DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

A404367508

FACILITY: Dow Silicones Corporation		**SRN / ID:** A4043
LOCATION: 3901 S Saginaw Rd, MIDLAND		**DISTRICT:** Bay City
CITY: MIDLAND		**COUNTY:** MIDLAND
CONTACT: Jim Alger , Midland Area State Air Permitting Specialist		**ACTIVITY DATE:** 04/26/2023
STAFF: Adam Shaffer	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MEGASITE
SUBJECT: Partial Compliance Evaluation of FG325-01, EU325-01, EU502-01 and EU502-07.		
RESOLVED COMPLAINTS:		

A partial compliance evaluation (PCE) consisting of an onsite inspection and records review was conducted by Air Quality Division (AQD) staff Adam Shaffer (AS) of the Dow Silicones Corporation (DSC) site located in Midland, MI. Applicable records were requested on April 18, 2023, to verify compliance with Renewable Operating Permit (ROP) No. MI-ROP-A4043 -2019a (now MI-ROP-A4043-2019b), specifically flexible group (FG)325-01 and emission units (EU)325-01, EU502-01, and EU502-07. Through these emission units and flexible group, select records were requested and reviewed through FG304VENTRECOVERY, FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, and FGSITEBLOWER. An in-person inspection to verify compliance was later completed on April 26, 2023.

Facility Description

DSC is a chemical processing facility. The facility is a mega-site and is a major source of hazardous air pollutants (HAPs), nitrox oxides (NOx), particulate matter (PM) and volatile organic compounds (VOCs). Additionally, the site is subject to various federal regulations and the site is operating under an EPA Civil Order No. 19-11880.

Offsite Compliance Review

DSC is required to submit semi-annual and annual compliance reports per Part A General Conditions 19-23 of MI-ROP-A4043-2019b. Previous reports were reviewed for select time periods. In the most recent annual compliance report submitted for 2022, there appeared to be no deviations specifically for the specific flexible group or emission units for this inspection.

Based on the timing of the inspection, the 2022 Michigan Air Emissions Reporting System (MAERS) Report was reviewed. It appears that DSC uses "Emission Master" software when determining emissions for each product. DSC also uses MAERS emission factors for natural gas used. Additionally, fugitive emissions such as from LDAR monitoring and emissions from spills are added in as well. Upon initial review of the MAERS Report, discrepancies were noted between the emissions reported and the records provided for several recent inspections. In a follow up phone conversation on April 24, 2023, it was concluded that the discrepancies were from DSC reporting both process emissions and fugitive emissions together. Data was reviewed for several emission units inspected. Minor errors were noted, however, after further review the 2022 MAERS Report appeared acceptable. Additionally, at this time the supporting documentation is acceptable, though it was stated to DSC staff moving forward that more specific supporting documentation to better understand how DSC came to the amount of emissions reported per each unit will be required.

Compliance Evaluation

A request was sent to Mr. Jim Alger, Midland Area State Air Permitting Specialist, of DSC on April 18, 2023, for records required by ROP No. MI-ROP-A4043-2019a, specifically for FG325-01, EU325-01, EU502-01, EU502-07, FG304VENTRECOVERY, FG337SCRUBBER, FGTHROX, FGSITESCRUBBERS, and FGSITEBLOWER. The onsite inspection was later completed on April 26, 2023.

AQD staff AS arrived at the facility at 8:30am. Weather conditions at the time were sunny skies, temperatures in the middle 30's degrees Fahrenheit, and winds to the southeast at 5-10mph. Upon arrival AS met with Mr. Alger and several other company staff to initially go over records and later completed a tour of the site, specifically of units EU325-01, EU502-01 and EU502-07. Follow up records were provided by Mr. Alger and site-specific questions were answered by company staff at the time of the inspection.

As mentioned above DSC is a chemical processing facility. During the inspection, the components of the above mentioned emission units and flexible groups were discussed at length with company staff.

ROP No. MI-ROP-A4043-2019b

EU325-01

This emission unit is for a TCS (trichlorosilane) vent recovery system. EU325-01 receives vents from different processes to recover TCS. EU325-01 is located in 317 building. This emission unit typically vents to the carbon bed and venturi scrubber system described in FG325-01; however, the emission unit may vent to the 337 wet scrubber in the event the venturi scrubber system is down.

Onsite Observations

Per Special Condition (SC) III.1, the permittee shall not operate the process unless either carbon bed bank no. 1 (carbon beds 20587, 20588 and 20589) or carbon bed bank no. 2 (carbon beds 22200, 22205 and 22210) are installed maintained and operated in a satisfactory manner. It was noted that carbon bed no. 325 is carbon bed bank no. 1 and carbon bed no. 327 is carbon bed bank no. 2. Records were reviewed at the time of the inspection for select time periods. A total of five exceedances (events) were noted between the carbon bed banks that would have caused the exceedances. A summary of the cause and corrective action for each exceedance was provided at the time of the inspection. Two of the exceedances were for carbon bed no. 1 and the rest for carbon bed no. 2. The causes for the five events were the valve not being in the correct position after maintenance, carbon bed being oversaturated with chlorosilane, poor regeneration on the carbon bed due to poor circulation of heating transfer liquid, a leaking valve, and blower was pulling vents off carbon bed too slowly. Corrective actions were completed to address each exceedance. After further review, it was determined that a violation notice would not be sent for the exceedance events for the two carbon beds at this time.

Per SC III.2, the permittee shall not operate the process unless either venturi scrubber bank no. 1 (venturi scrubbers 9956, 9957 and 9958), venturi scrubber bank no. 2 (venturi scrubbers 22245-1, 22245-2, and 22245-3), or the 337 scrubber is installed, maintained and operated properly. Flow rate records were reviewed for select time periods at the time of the inspection. It was noted that bank no. 1 (north) is a backup scrubber and the primary scrubber used is bank no. 2 (south). Satisfactory flow rates for the two scrubbers is 10 gal/min – 30 gal/min. The bank no. 1 was used twice during the time periods reviewed.

Based on the records reviewed, it appears that DSC was operating at least one of the two venturi scrubber banks in a satisfactory manner during process operations.

Per SC IV.1, the permittee may operate equipment in EU325-01 under maintenance and/or upset conditions for a maximum of 200 hours per rolling 12-month time period. After further review there appeared to be no times when maintenance / upset conditions occurred in the time periods reviewed.

The emission unit was observed at length during the course of the site inspection and appeared to be being operated in a satisfactory manner.

There are four stacks associated with this emission unit and were observed at the time of the site inspection. Though the dimensions were no measured, they appeared to be consistent with what is identified in MI-ROP-A4043-2019b.

Records Review

This emission unit is subject to an hourly hydrogen chloride emission limit of 1.9 pounds per hour (pph) during normal operations. This emission limit is met through satisfactory operation of either venturi scrubber bank no. 1 (venturi scrubbers 9956, 9957 and 9958), venturi scrubber bank no. 2 (venturi scrubbers 22245-1, 22245-2, and 22245-3) or the 337 scrubber. As will be discussed further below, emissions were not vented to the 337 scrubber during the select time periods reviewed. Based on records reviewed and observations made of the venturi scrubbers discussed previously in this report, DSC appears to overall be meeting this emission limit.

This emission unit is subject to a second hourly hydrogen chloride emission limit of 14.6 pph during maintenance and / or upset conditions. Records were requested and provided for select time periods of any times that this emission unit would have been subject to this second emission limit. Based on the records provided, there appears to have been no instances in the time periods reviewed where this second emission limit would be applicable.

Per SC VI.1, the permittee shall keep, in a satisfactory manner, records of the number of and duration of maintenance and / or upset operation periods per a monthly / 12-month rolling time period. Records were requested and provided for select time periods. As mentioned above, there appears to have been no recent maintenance / upset operations. This appears acceptable.

EU502-01

This emission unit is for the methyl vent system consisting of emissions from tanks T-100, T -102, T-150, T-151, T-208, T-20841, and T-25-100, emissions from maintenance procedures involving portable storage containing methylltrichlorosilane, methyldichlorosilane, dimethlydichlorosilane, dimethlychlorosilance, trumethylchlorosilane, phenyltrichlorosilane, ethyltrichlorosilane, and the vent from the cabot mix tank operation. This emission unit is subject to the requirements of 40 CFR Part 60, Subparts A and Kb and 40 CFR Part 61, Subparts A, J, and V. This emission unit vents to the 337 spray scrubber system or to the dry vent tank of the THROX system. The dry vent tank is ether sent to the THROX system burner or diverted to the site scrubber system. Emissions from loading stations 9G, 10G, DVST-28, and DVST 56 also have the option to vent directly to the site scrubber system via the "bulk move vent" described in EU502-07.

Onsite Observations

Per SC IV.1, the permittee shall not operate the emission unit unless the vent streams from the equipment are exhausted to the emission control devices further described in the special condition. Additionally, the permittee shall not exhaust emissions from this emission unit to control devices further described in the special condition unless the applicable control equipment is installed, maintained, and operated in a satisfactory manner. DSC staff stated that the conditions of this special condition are being met. After further review, this appears acceptable.

The emission unit was observed at length during the course of the site inspection and appeared to be being operated in a satisfactory manner.

There are three stacks associated with this emission unit. Photo verification was requested and provided for each stack following the site inspection. After further review, the stack dimensions appear consistent with what is listed in MI-ROP-A4043-2019b.

Records Review

This emission unit is subject to a 4.8 pph annual VOC emission limit. Records were requested and provided for select time periods. As of February 2023, the 12-month rolling hourly average was 0.0807 pph which is well within the VOC emission limit. Previous annual average VOC emission rates reviewed also appeared to be within the permitted limit.

This emission unit is subject to a 2.5 tons per year (tpy) VOC emission limit per a 12-month rolling time period. Records were requested and reviewed for select time periods. For the month of February 2023, 52.17 lbs of VOC emissions were reported. As of February 2023, 707.54 lbs (approximately 0.353 tons) per a 12-month rolling time period were reported which is within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

Per SC VI.2, the permittee shall keep monthly / 12-month rolling time period VOC emission records. Records were requested and provided for select time periods. Based on the records provided, DSC appears to be keeping track of applicable VOC emissions.

Per SC VI.3 / IX.1, the permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Kb (NSPS Subpart Kb), for tanks associated with this emission unit. Tanks sizes and vapor pressures were requested and provided for each tank. The tank sizes ranged from 1,500 gallons to 60,000 gallons and vapor pressures provided ranged from 2.78 psi to 10.18 psi. DSC is complying with the NSPS Subpart Kb by keeping track of design capacity and vapor pressure. DSC went on to say that depending on the size and vapor pressure, the applicable tank is equipped with a fixed roof that vents through a closed vent system and control device as specified in 60.112(b)(a)(3) or applicable recordkeeping is maintained to demonstrate compliance. After further review this appears acceptable.

EU502-07

This emission unit consists of two sets of related equipment with different emission profiles and different vent control paths. The two vent paths are the distillation vents and the bulk move vents. Additional information regarding this emission unit is further described in MI-ROP-A4043-2019b.

Onsite Observations

Per SC IV.1, the permittee shall install, calibrate and operate in a satisfactory manner, a device to monitor and record the mass flow rate of the vapor from the bulk move vents to the site scrubber system on a continuous basis. Records were requested and reviewed for select time periods during the course of the inspection. Based on the records reviewed, DSC is monitoring and recording applicable records. The monitoring flow rate device associated with the bulk move vents to the site scrubber system is calibrated every fifteen months with the last two calibrations occurring on 11/17/20 and 02/22/22. After further review, DSC appears to be meeting the requirements of this condition.

Per SC IV.2, the permittee shall not operate the equipment listed in this special condition unless the vent streams from the equipment are exhausted to the emission control devices also listed in this condition. It was verified by the company that DSC is meeting the requirements for this condition.

The emission unit was observed at length during the course of the site inspection and appeared to be being operated in a satisfactory manner.

Five stacks are listed in association with this emission unit and select stacks were reviewed onsite with photo verification of the remaining stacks provided following the site inspection. Though the dimensions of each stack were not measured they appeared to be consistent with what is listed in MI-ROP-A4043-2019b.

Records Review

This emission unit is subject to a 6.0 tpy trichlorosilane & tetrachlorosilane combined emission limit per a 12-month rolling time period. Records were requested and provided for select time periods. For the month of February 2023, 765.49 lbs of combined emissions were reported. As of February 2023, 1,202.16 lbs (approximately 0.60 tons) of emissions were reported per a 12-month rolling time period which is well within the permitted limit. Previous 12-month rolling time periods reviewed also appeared within the permitted limit.

Per SC II.1, the permittee shall not route more than 1,000 lbs of material per hour, based on a one-hour average, from the bulk move vents to the site scrubber system. Records were reviewed for select time periods while onsite. Upon speaking with company staff, it was determined that there is an alarm in place and if the value exceeds 1,000 lbs (readings every 15 minutes) then this gives the company time to correct before exceeding this material limit. The records reviewed appear acceptable and DSC appears to be meeting this material limit.

Per SC II.2, the permittee shall not route more than 600 lbs of material per hour, based on an annual average, from the bulk move vents to the site scrubber system. Records were requested and provided for select time periods. As of February 2023, the annual hourly average for the bulk move vents to the site scrubber system was 203 lbs per hour which is within the permitted limit. Previous annual averages reviewed also appeared to be within the permitted material limit.

Per SC VI.1, the permittee shall monitor and record, in a satisfactory manner, when the bulk move vents are operating, the mass flow rate of the vapor from the bulk move vents to the site scrubber system on a continuous basis. Records were requested and reviewed for

select time periods while onsite. Based on the records reviewed, DSC appears to be keeping track of applicable records.

Per SC VI.2, the permittee shall track of monthly / 12-month rolling time period emission records for emission limits specified in section one for EU502-07. Records were requested and provided for select time periods. Based on the records provided, DSC appears to be keeping track of applicable records.

Per SC VI.3 and IX.1, the permittee shall comply with the applicable requirements of NSPS Subpart Kb for storage vessels that are listed in these special conditions. DSC stated they keep track of design capacity and vapor pressures of materials stored and comply with applicable control requirements. The tank sizes and vapor pressures for each of the applicable tanks was provided. The tank sizes ranged from 20,000 gallons to 60,000 gallons and the vapor pressures were noted to be 12.38 psia. Based on the size and vapor pressure the tanks were stated by DSC to be equipped with a close vent system and control device as specified in 60.112b(a)(3). This appears acceptable.

FG-325-01

This flexible group is for the carbon bed and venturi scrubber system used to control emissions from EU325-01, EU502-01 and EU502-07. The 337 scrubber acts as a backup to the venturi scrubber system. Emission units associated with this flexible group are EU325-01, EU502-01 and EU502-07.

Onsite Observations

Per SC III.1, if the concentration of chlorosilanes from carbon bed bank no. 1 and 2 exceeds 100 ppm by volume, respectively, except during startup or shutdown periods, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. As mentioned above, during the select time periods reviewed, five exceedance (events) occurred. Details regarding each event were provided which included the cause and corrective actions taken to address the issue moving forward. After further review, this appears acceptable at this time.

Per SC III.2, while venting to venturi scrubber bank no. 1, if the combined liquid flow rate of venturi scrubber nos. 9956-9958 is less than 30 gallons per minute, or the individual liquid flow rate of no. 9958 is less than 10 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. Records of liquid flow rates were requested and reviewed onsite for select time periods. Based on the records reviewed, the venturi scrubbers overall appeared to be being operated in a satisfactory manner.

Per SC III.3, while venting to venturi scrubber bank no. 2, if the combined liquid flow rate of venturi scrubber nos. 22245-1 through 22245-3 is less than 30 gallons per minute, or the individual liquid flow rate of no. 22245-3 is less than 10 gallons per minute, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. Records of liquid flow rates were requested and reviewed onsite for select time periods. Based on the records reviewed, the venturi scrubbers overall appeared to be being operated in a satisfactory manner.

Per SC III.4, the concentration of HCl in the outlet water from venturi scrubber nos. 9958 and 22245-3 shall not exceed 10 percent by weight, respectively. Records were requested

and reviewed at the time of the inspection. Based on the records reviewed, this percentage limit appears to be being met.

Per SC III.5, in the event of a malfunction of venturi scrubber bank nos. 1 and 2, emissions from the process (after the carbon bed system) shall be controlled by the 337 main scrubber. Several additional limits are also described further in the condition. It was stated by company staff during the select time periods reviewed that there were no events when emissions were redirected to be controlled by the 337 main scrubber. This was verified above and after further review appears acceptable.

Per SC IV.1-2, the permittee shall equip and maintain the carbon bed system (carbon bed bank nos.1 and 2) with a monitor capable of detecting carbon breakthrough, which has been defined as greater than 100 ppm. Additionally, the permittee shall equip and maintain each venturi scrubber (venturi scrubber nos. 9956, 9957, 9958, 22245-1, 22245-2, and 2245-3) with a liquid flow indicator. Speaking with company staff indicators are attached for the carbon bed tanks and venturi scrubbers. Dates of the last calibrations for each monitor were also provided.

Four stacks are listed in association with this flexible group and were reviewed during the site inspection. Though the dimensions of each stack were not measured they appeared to be consistent with what is listed in MI-ROP-A4043-2019b.

Records Review

Per SC VI.1-2, while venting to the carbon bed bank no.1 and 2 the permittee shall monitor and record, on a continuous basis, the concentration of chlorosilanes from carbon bed bank no. 1 and 2 with instrumentation acceptable to the AQD. Records were requested and reviewed for select time periods during the inspection. Based on the records reviewed, DSC appears to be keeping track of applicable records.

Per SC VI.3-4, while venting to venturi scrubber banks nos. 1 and 2, the permittee shall monitor and record, on a continuous basis, the liquid flow rates and / or HCl concentrations for the applicable scrubbers. Records were requested and reviewed for select time periods at the time of the inspection. Based on the records reviewed, DSC appears to be keeping track of applicable items.

Per SC VI.5, the permittee shall complete several items further described in this special condition pertaining to the 337 scrubber in the event of a malfunction. As mentioned above, during the select time periods reviewed, it was stated by DSC staff there were no times of malfunction where emissions were redirected to and controlled by 337 scrubber.

FG337SCRUBBER

This flexible group is for the 337 spray tower water scrubber used to remove HCl and chlorosilanes from process exhaust prior to discharge to atmosphere. The 304 vent recovery system vents to the 337 scrubber. The 337 scrubber receives process exhaust from several emission units on site. The 337 scrubber is comprised of two scrubbers (i.e., scrubbers 9950 and 9960) which typically alternate in operation but can operate in parallel. The 337 scrubber utilizes water from the venturi scrubbers at EU325-01 (TCS vent recovery system) and city water as makeup.

As mentioned above, during the select time periods reviewed, there were no time periods where DSC redirected emissions from EU325-01, EU502-01 or EU502-07 to the FG337SCRUBBER.

During the inspection, it was mentioned by DSC staff that the company had recently replaced scrubber no. 9950. It was later determined that the company had used the Rule 285(2)(d) exemption for this replacement which states the reconstruction or replacement of air pollution control equipment with equivalent or more efficient equipment. The scrubber DSC stated was an equivalent piece of equipment. After further review, there is no testing condition identified for the FG337SCRUBBER that would have required testing to verify acceptable control efficiencies. It was concluded that this exemption would appear acceptable at this time.

FGTHROX

This flexible group is for the site wide thermal oxidizer system. The THROX will remove VOC, HAPs, PM10, hydrogen chloride, and other toxic air contaminants from the FGSITEBLOWER consolidated vent system prior to discharge to atmosphere. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart FFFF. FGTHROX is a CAM subject emission unit subject to the requirements of 40 CFR Part 64.

It should be noted that only portions of this flexible group were reviewed in order to verify that EU325-01, EU502-01 and EU502-07 are in compliance with FGTHROX.

Per SC IV.1, the permittee shall not route process vents to EUTHROX unless the burner, quencher, absorber, and two 2-stage ionizing wet scrubbers (IWS) in series are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes various criteria that are listed in this condition. Temperature records were requested and provided. It was stated that there were instances where emissions were being controlled by EUTHROX and the temperature would have been below the minimum temperature, however, it would appear that proper procedures were followed during these instances. Additionally, DSC is in the process of installing a backup EUTHROX (TOX). After further review, this appears acceptable.

FGSITESCRUBBERS

This flexible group is for the site-wide water scrubber system. FGSITESCRUBBERS will remove HCl and chlorosilanes from the FGSITEBLOWER consolidated vented system prior to discharge to atmosphere when the site wide thermal oxidizer system is not operating properly.

It should be noted that only portions of this flexible group were reviewed in order to verify that EU325-01, EU502-01 and EU502-07 are in compliance with FGSITESCRUBBERS.

Per SC III.2, the permittee shall not bypass FGTHROX unless the listed vents are routed to either the site wide water scrubbers or the control equipment specified in the vent's emission unit tables in ROP No. MI-ROP-A4043-2008 (or subsequent revisions) and the control equipment is installed, maintained, and operating in a satisfactory manner. It was verified by company staff that for the select time periods reviewed, there were no instances when emissions from applicable vents controlled by the EUTHROX were rerouted to the site wide scrubbers or local control when they were not operating properly. This appears acceptable.

Per SC III.5 and VI.2, proper operation of the site wide water scrubbers includes the total scrubber water flow rate shall not be less than the minimum flow rates specified in the Malfunction Abatement Plan (MAP), dated February 14, 2018. As discussed above, it was verified by DSC staff that during the time periods reviewed there were instances when emissions were rerouted from going to the THROX to the site wide scrubbers and when EU325-01, EU502-01 and/or EU502-07 would have been being controlled by the mentioned equipment. Flow rates during those time periods were requested and reviewed. The MAP requires each section of the scrubbers to have a minimum flow rate of 50 gallons per minute when accepting emissions and the combined flow rate from the recycle and city water shall be at least 100 gallons per minute. Flow rate records reviewed for the select times that emissions were being vented to FGSITESCRUBBERS appeared to show that the applicable flow rates were being met. After further review this appears acceptable.

Per SC I.1, this flexible group is subject to a 7.1 pph benzene emission limit per testing protocol and/or the Benzene Emissions Management and Monitoring Plan (BEMMP). Records were requested and reviewed for select time periods. The highest pph noted in the time periods reviewed was 5.4 pph, which is well within the permitted limit. It was later noted that this value is the worst cast of each vent for that particular time period (month) and not necessarily were all vent emissions on the same day. This appears to show that even adding together the worst-case emissions for that time period, DSC is still in compliance. Based on the records reviewed, it appears that DSC is meeting this emission limit as well as SC VI.3, which requires that satisfactory records demonstrating compliance with the BEMMP are kept.

FGSITEBLOWER

This flexible group is for the site vent consolidation and blower system that collects vapor streams from numerous emission units and vents throughout the facility and routes them to either the on-site thermal oxidizer with heat recovery (FGTHROX) or to a site-wide water scrubber system. There are two parts to the site vents consolidation and blower system: a dry vent header system for water reactive vents and wet vent header system for vents that can contain water.

It should be noted that only portions of this flexible group were reviewed in order to verify that EU325-01, EU502-01 and EU502-07 are in compliance with FGSITEBLOWER.

Per SC IV.1, the permittee shall not operate the emission units in FGSITEBLOWER unless they are routed to FGTHROX or the site wide water scrubbers, except as further described in this condition, and the control device is installed, maintained and operated in a satisfactory manner or the system is operated in accordance with the MAP described in SC III.1 of the FGFACILITY section of this permit. It was verified by DSC staff there were no instances in the select time periods reviewed, where the above-mentioned emission units were venting to FGSITEBLOWER when both EUTHROX or the site wide water scrubbers were not operating properly. This appears acceptable.

Per SC VI.1, the permittee shall record the time and duration of each bypass episode wherein the vents comprising FGSITEBLOWER are not routed to FGTHROX. Records were requested and provided for select time periods. During the select time periods reviewed, there were twelve episodes where vents were routed away from the THROX. After further review, DSC appears to be keeping track of the applicable records.

FG304VENTRECOVERY

This flexible group is for the 304 vent recovery system comprised of two interchangers (HX1 2040 and Hx2 2040) and two condensers (HX1 2044 and HX2 2044) which operate in series to remove air contaminates from process exhaust. The 304 vent recovery system receives process exhaust from several emission units on-site. FG304VENTRECOVERY is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The condensers are CAM subject devices for VOCs.

Per SC III.1, except as allowed by FGSITEBLOWER, SC IV.1.a, the permittee shall not operate any emission unit vented to the 304 vent recovery system if the exit gas temperature of the refrigerated vent condensers (HX1 2044 and HX2 2044) exceeds -76°C. Records were requested and reviewed onsite for various time periods. Initially, DSC stated that there were no instances in the time periods reviewed when EU502-01 and EU502-07 were venting to the FG304VENTRECOVERY and the exit gas temperature of the refrigerated vent condensers (HX1 2044 and HX2 2044) was over -76°C. However, upon review of the records provided there was one instance that the temperature did exceed the limit. DSC completed a follow up investigation, and it was determined the temperature spike was for HX1 2044 on June 22, 2022. The spike was due to a sudden increase in site nitrogen causing the controller to stop sending nitrogen to the condenser. When the temperature alarm was received, the controller placed the system in manual mode and provided additional cooling. The temperature took a few minutes before the system started to cool. DSC plans to evaluate valve tuning parameters as a result of the root cause investigation completed. No additional exceedances were noted during the records review.

Conclusion

Based on the observations made and records reviewed, DSC appears to be in compliance with MI-ROP-A4043-2019b, specifically the portions related to EU325-01, EU502-01, EU502-07 and FG325-01.

08/15/23

NAME ____________ DATE 08/15/23 SUPERVISOR ____________