From: Robert, Charlene [redacted]
Sent: May 7, 2025 9:16 AM
To: Beshada, Eshetu <Eshetu.Beshada@gov.mb.ca>
Cc: Burland Ross, Siobhan <Siobhan.BurlandRoss@gov.mb.ca>
Subject: FW: File 3128.00 Bausch Health - NOA Additional Information Request

Good Morning Eshetu,

We are writing to request a review of our current Environmental Act License (EAL 1364 R8) to determine whether an update is required or if the license can remain in its current form. This request is based on recent and upcoming operational changes, including emission control upgrades and post-treatment emissions. The goal is to confirm continued regulatory alignment and provide clarity around how the license applies under evolving site conditions.

At this time, we do not foresee any issues that would necessitate a formal amendment to the emissions threshold is necessary. Emissions remain well below the 4,500 kg/year threshold, production levels are expected to remain within historical ranges, and new abatement systems will further enhance compliance. We remain committed to monitoring, transparency, and continuous improvement in our environmental performance.

The following rationale is provided to support and demonstrate that the existing EAL continues to be protective and appropriate:

1. **Fugitive Emissions**
   As discussed, fugitive emissions from cleaning with solvents and alcohols are estimated at 10%. These have remained consistent over the last three years and are included in our overall VOC tracking.
2. **VOC Emissions- Post Treatment Summary Including Cleaning Fugitive Emissions**
   To support the review of our Environmental Act License, we have included a comparison of 2023 and 2024 emissions data, incorporating both post-treatment VOC emissions (based on a 99% destruction efficiency from thermal oxidizers) and fugitive emissions from cleaning activities (based on a 10% emissions rate). The annual totals, as detailed below, remain below the EAL limit of 4,500 Kg.

2023 Emissions Summary		
Substance	**Total Solvent used (Kg/Year)**	**Post-Treatment Emissions (Kg/year)**
Ethanol	108,620	1086
Isopropyl Alcohol	100,650	1,007
Methanol	11,077	111
Total	----------	2,204
Total Cleaning - Fugitive Emissions	1,872 Kg/year	
Total Emissions	**4,076 Kg/year**	

2024 Emissions Summary		
Substance	**Total Solvent used (Kg/Year)**	**Post-Treatment Emissions (Kg/year)**
Ethanol	106,320	1,063
Isopropyl Alcohol	88,693	887
Methanol	13,087	131
Total	----------	2,081
Total Cleaning - Fugitive Emissions	1,290 Kg/year	
Total Emissions	**3,371 Kg/year**	

3. **Production Forecast**

We do not forecast a significant change in production volumes that would result in VOC emissions exceeding the 4,500 kg/year limit. Emissions are expected to remain consistent with historical values. Nonetheless, we will continue to monitor closely, and report should circumstance change.

4. **Operational Controls Supporting Environmental Act License Compliance**

Bausch Health Steinbach remains committed to strong environmental performance and continuous improvement. As part of this commitment, we will:

- Continue to track alcohol consumption on site, including for cleaning and production, to support accurate emission estimates.
- Monitor untreated emissions, including those from cleaning activities and RTO bypass, on a regular basis.
- Ensure continued alignment with NPRI reporting requirements and maintain detailed internal records.
- Evaluate reduced- or non-VOC cleaning alternatives as part of our sustainability program.
- Conduct routine maintenance and optimization of RTO systems to ensure ongoing destruction efficiency.

These efforts form the foundation of our compliance strategy and reflect our proactive approach to environmental responsibility.

5. **Regenerative Thermal Oxidizers (RTOs) – 2025 Commissioning**

With the full commissioning of two Regenerative Thermal Oxidizers (RTOs) in 2025, the facility anticipates a significant reduction in total emissions, particularly from fugitive and accidental sources. These RTOs are engineered to operate at 99% destruction efficiency and will replace our aging abatement systems.

The new systems represent a major infrastructure upgrade, improving reliability, efficiency, and environmental performance. Once operational, the risk of accidental releases will be significantly reduced, and post-treatment VOC emissions are expected to decrease

6. Clarification Regarding EAL Wording

For clarity and regulatory consistency, we recommend considering an administrative amendment to the EAL to explicitly state that the 4,500 kg/year VOC threshold includes:

- Fugitive emissions from cleaning activities (estimated using a 10% emission rate),
- Untreated emissions post-thermal oxidizer (TOX), and
- Accidental releases due to system failures or upsets.

Routine fugitive emissions and post-TOX emissions would not require separate reporting unless emissions approach or exceed the annual threshold. Any unplanned or accidental releases will continue to be tracked and reported as per EAL. We believe this approach provides a clear, comprehensive framework for compliance while maintaining transparency and environmental stewardship. Please let us know if you would like to discuss this further or require any additional information.

Please contact me if you have any questions or require additional details.

Thanks.

Charlene Robert
Manager, Environment, Health & Safety
100 Life Sciences Parkway
Steinbach, MB, Canada R5G 1Z7
Ph: (204) 326-9000 Ext: 4320
[redacted]

From: Beshada, Eshetu <Eshetu.Beshada@gov.mb.ca>
Sent: Friday, March 7, 2025 3:06 PM
To: Tobar, Manuel [redacted]
Cc: Robert, Charlene [redacted] Burland Ross, Siobhan <Siobhan.BurlandRoss@gov.mb.ca>
Subject: RE: File 3128.00 Bausch Health - NOA Additional Information Request

Hello Manuel,

I apologize it took me long to get back to you. I would like to address your questions as follows.

- The 4500 kg limit includes all VOC emissions from the facility. Please note that the facility should cease operating whenever the thermal oxidizer is down.
- Bausch Health proposed the 4500 km emission limit, therefore, if you are proposing to alter this emission limit let us know for our review and decision.
- If you require to change in the emission limit, you must submit a mass balance of all VOC containing chemicals used at the facility. This should provide a detailed account for every step of the process.
- Reporting to NPRI is not in our jurisdiction. You must talk to our federal counterparts to clarify that. In our case we considered 100% VOC used is considered emitted unless justified that it was treated, captured, or retained in the product.

If you have any further question, please do not hesitate to reach out.

Regards

Eshetu Beshada, PhD., P. Eng.
Senior Environmental Engineer
Environmental Approvals Branch
Ph: 204 250-1932

From: Tobar, Manuel
Sent: Wednesday, January 15, 2025 12:31 PM
To: Beshada, Eshetu <Eshetu.Beshada@gov.mb.ca>
Cc: Robert, Charlene [redacted]; Burland Ross, Siobhan <Siobhan.BurlandRoss@gov.mb.ca>
Subject: RE: File 3128.00 Bausch Health - NOA Additional Information Request

Hello Mr. Beshada,

Thank you for providing the attached documents and details regarding the review requests. As per our discussion, we require clarification regarding the 4,500 kg per year emissions limit outlined in our environmental license. Specifically, we would like to understand the following:

1. Scope of Emissions: Does the 4,500 kg limit include only untreated emissions, such as those released to the atmosphere during thermal oxidizer downtime?
2. Theoretical Efficiency of the Thermal Oxidizer: Does the limit account for the 1% untreated emissions associated with the theoretical efficiency of the thermal oxidizer?
3. Untreated Emissions from Production Activities: Parts of our production process—such as mixing and dispensing—are exhausted into process rooms and do not pass through the thermal oxidizer for treatment. Additionally, alcohols used for cleaning and emissions released directly in process rooms are not treated by the thermal oxidizer. Are these examples considered untreated emissions and therefore included in the 4,500 kg limit?

Further, we report alcohol use at the site to NPRI. Until 2022, these emissions were calculated at a 10% rate but were revised to 100% emissions in 2022, resulting in a noticeable increase in reported values. Could you confirm the correct or normative approach for reporting this? Should we continue assuming 100% emissions, or is the 10% rate still appropriate? Without a study to validate this, we would greatly appreciate your guidance on the appropriate calculation method.

Finally, should the license be adjusted to differentiate between:

1. Accidental releases during thermal oxidizer downtime, and
2. Production activities that do not feed directly into the thermal oxidizer (e.g., mixing, dispensing, or cleaning using alcohols), which may result in untreated emissions.

Your guidance on these matters will help ensure compliance with our environmental obligations. Please let us know if additional information or further clarification is required from our end. Looking forward to your response.

Kind Regards,

BAUSCH Health

Manuel Tobar, ETI, CET
Environmental and Safety
100 Life Sciences Parkway
Steinbach, MB Canada R5G 1Z7
[redacted]
P: 204.326.9000 ext. 4374

From: Tobar, Manuel [redacted]
Sent: November 7, 2024 4:42 PM
To: Beshada, Eshetu <Eshetu.Beshada@gov.mb.ca>
Subject: RE: File 3128.00 Bausch Health - NOA Additional Information Request

Dear Mr. Beshada,

I hope this email finds you well.

I would like to request a meeting with you to discuss the first point of our response, specifically regarding the 1% untreated VOC as part of the emission requirements of our licence, in addition to fugitive emissions. We would

appreciate the opportunity to review this point with you in more detail, as it appears that this may not fully meet the conditions outlined in our licence. We would like to better understand your perspective on this matter.

Could you kindly let us know your availability next week for a meeting via Microsoft Teams to discuss this further?

In addition, in response to the second bullet point in your email below regarding the review of the VOC emissions report to NRCI, the increase in emissions from 2021 onward is due to a change in how we report emissions associated with the use of alcohol during cleaning activities. Prior to 2021, we assumed a 10% emissions release from these activities. However, starting in 2021, we revised this assumption to reflect a 100% emissions release, which accounts for the higher reported values.

In 2023, during a review of our site's air emission streams, we identified a potential source of emissions from cleaning activities that had not previously been considered. We notified Larry Markwart of this finding and our plan to engage an environmental consultant to help determine if this emissions source, along with others, may lead us to exceed compliance thresholds. The consultant has confirmed that, based on 2023 data, the facility-wide annual emissions of critical contaminants are estimated to be 19,298 kg. Excluding emissions related to cleaning activities, the facility-wide emissions of these contaminants are estimated to be 1,412 kg.

We would appreciate clarification regarding whether emissions associated with cleaning activities should be included in the total emission output for compliance purposes. If cleaning-related emissions are to be included, we will exceed the compliance threshold of 4,500 kg. We would be happy to discuss this matter further either in a separate meeting or via email, depending on your preference.

We look forward to your response and hope to arrange a time that works for you to discuss both of these matters.

Thank you for your time and consideration.

Kind Regards,

BAUSCH Health

Manuel Tobar, ETI, CET
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100 Life Sciences Parkway
Steinbach, MB Canada R5G 1Z7
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From: Beshada, Eshetu <Eshetu.Beshada@gov.mb.ca>
Sent: Wednesday, October 2, 2024 11:54 AM
To: Tobar, Manuel [redacted]
Subject: RE: File 3128.00 Bausch Health - NOA Additional Information Request

Good morning Manuel,

Thank you for the additional information. The information is reviewed and still there are few issues to be addressed. I have tried to reach you over the phone to discuss them. Please provide the following information for further review.

- The 1% untreated VOC is part of the emission requirement of the licence in addition to any fugitive emissions. This does not meet the licence limits. For further assessment, please provide the inventory of chemicals annually purchased and used over the last three years.

    - Please note that as per the NoA the daily consumption of the chemicals containing VOC is over 14,000 kg.
- A further review of the VOC emission report to NPRI indicated that the years 2021, 2022 and 2023 are higher than the licence limit. Please provide any justification on those events.

If you would like to discuss the above, please do not hesitate to contact me at any time.

Regards

Eshetu Beshada, PhD., P. Eng.
Senior Environmental Engineer
Environmental Approvals Branch
Ph: 204 250-1932

From: Tobar, Manuel [redacted]
Sent: Friday, August 2, 2024 12:42 PM
To: Beshada, Eshetu <Eshetu.Beshada@gov.mb.ca>
Subject: RE: File 3128.00 Bausch Health - NOA Additional Information Request
Importance: High

Dear Mr. Beshada:

I trust this email finds you well. I have prepared a document with the answers to your questions, which I have attached to this email for your reference.

Please review the attached document, and if you have any further questions or need additional information, feel free to reach out.

Kind Regards,

BAUSCH Health

Manuel Tobar, M.SC ME
Environmental and Safety
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Please consider the environment before printing this email.

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August 02, 2024

Project/File: No. 3128

Eshetu Beshada
Environmental Approvals Branch
Box 35, 14 Fultz Boulevard
Winnipeg MB R3Y 0L6

Dear Eshetu,

Reference: File No. 3128 Bausch Health Response to NOA Information Request

In response to the e-mail information request from Manitoba Environment and Climate Change dated June 27, 2024, the following information is provided on behalf of Bausch Health related to the NOA request for the thermal oxidizer replacement.

i) In the proposed NOA, it is indicated that the second thermal oxidizer will mostly be a backup, except during a peak facility operation when the second thermal oxidizer is used to treat the extra VOCs. Based on experience how many hours per year Bausch Health expects to operate both air pollution control devices?

- The NOA report states that the second thermal oxidizer (TOX) will be used on "standby" mode to support peak operations. Peak operations are desired at the Facility and are anticipated to be achieved in the forseeable future, based on market demand. With peak operation, the TOXs are anticipated to operate up to 24 hours per day, 5 days per week (260 days per year), for a total of up to 6,240 hours per year each. Bases on an operational review, the intended control is to have both TOX operating in parallel to match the load based on system demand and provide instantaneous fail over if one TOX shutdown.

ii) The existing old thermal oxidizer has a VOC destruction rate of 99.9% (per 2019 NOA submission) whereas the new thermal oxidizer has a 99% destruction rate. How would you account for the 0.9% lower destruction efficiency in relation to Clause 16 of license 1364 R8? Provide the mass balance that shows how you meet this requirement.

- The destruction efficiency of 99% as reported by Anguil results in a post-treatment emission rate of 1.63 g/s (approximately 51,404 kg/year if both TOX units operate 365 days per year). These are post-treatment residual emissions and therefore do not contribute to the untreated emission limit of 4,500 kg/year as stated in Clause 16 of license 1364 R8.

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iii) The VOC emission rates considered in the dispersion model accounts the worst-case scenarios. Please provide a detailed rationale how this consideration and the 1.63 g/s emission rate for the two VOC containing chemicals indicated on page 7 of the proposal reconciles with bullet two above or Clause 16 of the license.

- With the TOX replacement, the maximum TOX process air flow increases from the existing 16,200 CFM to an anticipated peak operation of 34,000 CFM. With a destruction efficiency of 99%, approximately 1.63 g/s of post-treatment residual emissions are released to the atmosphere. With an emission rate of 1.63 g/s, the total residual TOX emissions at the Facility would be approximately 51,404 kg/year (if both TOX units were to operate 365 days per year). Should the TOX units operate 260 days per year, per the anticipated desired peak operations, the total residual TOX emissions are estimated to be 36,616 kg/year. As per Appendix C of the NOA report, an emission rate of 1.63 g/s results in maximum off-property ground-level concentrations below applicable air quality criteria at the nearest receptors and therefore, significant effects to air quality are not anticipated. This post-treatment, residual waste stream does not contribute to the current license limit as stated in Clause 16 and therefore, no changes to Clause 16 are required.

iv) If emission rates are adjusted, provide a revised dispersion model based on the new emission rate.

- The air dispersion model results were conservatively based on the TOX units operating with a process flow rate of 17,000 CFM each (34,000 CFM total) 24 hours per day and 365 days per year. As per Appendix C of the NOA report, this operation scenario emits approximately 1.63 g/s of post-treatment residual emissions to the atmosphere, resulting in maximum off-property ground-level concentrations below applicable air quality criteria at the nearest receptors and therefore, significant effects to air quality are not anticipated. The modelled emission rate represents a worst-case scenario of 365 days per year and the anticipated operation is 260 days per year; therefore, effects are expected to be less than the conservative results predicted from the model and well below applicable criteria. Additional dispersion modelling is not proposed at this time.

v) During the 2019 NOA you requested and approved to treat VOCs from the first 4 hours of drying process in the thermal oxidizer. Please provide a clarification if any change is anticipated under the new thermal oxidizer.

- No change to the 4-hour drying process is anticipated with the thermal oxidizer replacement.

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vi) The installation of two thermal oxidizers is expected to eliminate the requirement for any potential bypass of air pollution control device. As a result, we expect that Clause 15 of the license that authorizes a maximum of 12 hours air pollution control device bypass per a Calander Year is no longer required. If you expect this authorization is still needed, you are required to provide a detailed rationale and anticipated number of bypass hours per Calander Year.

- The operation of two TOX units increases system reliability; however, peak operations are anticipated to occur in the foreseeable future resulting in both TOX units operating up to approximately 24 hours per day, 260 days per year. A system failure of both TOX units simultaneously, although not anticipated and unlikely, has the potential to occur and therefore the need to potentially bypass the thermal oxidizers is still required. In the event of a system failure, operations will be adjusted to divert emissions to one TOX unit while the second TOX unit is in repair, resulting in a reduced operating scenario and reduced production. Given that the potential for a system failure is not eliminated with the proposed TOX system, Clause 15 allowing for system by-pass 12 hours per year is still required. Authorization of the release of untreated emissions to the atmosphere after 4-hours of drying (resulting in untreated emissions release of approximately 32 kg/year) as previously approved on April 11, 2019 is also still required.

Best Regards,

Manuel Tobar
Environmental and Safety
P: 204.326.9000 ext. 4374

From: Beshada, Eshetu <Eshetu.Beshada@gov.mb.ca>
Sent: Thursday, June 27, 2024 3:29 PM
To: Chikwinya, Thelma <[redacted]>
Subject: File 3128.00 Bausch Health - NOA Additional Information Request

Dear Thelma,

Thank you for the NoA submission. We have reviewed the NoA, and it is commendable that Bausch Health is replacing the existing inefficient old thermal oxidizer with a newer and energy efficient system. It is also commendable that you will install two units instead of one. This will potentially eliminate the need to bypass the air pollution control device in the event one is down for various reasons.

However, the following clarification or additional information are required to finalize the environmental assessment and review process.

- In the proposed NoA, it is indicated that the second thermal oxidizer will mostly be a back-up, except during a peak facility operation when the second thermal oxidizer is used to treat the extra VOCs. Based on experience how many hours per year Bausch Health expects to operate both air pollution control devices?
- The existing old thermal oxidizer has a VOC destruction rate of 99.9% (per 2019 NoA submission) whereas the new thermal oxidizer has 99% destruction rate. How would you account for the 0.9% lower destruction efficiency in relation to Clause 16 of licence 1364 R8? Provide the mass balance that shows how you meet this requirement.
- The VOC emission rates considered in the dispersion model accounts the worst-case scenarios. Please provide a detailed rational how this consideration and the 1.63 g/s emission rate for the two VOC containing chemicals indicated on page 7 of the proposal reconciles with bullet two above or Clause 16 of the licence.
- If emission rates are adjusted, provide a revised dispersion model based on the new emission rates.
- During the 2019 NoA you requested and approved to treat VOCs from the first 4 hours of drying process in the thermal oxidizer. Please provide a clarification if any change is anticipated under the new thermal oxidizer.
- The installation of two thermal oxidizers is expected to eliminate the requirement for any potential bypass of air pollution control device. As a result, we expect that Clause 15 of the licence that authorizes a maximum of 12 hours air pollution control device bypass per a Calander Year is no longer required. If you expect this authorization is still needed, you are required to provide a detailed rational and anticipated number of bypass hours per Calander Year.

If you have any question or need a clarification on the above, please do not hesitate to contact me at any time.

Regards

Eshetu Beshada, PhD., P. Eng.
Senior Environmental Engineer
Environmental Approvals Branch
Ph: 204 250-1932