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DEPT. OF ENVIRONMENT & ENERGY
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**RESPONSE TO DOW SILICONES CORPORATION VIOLATION NOTICE FOR
EU207-03 (LSR RUBBER MANUFACTURING BATCH MIXER PROCESS)**

Attached is a response to a violation notice dated November 9, 2020 for emission unit EU207-03 (LSR Rubber Manufacturing Batch Mixer Process) located at the Dow Silicones Corporation in Midland, Michigan. The process is covered by table EU207-03 in Renewable Operating Permit No. MI-ROP-A4043-2019. If you have any questions regarding this response, please contact Jenny Kraut at (989) 496-7133 or jennifer.kraut@dow.com.



Kristan Soto
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Attachment

EU207-03 (LSR RUBBER MANUFACTURING BATCH MIXER PROCESS)

Violation Notice Response

Introduction On September 16, 2020, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), received the semi-annual deviation report from Dow Silicones Corporation (DSC) for Renewable Operating Permit (ROP) No. MI-ROP-A4043-2019. During EGLE's review of the report, staff observed deviations for table EU207-03 in the ROP. As a result, in a letter dated November 9, 2020, EGLE cited DSC in violation of condition no. I.2 of table EU207-03 and Rule 201 (R 336.1201) and requested a written response to the cited violations by December 14, 2020. This document contains DSC's response.

Requested Information

Submit a written response to the cited violation. The written response should include: the dates the violations occurred; an explanation of the causes and duration of the violations; whether the violations are ongoing; a summary of the actions that have been taken and are proposed to be taken to correct the violations and the dates by which these actions will take place; and what steps are being taken to prevent a reoccurrence.

Deviation No. 1:

The violation notice states that DSC exceeded the 12-month rolling total for VOCs by 3.84 tons per year for several months during the 2020 calendar year. This is cited as a violation of condition no. I.2 in table EU207-03 of the ROP.

Dow Silicones Corporation Response:

On January 24, 2020, Consent Decree 19-11880 (CD) between the United States of America and DSC became effective. The CD required DSC to develop a Clean Air Act Compliance Plan and included a requirement to update affected air permits at the Midland site to ensure full compliance with MACT requirements including the consideration of trace chemicals discovered in certain raw materials. As a result of the CD and desired process changes, DSC submitted Air Permit to Install (PTI) Application No. 156-06E for EU207-03 on April 30, 2020. The application is based on updated emission calculations which indicate the emission unit exceeded its 12-month rolling time period VOC limit by 3.84 tons for several months during the 2020 calendar year. The current 12-month rolling VOC limit in the ROP for



EU207-03 is 2.9 tons per year. As demonstrated in the recently submitted air PTI application for EU207-03 and draft air PTI from EGLE, the requested 26.3 ton per year VOC emission rate is permissible by EGLE pursuant to Rules 225 and 702 (R 336.1225 and R 336.1702). Therefore, DSC does not believe there was any harm to human health or the environment as a result of the alleged violation.

The difference in the calculated 12-month rolling VOC emissions is due to the fact that DSC converted its emission calculations from Excel based to Emission Master software. Preliminary reviews reveal that in some cases Emission Master calculated higher numbers than the previous Excel-based methodology. There is no indication that the old calculations were inaccurate. However, Emission Master appears to be more conservative in some instances. The actions taken to correct this issue did include the submittal of air PTI application no. 156-06E, and resolution will be complete upon issuance of the air permit which is currently anticipated to occur no later than March 1, 2021.

Deviation No. 2:

The violation notice states that emissions of hexamethyldisiloxane (EBB) exceeded the quantity disclosed in the application for the current permit. This is cited as a violation of Rule 201 (R 336.1201).

Dow Silicones Corporation Response:

For the same reasons described above for deviation no. 1, DSC submitted Air PTI Application No. 156-06E for EU207-03 on April 30, 2020. The application is based on updated emission calculations which indicate the emission unit is emitting EBB in excess of rates disclosed in the previous air PTI application. As demonstrated in the recently submitted air PTI application, the revised EBB emission rate does not exceed the ambient air screening limit and is permissible by EGLE pursuant to Rule 225 (R 336.1225). Therefore, DSC does not believe there was any harm to human health or the environment as a result of the alleged violation.

The EBB emissions increase is due to a revised understanding of the existing scrubber's EBB removal efficiency (i.e., it's less than previously permitted) and incremental changes in production that have occurred since the prior air PTI application was submitted. The actions taken to correct this issue did include the submittal of air PTI application no. 156-06E, and resolution will be complete upon issuance of the air permit which is currently anticipated to occur no later than March 1, 2021.

