

November 13, 2019

Cynthia S. Bertocci
Executive Analyst
Board of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

Ref. 4518

Re: Potential Air Quality Testimony Preparation Timing and Data Needs Requests

Dear Cindy:

Tech Environmental, Inc. (Tech) has been asked by Upstream Watch to provide comments on the air quality aspects of the Nordic Aquafarm's applications. As part of that process, logistical concerns with the currently proposed timeline for preparing testimony for the hearing have been identified.

Unfortunately, it is unclear whether the proponent can provide the completed data request; updated dispersion modeling to demonstrate compliance with the Chapter 110 Ambient Air Quality Standards; then update the air quality study, and incorporate any changes into the Chapter 115 air application, before finally performing collateral changes in the other applications, specifically, 06-096 Chapter 375(1) and Chapter 375(10), all prior to December 13, 2019.

Even if they can accomplish this, there would likely be little-to-no time for the preparation of testimony. While we can do some parallel testimony preparation, the stack heights and the potential construction impacts that will be spread out over many years, and the degree to which any pending analyses absolutely, marginally or inadequately, demonstrate compliance will prevent complete testimony preparation in advance of their application being revised and completed.

This letter walks through the potential timeline, so you can understand our concerns.

Timing and Schedule Announcements

On Friday, November 8, 2019, at approximately 2:00 PM, the Fourth Procedural Order was provided, and in it, a firm date of December 13, 2019 is required for pre-filed testimony. Today is November 13, 2019, exactly one month from the testimony deadline.

Later, at approximately 5:00 PM, a second item was sent to the listserv. The second item requested the following information:

“Following up on yesterday’s Board meeting, and pursuant to Chapter 3, sections 5(D) and 16(A)(1) of the Department’s rules, Department staff requests that the Applicant provide the following information related to its application for a Chapter 115 air emission license:

1. *A complete listing of all stationary fuel burning equipment to be installed on-site, including the type of equipment, maximum rated heat input capacity of each unit, and the type and quantity of fuel burned in each unit.*
2. *Unique identification of each stack and which unit or units exhaust through it, and maximum volumetric flow rate and exhaust temperature from each stack.*
3. *The height above ground level and inside diameter of each stack.*
4. *A scaled plot plan schematic of the facility that shows the following:*
 - *the location of all stacks, buildings, and other structures (e.g., tanks, towers, etc.);*
 - *the base elevation and height above ground level for each stack, building, and other structure;*
 - *a north arrow;*
 - *an accurate scale ruler;*
 - *the facility property boundary; and*
 - *any areas likely to be fenced surrounding the facility.*

We ask that the Applicant provide this information no later than November 22, 2019, so that Department staff and the intervenors have sufficient time before the hearing to review the information. ”

This list of information is clearly intended for air dispersion modeling. Unfortunately, this site information is only one component of dispersion modeling and does not consider other operating scenarios. Furthermore, the requested information only applies to those air impacts associated with generator and combustion emissions, and does not request information for addressing the air quality component in SLODA as well.

Dispersion and Variable Loading Concerns

Sticking with the air application for now, there are four primary factors for assessing potential air quality impacts through dispersion modeling: site information, source information, meteorological data, and background air quality data. Typically, the regulatory authority advises on the appropriate meteorological data, terrain data, and background air quality conditions for the project, while the source and site information is provided by the proponent.

The source information provided in the original application provides hourly emissions of different compounds at 100% load. While 100% load may provide the maximum concentrations, or maximum loadings, of each pollutant, it is very likely, especially in this application, at this site, that at times the generators will run at a load other than 100%. Since the stack diameters are designed for the maximum operating scenario, lesser loads would result in lower temperatures and lower exit velocities, and thus decreased dispersion.

Especially in areas with complex terrain, it is not unusual for a combustion source to require a higher stack to achieve comparable dispersion under lower flow/temperature operating conditions than the maximum flow/temperature scenario that was used to specify the stack diameter. Therefore, given the previously-demonstrated extents of potential air quality impacts that Tech provided, there is a

significant impact potential with respect to stack height. Therefore, it should be necessary for the proponent to provide the range of operational conditions to ensure the public's health is protected under such scenarios. Unless the proponent is going to make it physically impossible for the engines to be operated at 25%, 50%, or 75% load to match the facility's demands at any one time, then all of those emissions for these possible operating scenarios should be presented, and modeled as well. This is standard protocol for a facility that has the air emission potential of a 14 MW power plant with independent stacks.

Other Items Required to Demonstrate No Adverse Impact Still Outstanding

The DEP request for information from November 8, 2019 focused on source information. As discussed above, other information, such as site information, alternative source emissions data, meteorological data, receptor locations, and background air quality data is also necessary before the application and assessment can be considered updated and completed.

Typically these items would be discussed at the air permit pre-application meeting and then the assumptions would be in the air permit application description along with the input/output model files. Since this dispersion modeling is to be performed after the original application, these items need to be provided as well, with a caveat from DEP that they agree that they are acceptable:

1. Five years of compiled meteorological data, as recommended by DEP for use with this project.
2. A comparison of available background data and a justification that the background data proposed is representative, and yet conservative.
3. Terrain data and the extent of the domain based on local terrain features.
4. The proposed receptor spacing and extent.
5. The source cutsheets from the manufacturer guaranteeing emission rates at 25%, 50%, 75%, and 100% loads, as well as the exhaust rates and temperatures at each increment. These are readily available from the manufacturer, especially for an engine as established as the one proposed in the application.

In addition to the stationary combustion sources provided above, the proponent must include mobile point and area/volume sources related to construction, operations, and maintenance for Phase 1 and Phase 2, and the potential overlap of Phase 1 operations and Phase 2 construction to demonstrate that there would be no adverse impact to public health per 06-096 Chapter 375 (1). Since there clearly is a very large and long Phase 1 construction period proposed, and there would likely be overlapping Phases, modeling at a minimum must also be performed for Phase 1 and any overlapping scenarios the proponent proposes as well, to ensure public health and compliance with both absolute and incremental air quality standards in 06-096 Chapter 110 Items 2-7 and the applicable Incremental Standards in 06-096 Chapter 110 Item 8.

To complete a compliance demonstration with the 06-096 Chapter 110 Ambient Air Quality Standards and to demonstrate that a determination can be made to determine whether there is “No Unreasonable Adverse Effect On Air Quality” as required in 06-096 Chapter 375 (1) the proponent must provide the following additional information for both Phases 1 and 2:

1. Non-road equipment to be used on-site, including the equipment type, the engine rating of each unit, the expected daily usage of each unit and duration of use.
2. On-road equipment to be used on-site, including the peak daily volume of trucks on-site, the duration of truck activity, on-site truck travel speed and route, and the peak number of trucks simultaneously idling on-site.
3. Average local wind speed to consider potential wind erosion of exposed working area.
4. Expected depth of excavated ground.
5. Tonnage of fill material kept on-site.
6. Tonnage of daily excavated material.
7. Any on-site processing of excavated material for reuse, including processing activity, equipment, hours of use, duration of use, and material tonnage to be processed.
8. Expected depth of gravel replacement for the excavated areas.
9. Tonnage of and type of gravel material kept on-site.
10. Tonnage of gravel to be processed on-site.
11. Methods to be employed to process excavated rock onsite.
12. Tonnage of daily gravel material.
13. Tonnage of cement required to complete
14. Expected number of loads of cement to be delivered.
15. Tonnage of cement to be made on-site, if any.
16. Tonnage of daily cement to be poured.
17. All truck traffic volumes on a total truck and trucks per day basis for deliveries for construction, operations, and maintenance at different times throughout the 6+ year construction schedule.

Schedule Implications of Modeling and Testimony Preparation

With respect to schedule, the proposed date of November 22, 2019 for this initial data request is simply not consistent with the dates required in the Order. It is understood that these two schedules were likely developed in parallel on the same day, so it is understandable that they may not be in perfect sync. The obvious choice is that the deadline to provide these requested data likely should be adjusted to sooner than November 22, 2019, to comply with the testimony date of December 13, 2019 in the Order.

The original DEP data request, and this expanded data request is for source information that must already be readily available to the proponent, and thus should be able to be provided much sooner than the schedule suggests. As part of the permitting process, the proponent must know where the engines and all of the fuel-burning equipment is located, information about their buildings and site, the logistics of materials to be removed and added for construction, and how they plan to achieve their construction timeline.

Suggesting two weeks to provide this basic information is not consistent with the single weeks provided in the Order for reviews and rebuttals of comprehensive testimony prior to the hearings. Furthermore, when this information is provided in two weeks, potential compliance would not yet be demonstrated. At this point the air application is still incomplete.

Only after dispersion modeling has been completed, the new stack heights have been confirmed, the application forms have been updated, the text in the application has been updated, the SLODA application (Chapter 375 Item 1) has been updated, any separate but interrelated evaluations such as noise (Chapter 375 Item 10) have been updated, the relevant referenced text in the SLODA application has been updated for any interrelated evaluations, and the permits completely reflect the up-to-date proposed facility, is the material fully ready to be examined for testimony.

While this methodical process may seem tedious and superfluous, it is imperative for the first project of this size to be permitted in one permitting exercise, so that it is completely clear to all what is in the permit application and what has been superseded. Frankly, this is why we recommend to our clients that their initial application be as thorough and as complete as possible, so as to eliminate the tiresome exercise of updating not only the application materials directly affected, but any other applications that may be directly or indirectly affected. I may be dating myself with this comment, but I tell my staff that we don't want to have to provide a lot of "slipsheets" to update applications.

Schedule Example does not Provide Enough Time for Testimony Preparation

While trying to come up with a better date for data submission, the conclusion unfortunately was that there really isn't one that can work. Here is an example of why this schedule does not seem to be possible:

1. Modeling Data is provided on November 22, 2019.
2. Modeling must be performed by DEP to confirm potential compliance, assume a minimum of one week (five business days). That would be a very tight timetable for DEP given their competing project demands, but let's hypothetically say they can commit to it.
3. Thanksgiving holidays are the next week so five business days would be December 3rd.

4. Next the proponent would need to update the air application to reflect any changes as a result of the modeling. Five business days would be a short turn around, but let's say only three business days. It is now December 6, 2019.
5. During those three business days the proponent identifies how these changes affect any other studies or interrelated topics in the other applications. If somehow the proponent can identify these other areas, update the studies or analyses, change the applications, and resubmit it in a week, it is now December 13, 2019.
6. Testimony would now be due the same day as the updated applications are available. Even if everything is pushed forward a week, there is still only about a week for testimony preparation, in the best case scenario.

Unfortunately, given the typical response time to-date from the proponent of about a month or longer for RFIs, it is unlikely that all of these intermediate dates can be met by the December 13, 2019 testimony deadline.

It truly appears that this schedule does not work.
Please advise.

Sincerely,

TECH ENVIRONMENTAL, INC.



Michael T. Lannan, P.E.
President