DENSO

DENSO MANUFACTURING MICHIGAN, INC.

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June 27, 2016

Mr. Rex Lane
Senior Environmental Quality Analyst
Air Quality Division
Michigan Department of Environmental Quality
7953 Adobe Road
Kalamazoo, MI 48909

Dear Mr. Lane;

This letter is in response to the June 1st inspection and subsequent notice of violation of PTI #19-04B Special Condition IV.1, provided in your letter of June 9th, 2016.

In review, DENSO believes that the minimum temperature requirement for H451 thermal oxidizer was unintentionally changed in Permit #19-04B, in September of 2014. Unfortunately, since this was an unexpected, undiscussed, and unrequested change, it was not detected by DENSO staff upon receipt of the draft or new permit conditions. As such, operation of H451 continued to meet the existing compliance requirements given in DENSO's Renewable Operating permit (ROP) MI-ROP-N1192-2003B.

In regards to the specific elements and criteria requested in the June 9th letter, they are addressed summarily here:

Response elements	Comments
Dates of Violation	Beginning September 10, 2014 with the issuance of Permit #19-04B
Is violation ongoing	Yes, until a modified PTI is issued to correct the temperature requirement. A draft PTI #19-04C has already been received, which should be final by the time you receive this letter. However, DENSO was always complying with the temperature requirement in our ROP MI-ROP-N1192-2003B, which contradicts the requirement in PTI #19-04B.
Cause of the violation	Inadvertent and unplanned change to the permit condition in PTI #19-04B; This change was undetected by DENSO Staff. (further comments given below)
Summary of completed corrective actions, proposed corrective actions, and dates	1. DENSO engineers evaluated the equipment to increase the incinerator up from 1292°F to 1400°F. However, due to the age and design of the process, the temperature cannot be raised without safety hazards and potential equipment failures. (completed June 2, 2016)

	2. A modification to PTI #19-04B was requested, to return to the original condition requiring a minimum incinerator temperature of 1292°F. (completed with submittal sent on June 3, 2016). 3. Proposed – Receive PTI #19-04C with original condition of 1292°F. (draft received from MDEQ on June 24, 2016; final issuance expected within a few days)
Actions to prevent reoccurrence	With all new draft PTI modifications received by DENSO in the future, we will perform a line by line review of every condition comparing the draft to the current requirement, not just those conditions being modified or added. We will document the key operating conditions for each permit in a summary list.

Circumstances leading to the H451 incinerator temperature change revolve around permit applications 19-04A&B. These applications were to combine the heater core elements of the existing DENSO ROP with a subsequent heater core PTI; while making revisions to update equipment, standardize certain requirements, and revise emission limits. In this case, the existing H451 conditions from the ROP were combined with the equipment of PTI #19-04, to create a Heater Core Flexible Group for the ROP revision.

DENSO feels that the change to the H451 incinerator minimum temperature was unintended because:

1. The purpose of PTI #19-04B was to combine existing ROP requirements with Permit 19-04, while revising equipment and emission limits, and standardizing certain requirements. No operational changes were requested by DENSO nor discussed with MDEQ staff. Furthermore, making this temperature change contradicts the existing requirement in FGAL-HTR-LINE of DENSO's MI-ROP-N1192-2003B.
2. Discussions with Julie Brunner, the permit engineer, regarding PTI #19-04 modifications never included the topic or need for raising the H451 thermal oxidizer temperature. Additionally, the current permit engineer for PTI #19-04C modification reviewed the file information and did not see any justification for the change.
3. The temperature requirement is meant to ensure proper VOC destruction efficiency (DE). The 95% DE requirement remained the same in #19-04B as the previous ROP condition. Based on previous stack testing of H451 and other degreasers at DMMI that operate at 1,292°F, it would not have been necessary to increase the temperature to obtain this DE.
4. It is not possible for us to operate the H451 thermal oxidizer at 1,400°F with current equipment. The design specification for the exhaust fan is rated at a maximum of 1,292°F. To increase the temperature to 1,400°F would result in a serious safety risk and mechanical failure.
5. The other thermal oxidizer in PTI #19-04B (H751), as well as numerous other thermal oxidizers at DENSO, do have a minimum temperature requirement of 1,400°F; making it easy to erroneously list H451 with the same 1,400°F requirement.

A chronological time line is given in Attachment 1.

If you need additional information or if you have any questions related to this response, please feel free to contact me at (269) 565-8550 or Jody Smith at (269) 565-8562.

Sincerely,

Michael J. Myszka

Michael Myszka
Environmental Section Leader
DENSO Manufacturing Michigan, Inc.

CC: Andris Staltmanis, DENSO
Kirk Hautau, DENSO
Jody Smith, DENSO
Jim Laney, DENSO
Mary Douglas, MDEQ

Enc.

Attachment #1

Time frame	Related Events
10/9/1996	H451 oven degreaser permit application
12/16/1996	H451 oven degreaser permit approval, permit #519-96 - Machine H451 incinerator minimum temp of 1292°F
5/20/2003	Effective date for DENSO MI-ROP-N1192-2003 - H451 incorporated into ROP - Machine H451 incinerator minimum temp of 1292°F
6/14/2004	Heater Core Line 2 (includes H751) permit approval #19-04 - Machine H751 incinerator minimum temp of 1400°F
4/22/2005	ROP amended as MI-ROP-N1192-2003B - Machine H451 incinerator minimum temp of 1292°F
7/26/2007	DENSO ROP renewal submitted
9/20/2013	Permit application #19-04A submitted - To combine the heater core elements of the existing ROP with the subsequent heater core PTI #19-04; while making revisions to update equipment, standardize certain requirements, and revise emission limits - No request or discussion for changes to H451 operating conditions
1/23/2014	Permit #19-04A draft provided by MDEQ (This draft listed H451 temp requirement at 1400°F, which was not detected by DENSO.)
1/31/2014	Permit #19-04A application withdrawn for another reason – an emission limit for n-propyl bromide, an ingredient in an aerosol cleaner used at DENSO
8/21/2014	Permit #19-04B application submitted - Same application information as #19-04A, after a change in the aerosol cleaner being used - Combines ROP heater core requirements with PTI #19-04, and some revisions; purpose is to develop an ROP flexible group - No request or discussion for changes to H451 operating conditions
10/24/2014	Permit #19-04B approved - H451 incinerator minimum temp changed to 1400°F
6/1/2016	DENSO Air Quality Inspection by MDEQ staff, led by Rex Lane. Contradiction between temperature requirement in MI-ROP-N1192-2003B and PTI #19-04B detected. H451 was observed to be operating in compliance with ROP but below the revised PTI temperature.
6/3/2016	PTI application; requesting H451 incinerator minimum temp be returned to 1292°F
6/24/2016	Draft PTI #19-04C received from MDEQ; incinerator minimum temp returned to 1292°F.