

**STATE OF MAINE
BOARD OF ENVIRONMENTAL PROTECTION**

IN THE MATTER OF

NORDIC AQUAFARMS, INC.)	
Belfast and Northport)	
Waldo County, Maine)	
)	
A-1146-71-A-N)	INTERVENOR NORTHPORT
L-28319-26-A-N)	VILLAGE CORPORATION'S
L-28319-TG-B-N)	POST-HEARING BRIEF
L-28319-4E-C-N)	
L-28319-L6-D-N)	
L-28319-TW-E-N)	
W-009200-6F-A-N)	
)	

Intervenor Northport Village Corporation (“Northport”) submits this Post-Hearing Brief to assist the Maine Board of Environmental Protection (“Board” or “BEP”), the Maine Department of Environmental Protection (“Department” or “DEP”), the Commissioner of Environmental Protection (the “Commissioner”) and the DEP Staff (“Staff”) to evaluate the applications of Nordic Aquafarms, Inc. submitted under the Maine Site Location of Development Act (“SLODA”), the Maine Natural Resources Protection Act (“NRPA”), the Maine Pollution Discharge Elimination System/Waste Discharge License (“MEPDES/WDL”) and the Chapter 115 Major and Minor Air Emission License Regulation.

INTRODUCTION

Blasting, Noise, Odor and Air Quality

It is notable that these four issues present a special challenge within this permitting process. They are related not only in the interconnectedness of their effects, but also in the complex array of interrelated federal, state, and municipal laws and rules, the lack of specifics and conclusive nature of DEP regulations, and the finite resources of DEP staff. Performance-based conditions

to ensure compliance are a central and critical aspect of any permit. This project cannot be reasonably conditioned for blasting, noise, odor and air quality independently with the information provided. The nuisance impact on local uses from these areas is additive; it is not possible to develop performance specifications without defining the tolerance for each of them independently and together.

The discussion that follows regarding (A) Blasting, (B) Noise, (C) Odor, and (D) Air Quality demonstrates that Nordic Aquafarms, Inc. (“Nordic”) has not demonstrated any capability to satisfy the conditions therein, or made a diligent effort to comply with these sections of the law. Before Department staff can competently process this application and the Board can issue a decision, Nordic must provide sufficient information to identify, classify, and quantify potentially hazardous conditions in order to determine whether appropriate standards are met, evaluate mitigation efforts, and ensure long-term compliance. The Department must insist that Nordic perform the appropriate studies. Nordic must supply appropriate data and modeling – otherwise the Board will have no choice but to deny Nordic’s requested permits.

In the case of these four topics that should be addressed as part of the SLODA permit, the myriad of applicable federal and state statutes and regulations, the use of conclusive rather than prescriptive requirements within Department rules, and the stressed and stretched resources of Department staff, coupled with the applicant’s lack of diligence, makes it impossible for staff or for the Board to determine “whether the developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect existing uses, scenic character, or natural resources in the municipality or in neighboring municipalities,” see 06-096 C.M.R. ch. 375 (NOTE) (2016), or for the Department to devise responsible performance-based permit conditions.

A. Nordic’s Blasting Plans and Blasting Assessments Are Incomplete.

Blasting is covered in the Site Law of Development Act (“SLODA”). See 38 M.R.S. §§ 481 *et seq.* “Blasting will be conducted in accordance with the standards in section 490-Z, subsection 14 unless otherwise approved by the department.” 38 M.R.S. § 484(9).

Evaluation of the potential for damage from normal blasting vibrations is addressed in 38 M.R.S. § 490-Z (14)(F): “A preblast survey is required for all production blasting and must extend a minimum radius of 1/2 mile from the blast site. The preblast survey must document any preexisting damage to structures and buildings and any other physical features within the survey radius that could reasonably be affected by blasting.” Similarly, the SLODA application form asks applicants to comply with the following:

Section 20. Blasting. If the development requires blasting of rock or other earth materials for road construction, foundations or any other purpose provide the following information.

A. Site plan. A site plan indicating proposed blast areas at the project site and locations of all offsite structures and wells not owned or controlled by the applicant within 2000 feet of any blast site unless a lesser distance is approved in writing by the department.

B. Report. A report prepared by a qualified professional that includes the following.

(1) Assessment. Assessment of the potential for adverse effects of blasting on protected natural resources and structures and wells not owned or controlled by the applicant considering, at a minimum, ground vibration, peak particle velocities, noise and airblast effects and on-site and offsite ground and surface water quality and quantity.

(2) Blasting plan. Provide a blasting plan which addresses methods to control adverse effects from ground vibration, airblast and flyrock; provides details on the proposed blast design, monitoring of blasts (as applicable), a blast schedule; and includes provisions for pre-blast surveys, signage, warnings, and access control during blast events in conformance with Title 38 MRSA § 490-Z (14).

i. The blasting plan submitted by Nordic as part of its SLODA application fails to provide an assessment of the potential for adverse effects of blasting on protected natural resources and structures not owned or controlled by the applicant.

In its SLODA application, Nordic represented “[a]ccording to the [blast assessment and blasting plan for the project] the potential for adverse effects from blasting on natural resources, structures, surface water, and well of [*sic*] offsite buildings is negligible at best, based upon the proposed site design.” (SLODA Application Sec. 20, Text, p. 1). It is hard to gauge the accuracy of this statement when the accompanying pre-blast survey drawing simply shows the project site, with an outline outside the project area, labeled as the “Potential Blasting Limits”. The limits are outside of the project site, and onto projected locations, and it is unclear what the drawing is trying to depict. See Appendix 20-B to Nordic’s SLODA application.

Nordic has not addressed any potential for adverse effects of blasting in the intertidal and subtidal marine zones for pipeline placement. Sessile and burrowing marine organisms, fish, and shorebirds will clearly be affected by vibration, noise, and particulates. Many of these organisms are resident year round; construction timing is not a mitigation measure.

Similarly, Nordic failed to address whether blasting could occur adjacent to the existing dam structures and the potential for any adverse effects. The proximity of and condition¹ of the dams should have prompted Nordic to do this assessment already. When pressed on this issue at the hearing, Nordic’s witness acknowledged that such assessments will need to be made:

DR. HOPECK: That does capture both of those dams, so if -- and if we get to that point, if a permit is issued and we do have those covered in pre-blast survey, would it be reasonable for the Maine Emergency Management Agency to participate in that pre-blast survey or at least review the results of it and would you be willing to accept any recommendations they might have, if any, for monitoring of the dams during blasting?

BRETT DOYON: As far as our pre-blast survey, we would do just like a video of *the existing structures and the existing cracks* and I assume that they could do

¹ See GEI Prefiled Testimony, at 22-25, regarding the condition of the dams.

their own or, you know, tag along, I guess, with the process. And if they had, you know, concerns and limits and standards I believe we would, you know, we would listen to their recommendations.

2/13/20 Tr. 172:10-25 (emphasis added).

MR. PELLETIER: Yup. And just -- and I understand you don't know exactly where -- you wait until you start pulling off materials to see where you've got to work, but any idea where blasting might occur relative to the location of the dams -- of that Lower Dam?

BRETT DOYON: I think there is some anticipation for some blasting under the lower southeast building and some of the trenches. And then I would assume that in the deeper areas of the building, the deeper cuts you -- it would be greater odds that you would hit -- hit ledge.

MR. PELLETIER: And what's --

MS. BENSINGER: Could you use the pointer, please.

BRETT DOYON: Yeah, so I would -- I think we're anticipating some ledge here and then in the back here where some of the deeper cuts are.

MR. PELLETIER: *And how do you handle an area like that that may be of concern?* I know this is part of your regular business, but how do you -- you know, *when you've got a particular structural concern in pretty close proximity to where your blasting is?*

BRETT DOYON: Yeah, I mean, once we hit the ledge and we know where it is and the depths of the cuts, I mean, we analyze it and we run calculations and, you know, figure out how many pounds of explosives we can use at this certain distances that we're, you know, that we are away from the structure and, you know, and limit that exposure to -- to those structures.

MR. PELLETIER: But would you say there would be a series of smaller blasts if you were close to something like a dam structure that you may have some concerns about and just do it that way?

BRETT DOYON: Correct. Yeah, I mean, when you're closer to buildings you kind of tend to go smaller, less pounds per delay and you -- you go smaller and, you know, you prefer to start further away, collect data. We set up seismographs at the existing structures of concern and then we calculate based on the results of the seismographs and stay within industry standard limits that -- that we're allowed.

2/13/20 Tr. 163:15-165:9 (emphasis added).

What the foregoing demonstrates is that Nordic was aware of a structure, namely the structurally compromised dams, for which it should have submitted an assessment for potential for adverse effects of blasting on these structures or a plan which addresses methods to control any such adverse effects. By omitting this information, Nordic's SLODA application lacks the requisite "[a]ssessment of the potential for adverse effects of blasting on protected natural resources and structures" and should not be approved.

(ii) It is unclear from Nordic's SLODA Application and the testimony presented at the hearing where it proposes to have blasting occur.

In Section 20 of Nordic's SLODA Application, it stated that "[b]ased on the geotechnical investigations presented in Section 11, project development is expected to require blasting of approximately 18,000 cubic yards of bedrock during the construction of Site buildings and ocean pipeline infrastructure." Nordic does not provide any supporting data on how it determined that 18,000 cubic yards of bedrock would need to be blasted. The figure provided in this section (Figure 20-1) also does not indicate what areas on the site would be blasted to get to the determined volume of 18,000 cubic yards. Prefiled Testimony of M. Lannan, Blasting, at 3. While the text of the SLODA application states that Figure 20-1 is "[a] site plan showing anticipated blasting areas, based on existing information about subsurface conditions", the figure is titled "Ledge Removal Plan". The legend indicates only where there is supposed to be ledge removal and contours of the bedrock depth. It is unclear whether the bedrock depth is above mean sea level ("AMSL") or below existing grade. The figure also shows a line accompanied by a 90° angle in the upper left-hand corner where the ledge removal area is flush with the edges of Grow Module 2. The Geotechnical Engineering Report provides boring information that does not indicate that there is any knowledge of bedrock like this in this area. Prefiled Testimony of M. Lannan, Blasting, at 3.

Further, there is no ledge shown near the wastewater plant. Plainly this figure is not representative of expected blasting zones. Id. at 3.

The Geotechnical Engineering Report (Nordic's SLODA Application Appendix 11-B) also raises even more inconsistencies with the information that the applicant has provided. For example, borings B301 and B302 both show in the boring logs that bedrock is reached at 21.7' and 20.4' respectively. However, in the 6/25/2019 RFI response, Tables 1 and 2 only call out the "Depth to Till" as the proposed excavation depth, and the figures provided in the Blasting Plan suggest that intent is to reach bedrock. Tables 1 and 2 do refer to the excavation depth as depth to bedrock. The depth to bedrock and to till do not match up. See Prefiled Testimony of M. Lannan, Blasting, at 3.

It is unclear whether Nordic has truly determined the bedrock that must be removed, and therefore without any real sense of the proposed blast area, there is no way for the BEP to properly evaluate the potential effects or the efficacy of the methods for control adverse effects during blasting. This uncertainty was confirmed at the hearing:

MS. RACINE: That's okay. Mr. Doyon, my one question about blasting is has Nordic identified exactly you're going to be blasting?

BRETT DOYON: We do not have exact limits where we're going to be blasting at this time based on the design and what's actually out there for ledge will -- will result in actually where the blasting will have to take place.

2/13/20 Tr. 152:24-153:6

At this point in the process, Nordic had ample time to identify the actual proposed blast area, with support for its proposed zone of impact (such as information that demonstrates how it arrived at the projected amount of bedrock to be removed). Moreover, Nordic has failed to provide any satisfactory preblasting assessment as required by statute and the SLODA application with

regards to evaluation of adverse effects of blasting on natural resources and the Upper and Lower Dams. As a result, its SLODA application should be denied as incomplete.

B. The Board Should Reconsider Its Decision That Daytime Construction Noise Be Excluded From Consideration of Nordic's SLODA Application Because This Will Be a Serious, Long-Term Effect of the Nordic Project.

Prior to the February 2020 hearing, Intervenor Upstream contended that DEP and thus the BEP had jurisdiction over and must consider Noise as part of its review of Nordic's SLODA application. *See* First Procedural Order (Aug. 15, 2019); Fourth Procedural Order, ¶ 1(I) at 2 (Nov. 8, 2019). Nordic asserted, and the Board agreed, that daytime construction noise was not a proper Hearing Topic because it is "excluded" from regulation by the Department under SLODA. The presiding officer ruled²:

Parties may submit written comments on whether the proposed project meets the noise criteria under the Site Law, but the parties should be aware that pursuant to the Site Law, 38 M.R.S. § 484(3)(A), construction noise generated between the hours of 7 a.m. and 7 p.m. or during daylight hours, whichever is longer, is exempt from review by the Board.

Fourth Procedural Order, ¶ 1(I) at 2 (Nov. 8, 2019).

Resolution of the issue of whether daytime construction noise is subject to regulation by the Board is important. The Nordic project, if approved, would cause construction to occur over a period of four or five years, without stop, in an otherwise traditionally residential and agricultural area (that the City of Belfast re-zoned Industrial to accommodate Nordic) and will subject residents and farm animals to a cacophony of shrill sounds making habitation unpleasant, real estate unmarketable, and maintaining livestock impossible, to the farmers' great loss and damage.

² Although the Board appears to have ruled on this, Northport preserves the argument for reconsideration and any appeal.

As a matter of law, it is incorrect to conclude that daytime construction noise is not subject to Department regulation under Site Law. Nordic asserts that noise is “exempt from regulation” and thus does not constitute a proper topic for inclusion in a SLODA permit application. Northport disagrees. Noise is not, as Nordic claims, “exempt” from regulation. The text of 38 M.R.S. § 484(3) provides:

3. No adverse effect on the natural environment. The developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities.

- A. In making a determination under this subsection, the department may consider the effect of noise from a commercial or industrial development. Noise from a residential development approved under this article may not be regulated under this subsection, and noise generated between the hours of 7 a.m. and 7 p.m. or during daylight hours, whichever is longer, by construction of a development approved under this article may not be regulated under this subsection.
- B. In determining whether a developer has made adequate provision for the control of noise generated by a commercial or industrial development, the department shall consider board rules relating to noise and the quantifiable noise standards of the municipality in which the development is located and of any municipality that may be affected by the noise.
- C. Nothing in this subsection may be construed to prohibit a municipality from adopting noise regulations stricter than those adopted by the board.

Subsection 3(A) above contains two sentences. The first pertains to commercial or industrial development and provides that “the [Board] may consider the effect of noise.” The second sentence pertains to residential development and provides that noise from residential development is not “regulated under this section”. The first pertains to commercial and industrial development; the second pertains to residential development. Nowhere in the statute does it say that noise is “exempt” from regulation. That term is never used.

Were Subsection 3(A) read differently, there would be no need to have subsection 3(B). Since there is a Subsection 3(B), and since the legislature is presumed to intend what it does, the

two sentences in Subsection 3(A) must relate to different kinds of construction: commercial/industrial on the one hand and residential on the other. And commercial/industrial noise may be regulated by the Board. For a further explanation of this issue, please see Submission of M. Lannan, dated Dec. 12, 2019, “EXHIBIT NVC/UPSTREAM 6” at 9-15.

A construction noise exemption for a project of this size and scope could very well result in unbearable living conditions for years for nearby residents of Belfast and Northport without careful review, a commitment to construction mitigation, and planning. Mercifully, the legislature gave the Board the authority to prevent such a result. Nordic proposes to construct a power plant, a wastewater treatment plant, a water treatment plant, a food processing plant, millions of gallons of process tanks, hundreds if not thousands of miles of utility piping, ducting, wiring, etc., millions of cubic feet of soil excavation, countless cement trucks, supply deliveries, equipment deliveries, and a major road diversion and construction project and a significant pump station and outfall project. Each one of these could cause an adverse impact. Nordic’s suggestion in their report that the site is large and that there is plenty of space for sound to dissipate is not a mitigation strategy. Nordic SLODA Application, Appendix 5-A, at 6 (“Most construction activities associated with the proposed Project will be located hundreds of feet and further from protected residential locations.”) It provides no solace when the entire site is essentially earmarked to be developed.

Further, consider the legislative history³ of the law in question. The intent of the legislature is clear, and the intent is not to exempt daytime construction from regulation. The Board’s interpretation of the law may honor the limited resources of the DEP, but it does violence to the rules of statutory construction, not to mention common sense. On November 20, 2019, the

³ For a more comprehensive discussion of the issue of legislative history and interpretation, see Submission of M. Lannan, dated Dec. 12, 2019, “EXHIBIT NVC/UPSTREAM 6” at 9-15.

Presiding Officer took the following position in considering comment on the application's conformance with the relevant noise standards:

Although Chapter 375, § 10 of the Department's rules contains provisions pertaining to construction noise during daylight hours, the Site Law itself, in 38 M.R.S. § 484(3)(A) states that "noise generated between the hours of 7 a.m. and 7 p.m. or during daylight hours, whichever is longer, by construction of a development approved under [the Site Law] may not be regulated under this subsection [No Adverse Effect on the Natural Environment]." Where, as here, there is a conflict between the governing statute and a rule implementing it, the statute controls, and the exception set forth in statute takes precedence over the rule's stated restrictions. Also, in this case the statutory exemption for daytime construction noise was enacted by the Legislature after that section of the rule was in place, so the Legislature is presumed to be aware of the rule when it enacted the exemption. The Board cannot, therefore, consider evidence on the issue of daytime construction noise. Evidence pertaining to operational noise and nighttime construction noise may be submitted in writing while the record is open, but the topic is not a hearing issue.

See Letter of Cynthia S. Bertocci on behalf of the Presiding Officer addressed to Mr. Michael Lannan (Nov. 20, 2019).

There is no conflict. In subsection 3(A), there are two distinct matters in two different sentences, separated by a period. The first sentence set forth the department's authority to consider the effect of noise from a commercial or industrial development; the second sentence addresses what noise may not be regulated under the subsection. 38 M.R.S. § 484(3)(A). The clause referring to construction appears in the second sentence (residential) and is separated by a comma. Therefore, construction in the second sentence refers to residential construction only.

This makes sense, as residential construction is fairly consistent and normalized, and of a known and usually modest duration. By its very nature, commercial or industrial construction is very different, large, loud, of substantial and often indeterminate duration and compliance with the intent of 38 M.R.S. § 484(3) as described in the first sentence ("The developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that

the development will not adversely affect existing uses...”) in a commercial or industrial setting can only be determined on a case-by-case basis.

Given the importance of this issue, and the potential for serious impacts that will result from the noise generated from the construction of the Nordic project, Northport respectfully requests that the Board reconsider its decision not to consider daytime construction noise as a part of its evaluation of Nordic’s SLODA permit.

C. Although Nordic Has Acknowledged That Odors Will Exist, It Still Fails to Comply With the Regulations So As to Enable DEP to Fashion Suitable Conditions to Guarantee Ongoing Control of Odor.

It is Northport’s position that Nordic’s application is incomplete with regards to the information it was required to provide regarding potential odors and mitigation of those odors; and, in the alternative, if a permit does issue, Nordic should be required to set up a public hotline for odor complaints.

(i) Nordic’s SLODA Application with regards to odor is incomplete.

Pursuant to the regulations, an applicant shall make adequate provision for controlling odors. 06-096 C.M.R. ch. 375, § 17(A). Given the “extensive experience” available to Nordic (SLODA Application, Section 22, text, p. 3, 22.6), the Nordic production goals for this facility, and the potential for significant impact on the public in areas within and around this large facility, the Board should not approve Nordic’s incomplete application. It lacks the following information:

- Specific identification of all potential odor sources, including their location within the plant and their chemical identity in sufficient detail to evaluate mitigation measures;
- Specific descriptions, including area (size) of locations that would be affected by odor. This includes outdoor areas near active and passive ventilation system outlets and off-load facilities; and

- Specific proposed systems for enclosure of odor-producing materials and processes, and pro-posed uses of technology to control, reduce or eliminate odors. This includes:
 1. Size, location, function, and general description of sealed enclosure tanks,
 2. Size, location, function, and general description of chilling and freezing equipment,
 3. Design of off-load facilities to prevent odor leakage, and
 4. Integrated air treatment systems, describing means of capture, conveyance, and control of odors, and defining limits on and location of dispersion of output from those systems.

Nordic should provide sufficient information on this issue to enable the Department to determine whether conditions should be imposed to mitigate odors and to design appropriate permitting conditions if needed. As witness Mr. Michael Lannan, an environmental engineer with close to 30 years of experience in nuisance science and control, including without limitation, potential air, odor, noise, dust, lighting and vibration adverse impacts in residential, commercial and industrial mixed use projects (see Pre-Filed Testimony (Dec. 16, 2019)), testified during the hearing:

[I]t's my experience that you can do a conceptual design that gets you to the point where you can demonstrate compliance with the regulations, one, and two, set it up so that the DEP can come up with adequate conditions so that the -- the facility can be set up to be compliant so that if there is an odor complaint it can be addressed quickly, but the information provided cannot do that.

2/13/20 Tr. 190:24-191:6.

According to Nordic, “[t]he Belfast salmon farm will not generate noticeable odors . . . Odor in the seafood industry generally emanates from waste exposure to air; with the result of also destroying the value of potential byproducts. In our case, that would lead to economic losses.” SLODA Application, Section 22, p. 1, 22.0. Mr. Dinneen, however, in his pretrial testimony, acknowledges there will be odors but assured that “[o]dors that are produced will be effectively controlled by the installation of proven air treatment infrastructure in key production buildings.

HVAC systems within these buildings will be designed to ensure air is appropriately treated by these air treatment installations.” Pre-Filed Direct Testimony of Cathal Dinneen, ¶ 5 (Dec. 10, 2019).

Facility odors could have a significant environmental impact. The facility is located in a suburban area with a neighborhood, including a church, that is sensitive to odors. 2/13/20 Tr. 205:24-206:1 (M. Lannan). Public use is also expected in locations on and near the site: “[W]hen we're talking about trails that run alongside of the building and when we're talking about an education center and we're a talking about a stream and areas where people can walk and do walk...” Id. 290:1-6 (M. Lannan).

Subsection 17(B) of Chapter 375 states: “The application for approval of any development likely to be the source of offensive odors shall include evidence that affirmatively demonstrates that the applicant has made adequate provision for the control of odors, *including, but not limited to, the following information*: (1) the identification of any sources of odors from the development; (2) an estimation of the area which would be affected by the odor, based on experience in dealing with the material or process used in the development, or similar materials or processes; or (3) proposed systems for enclosure of odor-producing materials and processes, and proposed uses of technology to control, reduce or eliminate odors. 06-096 C.M.R. ch. 375, § 17(B) (emphasis added).

Nordic suggests that subsections (1), (2) and (3) of Section 17(B) of Chapter 375 should be read in the alternative, such that compliance with just one might be adequate: “No, I'm asking you whether the facility complies with all three of these Chapter 375 *alternative* requirements for demonstrating compliance with the odor control standards in SLODA.” 2/13/20 Tr. 196:1-3, 8-11 (statement by Attorney Tourangeau, counsel for Nordic Aquafarms) (emphasis added).

Northport respectfully disagrees with this interpretation of the Department's regulations⁴. All three categories of requested information should be provided, so that the Department can determine whether the applicant has made adequate provisions for the control of odors. Despite putting forth its theory that it is only required to comply with just one of the regulatory requirements, Nordic has represented it is "committed to implementing and mitigating factors to address -- address all applicable requirements." 2/13/20 Tr. 130:12-16 (C. Dinneen). However, evaluating Nordic's application in light of the foregoing regulation, it's evident that Nordic has failed to provide the requisite information.

(1) *Nordic has failed to specifically identify the sources of odors from the proposed development.*

Nordic has only listed very generalized sources of odor for the industry as a whole. Specific on-site locations of concern are not identified. In its application, Nordic lists potential sources of odor in land-based aquaculture to include (1) ensilage of mortalities; (2) fish processing; (3) the waste water treatment plant; and (4) to a lesser extent, feed storage. SLODA Application, Section 22, Text, p. 1, 22.0. This list is not adequate to assess the efficacy of potential odor control systems, since there is no indication of where the odor will be located and the boundaries within which it will be contained. Potential odor sources must be specifically identified in order to identify equipment that will manage it effectively:

While the wastewater and waste sludge will have obvious odors that have not been defined, it is important to note that the fish from beginning to end will have a myriad of potential odors that are compounded based on material age and storage quantities. ...[T]here are many different fish odors present in fresh fish, spoiled fish, oxidized fish, fish processing, and general environmental odors from fish. None of these have been considered.

⁴ See Section 22 of the SLODA application: "Odors. Identify the nature and potential sources of odors from the development, if the development will create any significant odors. Provide an estimate of areas affected and methods of control." (emphasis added)

Pre-Filed Testimony, M. Lannan, Odor, at 5 (citing pages 60-61 of the book *Odors in the Food Industry*, Edited by Xavier Nicolay and published in 2006 as part of ISEKI Food Integrating Safety and Environment Knowledge into Food Studies towards European Sustainable Development series). By contrast, specific examples of odors would include, *inter alia*, species-related fresh fish odor (C6-C9 alcohols and carbonyls, Bromophenols, N-cyclic compounds, Short chain alcohols) and microbial spoilage odor (Short chain carbonyls, Amines, Sulfur compounds, Aromatics, etc.). Pre-Filed Testimony, M. Lannan, Odor, Exhibit NVC/Upstream 9, Attachment A. Without identifying the specific chemical nature of an odor, it is impossible to assess the efficiency of suggested mitigation equipment. For example, Nordic cites carbon filters as a typical technology that will be used for odor mitigation, see 2/13/20 Tr. 165:21-23 (C. Dinneen), but the proposal to use such technology is meaningless without more specifics regarding the chemical compounds it is meant to address. 2/13/20 Tr. 202:5-7 (M. Lannan: “[C]arbon has -- has affinity for different compounds of concern. They haven't identified any of the compounds of concern.”).

Therefore, as Nordic does not adequately identify the nature of the odors, it has failed to satisfy this regulatory requirement contained in Chapter 375, § 17(B)(1). As a result, it is also not possible to determine whether the equipment Nordic suggests is appropriate for mitigation (see discussion below).

(2) *Nordic has failed to provide an estimation of the area which would be affected by the odor.*

Nordic has not satisfied this requirement because it has not even identified locations within the facility where odors will be produced. The application simply states that “[a]ll processes with the potential for creating odors will take place in completely enclosed buildings.” SLODA

Application, Section 22, Odors, Text, p. 1. Nordic's witness on this topic echoed this assertion at the hearing:

MS. RACINE: And Nordic didn't provide any estimation of area to be impacted in this application; is that correct?

CATHEL DINNEEN: We have said it will be confined to within the associated buildings and structures.

MS. RACINE: So Nordic didn't do any odor emission estimating?

CATHEL DINNEEN: Nordic did not do that and I don't know of any fish farm anywhere in the world that would do that simply because it's quite simple and easy to manage by capturing it, containing it and treating it.

MS. RACINE: So Nordic didn't perform any odor dispersion modeling of any sources of odor?

CATHEL DINNEEN: As I said, that's – that would be extraordinary because the odors are confined and it's relatively easy to do that to confine and capture the sources of potential odor.

2/13/20 Tr. 136:9-137:2.

These statements just ignore that there will also be odor potential when fish and waste products are transferred to trucks for distribution or disposal. Buildings cannot be totally enclosed.

Air circulation is essential, whether or not it is controlled:

It is simply not possible to enclose very, very large exposed tanks, agitate them, and not ventilate the headspace. The result would be condensation, biological slime, and unsafe conditions. I have seen this directly in wastewater plants that have attempted to "solve" their odor problems strictly through containment. It is not and (*sic*) odor control strategy. Furthermore, this facility will be processing 200,000 pounds of fish as day. Doors will continue to be open and closed, and if there is inadequate ventilation staff typically props open the doors for "fresh air" regardless of company policy, simply enclosing buildings does not account for the needs of normal use.

Pre-Filed Testimony, Testimony of M. Lannan, Exhibit NVC/Upstream 9, Odor, at 4.

No specific buildings are identified. Without referring to a specific building, it is impossible to know the size of the affected area, the source of the odor, or the chemical nature of

the odor. It is impossible to evaluate whether proposed equipment would be appropriate, or the effectiveness of proposed containment methods. Nordic, for example, will have “a wastewater plant that if this was a municipal wastewater plant would service 30,000 people.” 2/13/20 Tr. 188:22-24 (M. Lannan).

Nordic has not provided any information in this application section about the cubic-footage of this building, entrances, or ventilation plans. We do not know the composition or signatures of odors likely to be produced. We do not know the ventilation or odor mitigation plans. Odor is a significant concern in this location, and there is no indication that Nordic has recognized the issues or can supply cost-effective equipment to mitigate effects. If the public complains of an odor, it might be difficult to trace it to this location since potential odors from this source have not been defined. This is true of all buildings within the facility. Ventilation systems, from an open door to sophisticated HVAC systems, release air, and potentially odor, to the outside. Nordic has not identified outdoor areas that could be affected. Therefore, Nordic has not provided any estimation of the areas that will be affected by odor.

- (3) *Nordic has not described the technology it proposes to use for enclosure of odor-producing materials and processes and that to control, reduce or eliminate odors in sufficient detail to demonstrate that it is adequate for specific applications within this facility.*

According to Nordic, basic mechanisms for odor control throughout the facility will include (1) sealed enclosure in tanks, (2) chilling or freezing, (3) regular out-shipment to off-take partners, and (4) air treatment systems. Moreover, Nordic has represented “[a]ll processes with the potential for creating odors will take place in completely enclosed buildings.” SLODA Application, Section 22, Text, p. 1, 22.1.

Nordic has not identified enclosure tanks or chilling/freezing appliances that are suitable for this specific facility. Nordic has projected the amount of fish it will produce and process,

(33,000 metric tons per year, SLODA Application, Section 01, Description, Section 1, text) but has not designated the volume⁵ of sealed enclosure tanks or chilling and freezing appliances it intends to use. Without knowing the capacity of these measures, it is unknown whether they will be effective, especially with Maine's weather that will interrupt transportation and power at unpredictable times for unpredictable periods.

Nordic has not identified technology to mitigate odor from waste-holding or off-loading facilities. Air-treatment systems are crucial to managing the escape of odors from buildings. Nordic describes air-treatment technology they intend to use: "We will employ air filtration that may include carbon, biofilters, wet scrubbers, and media." SLODA Application, Section 22, text, p. 1, 22.1. As discussed above, without identifying the specific chemical nature of an odor, it is impossible to assess the efficiency of suggested mitigation equipment.

MS. RACINE: Yeah. And speaking to the measures, right, the third requirement about – the application about having proposed systems for the enclosure of the materials, to that end in the application it stated that Nordic is going to partner with established recycling and disposal professionals with years of experience of odor control and, quote, through consultations we will install improvement equipment at key areas to ensure additional odor control.

CATHEL DINNEEN: Mmm Hmm.

MS. RACINE: Has there been any specific equipment identified in the application?

CATHEL DINNEEN: Well, again, the Site Law rules based on our understanding of the rules doesn't at this stage in a proposed facility ask us to commit to any specific piece of equipment or any specific configuration.

⁵ C. Dinneen testified that the ensilage tank would be about two-and-a half cubic meters, but did not address how many tanks would be used or needed in the event of a larger mortality event (2/13/20 Tr. 159:23-160:9, 161:3-9):

MR. PELLETIER: Mr. Dinneen, you were talking about the fact that you got a tank for the one -- to handle the mortality and you said for 2 ½ meters, so I'm guessing a little over 8 feet cubic of volume, but these are big tanks with a lot of fish in and there I'm assuming, you know, we're talking about handling occasional mortality fish on a daily basis, if there was a more of a catastrophic event for one of those big tanks or a couple of those big tanks at a time, is there multiple tanks beyond that one 2 ½ cubic meter tank that they can handle it -- do you have the capacity to handle a big event?

Mr. DINNEEN: . . . -- I mean, I can't -- I can't predict the future. You never know what's going to happen, but those - those sort of scenarios would be very rare and it's highly unlikely that you would lose a very large amount of stock. But the ensiling [sic] tanks, to answer your question, will not cope with that.

2/13/20 Tr. 143:1-18.

MR. MARTIN: Sorry. I apologize if I'm repeating anything. I missed some of the context on the engineering answers before. But are you familiar with some of the air filtration technologies that were mentioned, industrial mollification covers and carbon absorption filters? Are you familiar with those technologies and how they work?

CATHEL DINNEEN: Certainly the carbon filters. That's typically what we would use to remove the offensive odor from absorption.

MR. MARTIN: Are you able to speak to the effectiveness of those technologies in terms of removing odor?

CATHEL DINNEEN: I would say I have personally pumped hundreds of thousands of liters of this material, sludge, into stored tanks -- sorry, sealed tanks that had carbon filters installed and it was very effective at removing those odors.

MR. MARTIN: Okay. Kind of a follow-up question to the technology there and this might -- feel free to defer to this Mr. Whipple later this afternoon. But are any of those HVAC unit components that you've discussed in your testimony, are any of those being used for or relied on to remove pollutants or hazardous air pollutants from the inside of the building before they go into the exhausted air?

CATHEL DINNEEN: I would like to say no and that said in my testimony what I indicated is that the -- the exact choice of equipment, the precise technology that we use will be selected and installed in collaboration with experts in the field, so what we actually will install, the specific piece of equipment and the configuration of that will be done later with the appropriate engineers. But I guess the message I'm trying to give -- because some of these things we just simply can't do. We have to award contracts to vendors, for example, the people collecting the sludge or the people building the processing plant and so on, before we can actually do the very detailed design and configuration of some of these units even though we know pretty much how it's going to be they have to be involved. And obviously we -- we would need to have permission to build this facility before we go and sign contracts with these vendors, but they'll want to have their -- their own say and they'll have their own ideas from their own experience in the different areas as to how -- how they want to -- to be a part of the strategies that we use in those different areas for odor removal.

MR. MARTIN: So would -- would the final product of whatever that negotiation is be as effective or better than what is proposed in the application?

CATHEL DINNEEN: I would say what's proposed in the application will be extremely effective. And, again, we are committed [sic] to not having a nuisance odor at the boundary or outside the boundary of the facility and that's exactly what we'll do.

2/13/20 Tr. 165:14-167:22.

Nordic's general, conclusory statements that whatever they ultimately choose to do will "be extremely effective" does not constitute not constitute a feasible scheme for odor mitigation, nor does it satisfy the regulatory requirements that such technologies should be presented now, when the Board is evaluating Nordic's project and application and needs this information to adequately evaluate what conditions may be necessary as part of that process. Moreover, as noted above, Nordic has expressed its intention to outsource this duty to outside vendors who will "want to have their own say and they'll have their own ideas . . . for odor removal." Therefore, as Nordic has not specifically identified what technological systems it will use to control, reduce, or mitigate airborne odors, the Board should not approve Nordic's application and issue a permit.

(ii) If a permit is issued, the Board should require Nordic to provide a way for the public to report odors.

The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the applicant has made adequate provision for the control of odors. 06-096 C.M.R. ch. 375, § 17(C). Northport urges the Board to consider imposing the reasonable requirement that Nordic devise a public reporting system, including a "hotline," for the public to report unusual odors. The reporting system, coordinated with appropriate plant design, should allow complaints to be addressed quickly and effectively. During the hearing, Nordic representative Cathel Dinneen agreed to such a measure:

MR. DRAPER: -- and recognizing that engineered systems and mechanical systems can fail, has there been any consideration or is there any plan for Nordic providing, and I'm going to use the term a hotline, that's not necessarily the right perhaps term, but a way where a neighbor can report, A, I'm smelling something, there is a problem here. Is there a way that that can be reported and then subsequently addressed?

CATHEL DINNEEN: Well, what might be good is to perhaps submit it as a sort of an odor control plan where you can incorporate into the plan a strategy for neighbors *to do exactly that and we'll have no problem whatsoever at doing that.*

2/13/20 Tr. 159:6-19 (emphasis added).

D. The Combination of the Nordic Project's Chapter 115 Air Emissions and Non-Point Source Emissions Will Have an Unreasonable Adverse Effect on Air Quality.

Nordic applied for a Chapter 115 minor source air license, on the basis that it plans to have eight (8) point sources on site in the form of generators. It is Northport's understanding that Nordic's initial SLODA application also included a "central utilities plant that will provide electrical and heating to its proposed aquaculture facility." SLODA Application, Sec. 21, Air, Text, p. 1, 21.0. To that end, on November 8, 2019, the Department requested identification of "all stationary fuel burning equipment..." (11/8/19 Nordic Aquafarms Letter, J. Gilbert). However, on November 19, 2019, Nordic responded, "Nordic understands that we mention in the SLODA application that there could be propane heaters, but our intention now is to only install electric heaters..." (11/19/19 Air Response Letter, Ransom Consulting). Therefore, Nordic based its Chapter 115 license on the eight (8) generators as the only point source emissions for the site.⁶

Nordic has classified the emissions from the generators as a "synthetic minor source" and that is because it has elected to restrict emissions to by committing to a maximum fuel usage. Nordic's witness Steven Whipple testified that diesel fuel usage will be limited to 900,000 gallons annually in order to achieve "minor" air emissions levels. 2/13/20 Tr. 237:7-23. What is important about this point is this is an artificial restriction on the generators, and as their capacity to emit is greater. 2/13/20 Tr. 225:1-7 (S. Whipple). However, even using 7 of the 8 generators:

This version modeling suggests that the maximum potential impacts will be close to the allowable limit. It suggested that it will be 162 micrograms per meter cube of the 188 micrograms per meter cube limit of 86 percent of the limit. The applicant has been talking about 122 versus 188, but you do have to add in the background and when you add in the background that that number now becomes 162 or 86

⁶ Northport respectfully contends that any permit, if issued, must contain a condition requiring all power sources to be electric, except for the eight generators.

percent of the limit. So they're -- they're very close on this right now based on the modeling that has been done.

2/13/20 Tr. 267:5-15 (M. Lannan).⁷

Nordic is not merely required to present evidence of emissions as it pertains to the minor/major source analysis for a Chapter 115 license, and the Department and the Board's analysis cannot stop there. Nordic's plans as presented are not specific enough to ensure that no other onsite equipment will increase overall emissions and affect air quality. As part of its SLODA permit application, Nordic is required to demonstrate and the Board must evaluate "whether the proposed development will have an unreasonable adverse effect on ambient air quality, **through point or non-point sources of chemical pollutants or particulate matter.**" 06-096 C.M.R. ch. 375, § 1(B) (emphasis added); see also 06-096, ch. 115, § 7(A), Ambient Air Quality Analysis, General Requirement ("It shall be the burden of any applicant to provide an affirmative demonstration that its emissions, *in conjunction with all other sources*, will not violate applicable ambient air quality standards) (emphasis added).; see also 38 M.R.S. § 590(2)(B)-(C) ("The department shall grant the [air emission] 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 . . . [n]ot violate or be controlled so as not to violate applicable emission standards; and [e]ither alone or in conjunction with existing emissions, not violate or be controlled so as not to violate applicable ambient air quality standards.") Nordic only calculated emissions for seven of eight engines and did not provide any other possible combustion sources.

⁷ See also Tech Environmental Comment Re: Nordic Aquafarms Revised Air Dispersion Modeling Deficiencies April 2, 2020, at 7 ("A project of this complexity that, under the best operating conditions, is already predicted, based on the previous DEP modeling, to quadruple the ambient 1-hour NO₂ concentrations in the area and consume at least 85% of the allowable ambient NO₂ emissions from the power plant alone, (and maybe more after the other building doghouses are included in the next modeling revision) needs to be evaluated holistically.") (emphasis in the original)

2/13/20 Tr. 266:10-13 (M. Lannan). This analysis stops short of considering that there will be many other sources of chemical pollutants and particulate matter that will affect the emissions figures such that they will exceed the air standards of the Clean Air Act:

The applicant has suggested that only combustion sources are covered with the Chapter 115 application. While combustion sources are used to find which permitting silo one must follow it does not mean that once the silo or a permitting chapter, in this case Chapter 115, is established that the applicant is relieved from examining all potential source if they might have an impact on the Clean Air Act.

2/13/20 Tr. 263:25-264:8 (M. Lannan); see also Apr. 2, 2020 Tech Environmental Comment at 2.

For example, Nordic has only considered nuisance dust and not the effects of respirable dust, which will impact the total emissions. Many fugitive dust emissions have specific, well-defined and quantifiable, respirable emission impacts from truck wheel traffic, moving of material on-site, loading and unloading of construction and waste materials, etc. Apr. 2, 2020 Tech Environmental Comment at 3 (emphasis in original). Nordic's initial application states: "Additionally, Nordic Aquafarms will be subject to Standard Condition 4, which addresses ongoing fugitive dust." (SLODA Application, Sec. 21, Air, Text, p. 1, 21.0) Nordic states that construction and operations will generate dust: "[e]mployees responsible for maintaining outside work areas will look to identify conditions of fugitive dust from any manufacturing/production and/or construction activities such as material handling, storage, processing, equipment malfunctions, and new construction activities." (SLODA Application, Sec. 21, Air, Appendix 21-B, Dust, p. 1)

Nordic's witness on this topic similarly testified about fugitive dust "[T]he license shall 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..." 2/13/20 Tr. 215:1-6 (S. Whipple), but he was unfamiliar with and

had not evaluated the effects of respirable dust that will be generated⁸. While in many cases a well-developed Best Management Practices plan for mitigating fugitive construction dust may be assumed to demonstrate compliance with respirable dust during construction, but not in all cases, and definitely not for this application. See Apr. 2, 2020 Tech Environmental Comment at 3 (emphasis in original).

MS. RACINE: Nordic proposes a massive excavation of soil which will require tens of thousands of dump truck loads of soil removal, is that your understanding?
STEVEN WHIPPLE: That they're going to -- there is going to be some earthwork, yup.

MS. RACINE: Quite a bit. Nordic has also proposed a cement plant on-site, is that your understanding?

STEVEN WHIPPLE: I'm not aware of that.

MS. RACINE: And the generators themselves also generate dust, I imagine.

STEVEN WHIPPLE: I mean, there is particulate emissions that is will come from the generators.

2/13/20 Tr. 234:9-23.

The impact of dust on air quality cannot be evaluated without this information and appropriate permitting conditions cannot be established without this information.

Moreover, Nordic's application fails to take into consideration that there may be a need for concrete mixing on-site⁹. There is also going to be a wastewater treatment plant, a fish processing facility, air exchanges as a result of the HVAC system, and tens of thousands of diesel truckloads for soil removal. It is evident from the record that these sources, and others, were not and have

⁸ "MS. RACINE: And would you say that these are all activities that would generate respirable dust . . .
STEVEN WHIPPLE: I mean, the term respirable dust, I mean, I think I know what it means..." 2/13/20 Tr. 234:24-235:5.

⁹ As Nordic's Ed Cotter testified: "We understand that the region we're in does not have a plethora of concrete plants nearby, so delivery of concrete is something that we want to make sure we understand and that that's something that available to us at this site . . . [S]everal projects in rural areas typically will ask *a concrete producer if they can do a batch plant on-site* and it's just specifically for that site. Most of the -- I would like to say all, but I can't say with 100 percent certainty, but that typically when we've been asked about that everybody has asked us what do you have on-site for construction electricity. So the real load there is electricity. *Now, I can't say that there is not some full source needed for combustion engines.*" 2/13/20 Tr. 248:3-18 (emphasis added)

not yet been taken into consideration when evaluating the potential for adverse effects on the air quality as a result of this project:

When you start talking about emissions from this power plant and we start talking about particulate emissions, particulate emissions from construction can be -- can be pretty significant for a project of this size. When you start looking at the potential pieces of equipment that have to be operating continuously in order to meet the schedule in this area it's very possible and probable that you can exceed the respiral particulate limits off-site and by respiral particulate I'm talking about the PM10 and the PM 2.5 standard. So when we're often looking at dust we look at it from a fugitive perspective, from a nuisance perspective and then also from the respiral perspective. The diesel engines will have emissions of particle. All of the mobile equipment.

Now, when we talk about HVAC here, there is a little bit of a -- we're talking about two different things. We're talking about heating and air conditioning, right, which is sort of the heat pump thing that was the propane heaters and now is the heat pumps and then we talk about whatever it is ventilation is needed to keep the odor down and to keep the humidity down. And so in those operations they're going to be into emissions and within that I think we have the potential for NOx, we have the potential for particulate obviously.

2/13/20 Tr. 272:11-273:1; 303:19-204:4 (M. Lannan); see also Apr. 2, 2020 Tech Environmental Comment at 3, 7.

Therefore, the Board cannot approve Nordic's SLODA permit application, or grant an air emission license, when it cannot assess (because that information has never been presented or analyzed) the effect of other potential non-point emission sources which are almost certain to cause the overall air quality to violate Clean Air Act standards. See Apr. 2, 2020 Tech Environmental Comment at 7 ("A project of this scope, with this many individual industrial processes and continuous 24-7 utility needs, with a half a billion dollars' worth of construction activities, must include all the potential construction, operations, and maintenances conditions for each proposed phase of construction and operation in its modeling demonstration, so that DEP and the public can

be assured that the project 'Meets all applicable Clean Air Act requirements', as the Applicant has claimed.'").

MS. RACINE: But Chapter 115 doesn't eliminate Nordic's responsibility to at all times comply with Clean Air Act requirements; is that right?

STEVEN WHIPPLE: Right.

MS. RACINE: So are you representing then that emissions from Nordic's mobile sources and construction activities will not exceed the Clean Air Act requirements?

STEVEN WHIPPLE: You know, I guess my statement would be on the stationary sources and the stationary equipment that's part of the – the licensing process, so my understanding is that they will meet the Clean Air Act requirements using all their mobile equipment --

MS. RACINE: But in your --

STEVEN WHIPPLE: -- I wasn't questioning that in any way.

2/13/20 Tr. 230:13-17; 230:24-231:11.

While Nordic might not be questioning whether its emissions and pollution from constructing and operating the site (Chapter 115 emissions plus any mobile or non-point sources) will exceed Clean Air Act thresholds, that does not mean that the Department and the Board similarly should ignore this issue. It is charged with making this determination, and require the applicant, Nordic, to provide additional information to make this determination if necessary. In the meantime, no air emission license or permit should issue until such a determination is made.

CONCLUSION

For all of the above reasons, Northport Village Corporation requests that the permits requested by Nordic be denied.

Dated May 4, 2020

INTERVENOR NORTHPORT VILLAGE CORPORATION

By: 

John Spritz, President

CERTIFICATION

I hereby certify that a copy of the foregoing was electronically mailed this 4th day of May, 2020 to those indicated on the attached Service List.



Kristin M. Racine, Esq.