



The Dow Chemical Company
Michigan Operations
Midland, MI 48674

December 4, 2019

DEQ-AQD

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**RESPONSE TO DOW SILICONES CORPORATION VIOLATION NOTICE FOR
FGSITESCRRUBBERS AND EU2703-03 (SITE SCRUBBERS AND THE CPTC
PROCESS)**

Attached is a response to a violation notice dated October 31, 2019 for the site scrubbers and the chloropropyl trichlorosilane (CPTC) process located at Dow Silicones Corporation in Midland, Michigan. The equipment is covered by tables FGSITESCRRUBBERS and EU2703-03 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.

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FGSITESCUBBERS & EU2703-03 (Site Scrubbers and the CPTC PROCESS)

Violation Notice Response

Introduction On February 14 and October 17, 2019, Gina McCann of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) conducted air inspections at EU2703-03 (Chloropropyl Trichlorosilane (CPTC) Process) and FGSITESCUBBERS (Site Scrubbers), respectively. Following the October 17th inspection, EGLE determined that Dow Silicones Corporation (DSC) is not in compliance with condition nos. III.3 and 4 of tables FGSITESCUBBERS and EU2703-03, respectively, in Renewable Operating Permit (ROP) No. MI-ROP-A4043-2019. As a result, in a letter dated October 31, 2019, EGLE cited DSC in violation of the permit and requested a written response to the cited violations by November 21, 2019. A request to extend the response deadline to December 4, 2019 was submitted to EGLE on November 6, 2019 and was approved the next day. This document contains DSC's response to the cited violations.

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.

Dow Silicones Corporation Response:

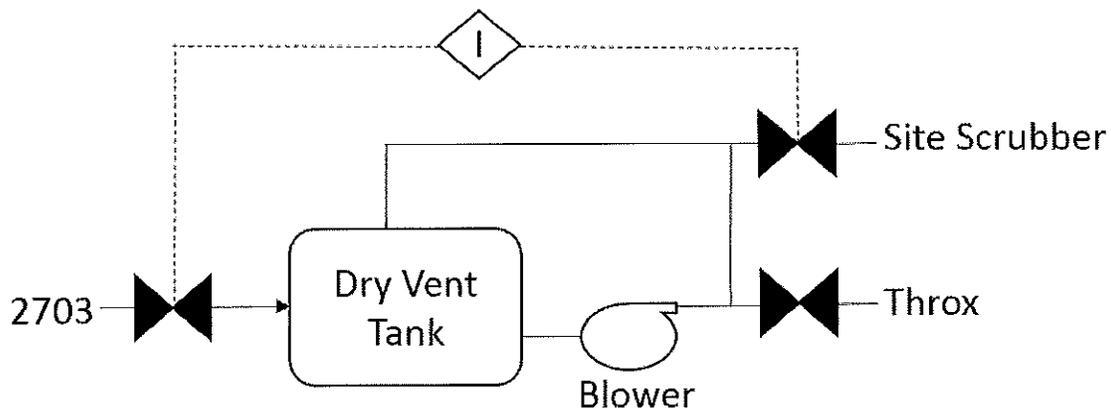
Condition no. III.4 of table EU2703-03 in the ROP states, in part: The permittee shall not operate EU2703-03 unless the emission control train, consisting of vent compressor 22790, vent condenser 22795, and either scrubber 9390 A or B, is installed and operating properly. The most recent air permit for EU2703-03 (or the CPTC Process) was issued on August 18, 2000. When EU2703-03 was permitted, it vented to compressor 22790, condenser 22795 and either scrubber 9390A or B before discharging to atmosphere through vent no. SV2703-011. In 2007, DSC received an air permit for a site thermal heat recovery oxidation (THROX) unit and site scrubbers. Sometime thereafter, EU2703-03 began using THROX as an alternate control device under Rule 285 (i.e., replacement of air pollution control equipment with equivalent or more efficient equipment).

In addition, when the THROX/Site Scrubber air permit was issued, it was DSC's understanding based upon conversations with Department of Environmental Quality air permit staff that the permit allowed the site to vent various emissions units to THROX instead of building specific air pollution control equipment specified in existing permits. Based upon this understanding and Rule 285, EU2703-03 determined it was acceptable to bypass the compressor/condenser/scrubber air pollution control system and vent to THROX.¹

¹ At the time, DSC did not understand that Rule 278(4) prohibited this change without a permit revision.

In 2015, EU2703-03 became an affected Group 1 process for OHAPs (organic HAPs) under the MON (Misc. Organic NESAP – 40 CFR Part 63, Subpart FFFF). As result, EU2703-03 was required to control emissions using a certified MON Group 1 control device. At the time, condenser 22795 and THROX were determined to meet this requirement. On September 15, 2019, DSC disclosed in the semi-annual ROP deviation report that the condenser does not meet MON Group 1 OHAP control requirements. This was concluded based upon the fact that a design evaluation was completed instead of a performance test for the condenser. Condenser 22795 is considered a large control device for OHAPs, and under the MON, design evaluations are not an acceptable form of demonstration. As described in the deviation report, this occurred due to a difference in MON rule interpretation between DSC's prior consultant and Dow subject matter experts. Based on this discovery, a decision was made to turn the compressor/condenser system off and direct vents to THROX to be in compliance with the MON rule.

Condition no. III.3 of table FGSITESCUBBERS, states in part: The permittee shall not bypass EUTHROX when operating SV2703-011 unless SV2703-011 is routed to the control equipment specified in EU2703-03 and the control equipment is installed, maintained, and operated in a satisfactory manner. The control equipment referenced in this condition are compressor 22790, condenser 22795 and either scrubber 9390A or B. When THROX bypasses to site scrubbers, an interlock automatically closes a valve at the THROX dry vent tank, and emissions at EU2703-03 are bottled up until THROX is operational and able to accept vents (see schematic below). It has historically been DSC's understanding that if emissions are not vented to atmosphere when THROX diverts, the requirements of the condition are satisfied.



Based upon the reasons cited above, DSC does not believe there is any harm to human health or the environment as a result of the alleged violations. However, in order to correct the cited violations, DSC will implement the following corrective actions.

1. Submit air permit applications for EU2703-03 and FGSITESCUBBERS. DSC would like to communicate with EGLE about aligning the permit applications with the obligations under the DSC Environmental Protection Agency consent decree.

2. Air permit to install exemptions will not be used to override prohibitory conditions stated in existing permits or the ROP. The learnings from this violation notice and previous notices have been communicated to site environmental staff.
3. The alleged violations will be reported as a deviation in the annual deviation report due March 15, 2020 and will include the reasons and corrective actions cited above.