From: Witt, Jon
To: Marmo, Brian
Cc: Woody, Matt; Vasu, Amy; Banon, Ysabel
Subject: FW: Sterigenics, Queensbury EtO - flow and updated emissions
Date: Monday, December 12, 2022 10:07:29 PM
Attachments: image001.png
image002.png
image003.png
image004.png
20220928_SterigenicsNY_RoomAirInfo.pdf

+Ysabel

From: Witt, Jon
Sent: Monday, December 12, 2022 10:02 PM
To: Marmo, Brian <Marmo.Brian@epa.gov>
Cc: Woody, Matt <Woody.Matt@epa.gov>; Vasu, Amy <Vasu.Amy@epa.gov>
Subject: RE: Sterigenics, Queensbury EtO - flow and updated emissions

Hi Brian,

See attached for the latest fugitive release parameters that we received from Sterigenics. There were no changes in stack release parameters. In March 2022, we were modeling 1.32 tpy of EtO emissions based on 2019 usage (378,318 lb/year). For the latest modeling, the usage is still the same, but we assume 80% of control for fugitives, bringing the emissions down to 0.347 tpy. See the table below for a complete breakdown of current emission estimates:

Emission Process Group (EPG)	Emission release point	Percent of EtO use going to EPG	Removal efficiency	Actual Emissions (tpy)
Sterilization chamber vent	ST1	94.96%	99.945%[1]	9.9E-2
Aeration room vent	ST2	3%	99.9241%[2]	4.3E-3
Chamber exhaust vent	ST3	0.4%	99.7998%[2]	1.5E-3
EtO dispensing	EF8	0.02%	80%[3]	7.0E-3
EtO dispensing	EF7	0.02%	80%[3]	7.0E-3
EtO dispensing	EF2	0.06%	80%[3]	2.4E-2
Vacuum pump operation	EF4	0.008%	80%[3]	3.2E-3
Vacuum pump operation	EF3	0.09%	80%[3]	3.5E-2
Pre-aeration handling of sterilized material	EF6	0.025%	80%[3]	9.6E-3
Pre-aeration handling of sterilized material	EF5	0.029%	80%[3]	1.1E-2
Pre-aeration handling of sterilized material	EF1	0.1%	80%[3]	5.5E-2
Post-aeration handling of sterilized material	EF11	0.1%	80%[3]	3.8E-2

Post-aeration handling of sterilized material	EF10	0.1%	80%[3]	3.8E-2
Non-oxidizer air pollution control device operation	EF9	0.04%	80%[3]	1.5E-2

[1] 12/21/17 stack test

[2] 12/15/19 stack test

[3] Assumption (lower-bound of performance of control technology used)

-Jonathan

From: Marmo, Brian <Marmo.Brian@epa.gov>
Sent: Monday, December 12, 2022 12:32 PM
To: Witt, Jon <Witt.Jon@epa.gov>; Woody, Matt <Woody.Matt@epa.gov>; Vasu, Amy <Vasu.Amy@epa.gov>
Cc: Banon, Ysabel <Banon.Ysabel@epa.gov>
Subject: FW: Sterigenics, Queensbury EtO - flow and updated emissions

Hi Jonathan, Matt, and Amy,

Last Thursday we met with NYSDEC regarding the Sterigenics facility in Queensbury. During the meeting, they had a few questions about the EtO risk assessment/emissions (you can also see the email below).

1. What emissions (and usage) were used for the modeling released in March 2022 (where Sterigenics MIR was 2000 in 1 million)? Also, what year (or twelve month period) were the emissions for?
2. What emissions (and usage) were used for the revised modeling (where Sterigenics MIR was 100 in 1 million)? What year (or twelve month period) are the emissions for?
3. What facility parameters were used in the revised modeling? Specifically, I think they are looking for the change in flow rate (or exit gas velocity) that Amy informed us about in October. And just to confirm, none of the other parameters changed from the previous modeling? (I attached an old spreadsheet which we sent DEC in March)

When we met with NJDEP last summer, Jonathan sent us a table with the emissions calculations for each process, so something similar to that which we could share with NYSDEC would be really helpful, especially for the upcoming public meeting.

Thanks in advance!

Brian Marmo
Physical Scientist
Air Permitting Section
Air and Radiation Division
United States Environmental Protection Agency, Region 2

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From: Walker, Randi J (DEC) <randi.walker@dec.ny.gov>
Sent: Friday, December 9, 2022 9:01 AM
To: Marmo, Brian <Marmo.Brian@epa.gov>; Banon, Ysabel <Banon.Ysabel@epa.gov>
Cc: Ruvo, Richard <Ruvo.Richard@epa.gov>; Zeng, Yuan (DEC) <yuan.zeng@dec.ny.gov>; LaLone, Christopher (DEC) <christopher.lalone@dec.ny.gov>; LaFarr, Margaret (DEC) <Margaret.lafarr@dec.ny.gov>; Sierzenga, Paul M (DEC) <paul.sierzenga@dec.ny.gov>; Abrams, Timothy D (DEC) <Timothy.Abrams@dec.ny.gov>; Claeys, Lauren E (DEC) <Lauren.Claeys@dec.ny.gov>
Subject: Sterigenics, Queensbury EtO - flow and updated emissions

Hi Brian & Ysabel,
I'm sending the Final RTR HEM Emission Inventory crosswalk on Sterigenics that we received – probably from Ysabel around March 2022. It would be helpful if we knew the facility parameters used in the risk assessment. Could you check that these were the values used? Then we could verify with the facility actual parameter at the facility for the risk assessment modeling year. Was the year 2020? I know changes to the modeling will not be made. Understanding the difference – if there is one – may help with framing the true emission's impact from the facility for the operating year modeled.

If the modeled year was 2020, could you provide updated details for the attached ETO usage and emissions document?

I hope this isn't too much to ask. It will help us at the public meeting to have this background information.

Thank you,
Randi

Randi Walker
she|her|hers
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