedule or table of power needs and therefore it is unclear whether ventilation for “air contaminant sources” will continue to operate in a power outage and how this will affect the facility’s overall emissions on a short-term basis.

III. AMBIENT AIR QUALITY ANALYSIS

Most comments with respect to this area are already presented in the first section that was used to demonstrate the rationale for the multiple rounds of modeling. The one general comment for this entire session is, again, that determining compliance with ambient air standards from only this one source is not sufficient to satisfy the claims in the Order.

In addition to the comments provided initially, an evaluation of the 24-hour PM_{2.5} Maximum Impact in Table III-7 in subsection F indicates that there could easily be a potential exceedance of the Class II increments at the location of maximum impact if other secondary emissions are included. Of course, this would require the facility to be operating 24-hours continuously, but the facility has no condition restricting it from operating for 24-hours in a row and likely would need to do so during a power outage, so this table reinforces the need to examine other sources, whether labeled “Insignificant Sources” or

not. This table clearly demonstrates that during Phase 2 construction that the facility will likely be out of compliance with PM_{2.5} when the power plant is operating.

There was discussion during the deliberations that the facility might not need all of its engines until Phase 2 is installed for emergency power. Given that there was no formal submittal of power needs or emergency demands, this statement cannot be validated or invalidated. In the end it does not matter since the facility's application was for non-emergency peak shaving, so it must be assumed that all engines will be installed and operational as soon as possible per the construction schedule provided, and prior to the completion of Phase 1 build-out. This creates a second possible air quality exceedance scenario for multiple criteria pollutants, as well.

The last paragraph in subsection F states:

Federal regulations and 06-096 C.M.R. ch. 140 require that any new major source or major source undergoing a major modification provide additional analyses of impacts that would occur as a direct result of the general, commercial, residential, industrial, and mobile source growth associated with the construction and operation of that source. Since Nordic has been determined to be a new minor source, no growth analyses were required.

There is a word missing from this paragraph, and it is the word "synthetic". If the last sentence is corrected to say: "***Since Nordic has been determined to be a new synthetic minor source, no growth analyses were required***", it would not be a true statement. The facility will be non-major for its annual emissions, but it is not "practical" to assume that air emissions on a short-term basis, which are not affected by the annual fuel limitation, would not benefit from this required analysis for short-term emissions. This concern is discussed further in the next section as part of the EPA Guidance document discussion. This statement and this discussion should be added to the Findings of Facts.

Furthermore the paragraph in G. Summary states:

In summary, the Board finds that the Department staff's modeling demonstrates that the Nordic facility as licensed herein will not cause or contribute to a violation of any SO₂, PM₁₀, PM_{2.5}, NO₂, or CO or to Class II increments for SO₂, PM₁₀, PM_{2.5}, or NO₂.

Firstly, it is assumed that the words [ambient air quality standards] are missing between "CO" and "or". This is not a true statement, as there has been no ambient air analysis to suggest it is true. Even without it, the "Class I increments" portion of the statement has not been confirmed. The key verb here is "contribute" when that action verb is coupled with "the Nordic facility", the statement is simply not a proper Findings of Fact based upon the information in the record. This concern is discussed further in the next section as part of the EPA Guidance document discussion. This statement and this discussion should be added to the Findings of Facts.

Proposed Action Item: Add this discussion to the Findings of Facts and require a Compliance Demonstration so that it is clear that the facility complies with the draft order and 38 M.R.S. section 590, Item 2. Or simply deny the air permit.

Attached EPA Memorandum on the "Potential to Emit (PTE) Guidance for Specific Source Categories"

This memo was written by the Director of the Office of Air Quality Planning and Standards (OAR) John S. Seitz in April of 1998. It is still offered on EPA's website today for source classification guidance. The

Clean Air Act (CAA) can be very confusing with respect to how one determines whether a source is categorized as a major or minor source. Ideally all sources would find a way to be a minor source, either naturally by calculating its PTE or “synthetically” by calculating its PTE with particular physical or operating limitation(s). For a number of years after the most recent CAA amendments in 1990, there was a concern that essentially small facilities would have to do so much preparation work to calculate their potential emissions in order to demonstrate that they are a true minor source, that it was cost, and administratively, prohibitive. Furthermore, there was a concern that there were so many rules and what if something was not considered? What is the liability? As a result this guidance document was developed for small sources. The first part of this discussion is to understand the three sources discussed earlier. They are listed here again for continuity from page 2 of the memorandum:

Often, in describing the overall stationary source population regarding potential-to-emit issues, EPA groups sources into three general types:

- (1) Major sources - those that actually emit major amounts of air pollutants, or have the potential to do so;***
- (2) “True minor” (also called “natural minor”) sources - those that do not have the physical or operational capacity to emit major amounts (even if the source owner and regulatory agency disregard any enforceable limitations); and***
- (3) Synthetic minor” sources - those that have the physical and operational capability to emit major amounts, but are not considered major sources because the owner or operator has accepted an enforceable limitation.***

Many sources have the “capacity” to emit major amounts of air pollutants, but actually emit amounts that are much lower than the major source threshold. For such sources, States and local permitting agencies provide opportunities to obtain limits on their potential to emit through construction permit programs, operating permits, general permits applicable to multiple sources, State implementation plans (SIP), and other mechanisms.

So far this last paragraph essentially fits the non-emergency generator plant scenario being permitted by this Applicant perfectly and the state’s permitting program including Chapter 115. In the next paragraph it discusses two ways to calculate enforceable limits:

There are two overall approaches that States and local agencies can use to establish enforceable emission limits which ensure that a source’s potential emissions are below the major source threshold. Using the first approach, case-by-case permitting, agencies create terms and conditions tailored to a given plant site. This approach is essential for complex sources warranting close scrutiny, such as sources that comprise many different sources and source types, and sources that limit their emissions to near-major amounts. Under the second approach, generally appropriate for less complex sources, States and local agencies create a standard set of terms and conditions for many similar sources at the same time. The terms air quality agencies use to describe this approach include “general permits,” “prohibitory rules,” “exclusionary rules,” and “permits-by-rule...”

Maine has clearly taken the latter approach, with a caveat that it “may” switch to the first as necessary. Please note that this paragraph is still discussing things in the context of major source thresholds”, so nothing prohibits this latter approach from applying to this air permit Application for Major/Minor

Source classification for the permit pathway determination and “enforceable emission limits” for source classification.

The beginning of the next section states:

What Is The Purpose Of This Guidance Memorandum?

The EPA issues this guidance to assist States and local agencies in efficiently creating potential-to-emit limits for small sources, and to assist States and source owners in identifying sources that are minor sources without additional limits. Where States and local agencies need and use this guidance, small business owners will achieve greater certainty that EPA, States and local control agencies, and the public do not consider them major sources under the Act.

Please note that the purpose is not to exempt sources from compliance with ambient air quality standards, but to define them as “Insignificant Sources” as part of the source classification “***exclusionary rules***”.

The next section states:

What Types Of Source Categories Are Included In This Guidance?

In identifying source categories to be covered within this guidance, the EPA included those categories for which a single type of activity tends to dominate emissions, and for which most sources in the category actually emit at levels well below their potential, and well under the major source thresholds. For sources with numerous categories at the plant site and/or that emit amounts that are just below the major source threshold, EPA believes that there is generally no feasible way to ensure their minor source status without a case-by-case permitting process...

Clearly, this Application suggests that a single type of activity dominates the emissions, but the other sources were not identified, so it is not possible to confirm that a case-by-case permitting process is not required. The next two sections describe the “cutoff” limits in this document. This document is not being presented as additional evidence with respect to what the cutoff limits should be for this facility or that there should be some. It is simply being provided to demonstrate that the “Insignificant source” designation in Appendix B applies to source classification and does not exclude them from being included in an ambient air quality analysis when warranted. The second paragraph in the next section at the top of page 6 helps clarify discrepancy:

...the EPA believes that for nearly all source categories, even those that are simple enough to be good candidates for this guidance, there will usually be emitting activities that will be co-located with the activity described in the cutoff. Generally, these sources are a very low percentage of the emissions from the entire facility. Some examples of co-located sources are cold cleaners at gas stations, consumer product usage such as cleaners and white-out, lawn mowers, and small portable generators. To account for any such sources, EPA calculated the cutoffs leaving a small margin for any such sources that may be present. (Note that EPA does not mean to imply that overall these types of co-located sources are not environmentally significant-just that they probably have little bearing on whether a source is major or minor.)

The last excerpt included below includes an example that summarizes the differences between the source classification statements and the need to consider all sources for ambient air quality compliance. It includes an example of SO₂, since at the time the percent sulfur limit was higher than it is now, and

there was no NO₂ 1-hour limit as there is now, but the concept is directly applicable to the deficiencies in this permitting process that ignored sources for ambient air quality compliance that are classified as “Insignificant” or that could be excluded by other “general permits,” “prohibitory rules,” “exclusionary rules,” and “permits-by-rule”. It states:

How Does This Guidance Relate To State And Local Minor Source Construction Permit Programs?

This guidance is NOT intended to affect minor source new source review (NSR) programs. Those programs are necessary for attainment and maintenance of the national ambient air quality standards (NAAQS), and for generally managing and protecting air quality in a given location. These are considerations independent of whether a source is a “major” or “minor” source. In making any change to a minor NSR program, the State or local agency needs to address air quality impact considerations in addition to those discussed here. For example, an agency limit to ensure that a source is minor for sulfur dioxide (SO₂) may involve fuel sulfur limits. Because those same fuel sulfur limits could possibly lead to short-term exceedances of the SO₂ standards, and the agency could not categorically exempt such a source from minor NSR without addressing those air quality impacts; it is important to note that the annual limits contained in the guidance, while ensuring that the source is not a “major source,” may not ensure that the source meets all short-term NAAQS.

This example is extremely analogous to this Applicant’s permitting approach, and therefore there is still a need to examine all sources that may contribute to the short-term impacts on-site and off-site.

Summary

By limiting the annual fuel usage, the facility should be able to practically comply with annual ambient air quality standards. But with only an annual fuel restriction of 900,000 gallons, the facility could run for days or weeks at a time. These annual restrictions will have no practical limitations on short-term emissions, and will provide zero relief for helping maintain compliance with 1-hour, 8-hour, and 24-hour ambient air quality standards. Therefore, any permit review procedures for this application must treat the short-term potential emissions as if they are from a major source of air pollution. That is not to say the facility must provide recordkeeping and maintenance records as if it is a major source, but simply that the source information for all sources must be provided from the Applicant as if it is a major source, and the due diligence required to demonstrate that the facility can and will meet the ambient air quality standards must be similar. It must consider all its sources, on-site and off-site secondary sources, and contributions from current and future nearby sources as one would be required to do so for a facility that has been demonstrated by DEP modeling to consume nearly all of, or more than, an allowable limit by itself. Then, and only then, could “enforceable and practical conditions” be developed for a very large, multi-process facility that is only taking an annual restriction on “emissions of air contaminants”.

This may not be the “typical” pathway for a Chapter 115 license and that is likely because most proponents would discount this site as unsuitable for this ancillary non-emergency power plant facility and move to a more suitable location by now. At another site, where there is no 45-foot local zoning limit height restriction, no FAA concerns in the flight pathway of the airport, is not in an area that is predominately residential and protected lands, and is in not in such close proximity to the fenceline, it is very likely that stacks could be closer to GEP height and the facility would not be consuming nearly all of, or possibly more than, the allowable ambient air quality increment during operations.

Furthermore, in another location, it is very likely that the proponent would not need to remove and replace millions of cubic feet of unsuitable soils, in some areas which will be slightly less or more than a hundred feet from residential properties, nature trails, established wetlands, a church, etc. The construction phase would not exceed the “temporary emissions” duration that EPA has applied to other project’s construction phases and the construction would be completed in a timeframe that is less than the ambient air quality standard’s form. Therefore, in a more practical location, one would not need to examine each and every construction scenario, additive secondary emissions scenarios, non-combustion sources of emissions, temporary sources, etc., along with an operating non-emergency power plant. In essence, in a more suitable location, sources labelled “Insignificant Sources” with respect to attainment status could also simply be considered de minimis for ambient air quality compliance, as is typically done.

Unfortunately, the choice made by this Applicant to use this location, these power plant and unsuitable soils construction scenarios, and this air permitting pathway requires significantly more scrutiny, and unfortunately during DEP information requests, the Applicant chose to side-step the requests in their entirety or provide incomplete responses as if the Applicant needed to provide less, not more information than one would typically provide for a complex facility of this size. As a result, air permitting at this time cannot be performed in a manner that protects both the region with respect to attainment or non-attainment status (i.e. the typical focus of Chapter 115), and the local community from exceedances of the ambient air quality standards during construction, operations, maintenance, and any combinations thereof. The information in the record for this air permit Application does not confirm the conditions of the Order and cannot be properly conditioned, also based upon the information in the record, and therefore the Air Permit must simply be denied at this time.

Thank you for your attention to this serious concern.

Sincerely,



Amy Grant, president
Upstream Watch