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NORTH CAROLINA
Environmental Quality

January 21, 2021

Mr. John Achzet
Regional Manager, Eastern Region
Ecolab Inc.
53 McCullough Dr
New Castle, DE 19720

Subject:

Additional Information Request
Application No. 6500356.20A
Ecolab Inc.
Facility ID: 6500356, Wilmington, New Hanover County
Permit No. 10313R02

Dear Mr. Achzet,

Reference is made to your Air Quality Permit Application No. 6500356.20A received on November 23, 2020 for the above subject facility.

During an initial review of the application, it was determined that the following information is required to continue processing the referenced Air Quality Permit application:

1. The exit velocity of the stack was modeled as 48 fps and the stack diameter was modeled as 2 ft in diameter. Observations onsite indicated an approximately 4" diameter stack. It is also noted that each container/bulk load will be packed differently and connected using flexible ductwork. Using this configuration does not allow for a consistent system resistance curve to be developed. In its absence, a flow monitor or velocity monitor is suggested. How does Ecolab propose to consistently demonstrate an adequate flow and exit velocity during aeration?
2. Visual inspections for potential leaks would only be appropriate for obvious gaps, holes or tears. Each time a container or tarped bulk commodity is fumigated both the containers and the aeration equipment have potentially variable leak rates which may not be readily visible. How can a worst-case leak rate be established and considered to assure compliance with the AAL? In a prior agreement with Royal Pest Fumigation, a 20% leak rate was assumed for fumigated yet unaerated shipping containers which were subsequently removed from the fumigation site and aerated elsewhere. Can you establish a worst-case leak rate for all of these variable conditions in the field? In your prior response it was indicated that Tiger monitors were present onsite. Describe any methodology that will be used to minimize leaks including calibration procedures, monitoring points, monitoring time at each point, frequency, and at what points in the fumigation/aeration process the monitoring occurs.

3. Fugitive emissions can also occur as a result of operational procedures as well. For example, during a recent site visit an unprotected worker was observed breaking the seal of an open connector at the point where the ductwork connects and subsequently connecting the duct and sealing with tape. The permit applications do not specify any SOP's for the process or account for any fugitives resulting from the procedures used to affect aeration. Can you provide those SOP's and quantify any potential fugitives resulting from those procedures?
4. Historically, fumigation operation often changed configurations/procedures according to need or convenience. The permit application contains no diagrams or specifications regarding the types of equipment or procedures being used to fumigate and aerate logs, produce and tobacco. In the absence of specifications, procedures or permit requirements for this equipment, how can items 2 and 3 above be addressed? Can you provide all potential equipment specifications and procedures (including how various pieces of equipment are sealed) employed to fumigate commodities which may be employed in the future?
5. To represent a worst-case situation for the purpose of modeling the AAL, the model inputs assume all methyl bromide is emitted in the first hour. Current operations consist of aerating the container for one hour and then opening the doors. The assumption in the model that all emissions occur in the first hour corresponds to a given flow rate in the aeration system which corresponds to the size and velocity within the duct. It is assumed that the agreement on Ecolab's part to assume all emission in the first hour is based on its knowledge of the process as well as the turnover rate of the air in the container during aeration. Considering the inconsistencies in the duct/stack diameter, absence of information regarding flow within the system and the changing air volume in a container loaded with logs, how is Ecolab ensuring no significant methyl bromide remains in the container when it is opened after 1 hour of aeration?
6. 15A NCAC 2D .0546 requires signage be placed anywhere the public might be expected to be. In the case of the fumigation operations at the NC Port, the operation is conducted on a leased parcel within the port and at a separate cold storage facility within a building. It is our interpretation that in addition to the port boundary along Burnett Blvd, signage is required to be posted along the boundaries of the leased parcel as well as appropriate locations around the cold storage facility. Please provide a plot plan of the leased parcel, a description of the cold storage facility and proposed locations for signage at all three locations.
7. While potentially covered above in a broader question, can you estimate the largest expected tarped bulk fumigation volume?

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The application process time clock will be put on hold during this time for you to respond to this request.

Should you have any questions with reference to the above matter, please do not hesitate to contact Dean Carroll at 910-796-7242.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ashley Carroll". The signature is fluid and cursive, with a large, sweeping flourish at the end.

for

Dean Carroll, Environmental Engineer
Division of Air Quality, NC DEQ

cc: **Wilmington Regional Office**
Ibeam Doc Module