

Mario Ornelas

From: Bryan Parker
Sent: Monday, March 4, 2024 3:41 PM
To: Mario Ornelas; Jeryl Stewart
Subject: RE: 32-0215/081059 Source Calculations

Mario – The emission factors for dip and spray application are supported by recent testing so I agree with what you have stated. A conservative approach is the way to go as well for future permitting. Call us and we can discuss.

-Bryan

From: Mario Ornelas <Mario.Ornelas@tn.gov>
Sent: Monday, March 4, 2024 1:41 PM
To: Jeryl Stewart <Jeryl.Stewart@tn.gov>; Bryan Parker <Bryan.Parker@tn.gov>
Subject: RE: 32-0215/081059 Source Calculations

Good afternoon,

Following a meeting with Jill, we have determined the following:

66-0112 Tyson (Obion County) does not appear to reference PAA intervention. This is something that will need to be addressed further.

27-0275 Tyson (Humbolt) is choosing to redetermine their VOC limits to account for intervention. They are planning to utilize the emission factors determined by the Newbern facility (Hillshire: 23-0101). Since Humbolt uses a similar concentration of PAA and AA, it is expected these emission factors would be a sufficiently comparable estimate. These permitting actions are not yet final.

32-0215 Koch Foods determined their own emission estimate based on research done by Georgia Tech and conducted their own testing using the same methodology as described in the study. For Koch foods: Dividing the calculated actual emissions by the (gal./hr.) usage results in an emission factor of 0.015 lbs./gal. Hillshire determined a 0.12 lbs./gal. emission factor. The EF for Koch foods is approximately 8 times smaller than the Hillshire EF. Since Hillshire is a spray application and Koch foods is strictly a dip tank, this difference seems reasonable. Additionally, the maximum VOC content for Koch foods is estimated around 64% and Hillshire was approximately 74% which further supports the lower estimate.

However, even if using Hillshire's EF, the expected PAA emissions from Koch foods is within the insignificant threshold. Therefore, the calculations will be used assuming the higher EF without any different permitting actions required at this time. This is considered a conservative estimate due to Koch foods using a lower % VOC content for intervention and since dip tanks are less likely to result in emissions than spraying. In the future, if another facility using only dip tanks were to provide an emission factor similar to Koch foods, then we would have further justification for accepting a lower emission factor estimate for dip tanks rather than spraying. In the meantime, it is proposed to use the emission factor 0.12 lbs./gal. of PAA/AA used for intervention for facilities using comparable VOC content (%).

Further discussion is required to determine how exactly to proceed with Wampler's, but we will soon begin the process of ensuring they have an air permit.

Please let me know whether these conclusions are acceptable.

Sincerely,



Mario Ornelas | Environmental Protection Specialist I
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From: Jeryl Stewart <Jeryl.Stewart@tn.gov>
Sent: Thursday, February 29, 2024 10:45 AM
To: Bryan Parker <Bryan.Parker@tn.gov>; Mario Ornelas <Mario.Ornelas@tn.gov>
Subject: FW: 32-0215/081059 Source Calculations

The big difference is that all of the VOC containing chemicals are used in dip tanks and are not sprayed as they are in hog operations
Their approach makes sense and this writer has no immediate issues with it
There has been a recent discussion regarding a similar facility [Tyson Farms Obion County 66-0112] I believe that they proposed something similar, I think that Jill was working on that
The only other similar plant that this writer is aware of is the Tyson farms Shelbyville plant [02-0011] and I do not think that this is even addressed in their permits

From: Mario Ornelas <Mario.Ornelas@tn.gov>
Sent: Wednesday, February 28, 2024 12:28 PM
To: Bryan Parker <Bryan.Parker@tn.gov>
Subject: RE: 32-0215/081059 Source Calculations

Good afternoon,

I would like to come back to determining an outcome for this facility. I've attached the files I had attached to the original email for convenience. Feel free to give me a call whenever you get a chance to review and are available.

Thanks,
Mario

From: Bryan Parker <Bryan.Parker@tn.gov>
Sent: Tuesday, January 9, 2024 4:08 PM
To: Mario Ornelas <Mario.Ornelas@tn.gov>
Cc: Garrett Ammons <Garrett.Ammons@tn.gov>
Subject: RE: 32-0215/081059 Source Calculations

Mario – I'll get with the group here and discuss. This does remind me of the Hillshire facility.

From: Mario Ornelas <Mario.Ornelas@tn.gov>
Sent: Tuesday, January 9, 2024 1:08 PM
To: Bryan Parker <Bryan.Parker@tn.gov>
Cc: Garrett Ammons <Garrett.Ammons@tn.gov>
Subject: 32-0215/081059 Source Calculations

Good afternoon,

I am working on an operating permit renewal for Koch Foods (32-0215) which is a TM facility in Hamblen County. The facility was only permitted for a fuel burning installation, but on this renewal, we began to ask about additional sources after realizing that they are a poultry slaughter facility rather than just processing.

The facility sent us two letters with calculations demonstrating emission levels from multiple sources, and I would like some guidance on their intervention source. They have multiple dip tanks which use a chemical called AFCO 4363 Perasafe 23 which contains high amounts of VOCs (PAA & Acetic acid). Their second letter demonstrates calculations they used to estimate VOC emissions (pgs. 6-8 of letter dated December 14, 2023). The first letter (dated November 9, 2023) outlines the use of the chemical and the methodology for determining emissions. Attached are the letters for reference. Could these calculations be acceptable, or could they be acceptable if they include more information/data?

A follow up email (also attached) included their annual usage and a safety data sheet. If we were to assume 100% emission using the annual usage, density, and VOC content (%) their potential to emit exceeds 150 tons per year and they would be categorized as a Title V facility.

As a comparison, The Hillshire Brands Company, 23-0101, (a pork slaughter facility) went through a similar permit process in which the facility tried to use a calculation method to estimate VOC emissions from intervention but was ultimately required to conduct testing to establish emission factors. If Koch Foods' calculations are not acceptable, would it, instead, be acceptable to use the emission factor established by The Hillshire Brands Company? Otherwise, I assume source testing will be required, but emissions are not controlled and simply escape through the building ventilation.

Sincerely,



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