



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAR 30 2012

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

REPLY TO THE ATTENTION OF:

Timothy Dyste
Midland Site Plant Manager
Dow Corning Corporation
Midland Plant
3901 South Saginaw Road
Midland, Michigan 48686

Re: Notice of Violation and Finding of Violation
Dow Corning Corporation, Midland, Michigan

Dear Mr. Dyste:

The U.S. Environmental Protection Agency is issuing the enclosed Notice of Violation and Finding of Violation (NOV/FOV) to Dow Corning Corporation (Dow Corning or you), for violations identified at the Midland Plant, located at 3901 South Saginaw Road, Midland, Michigan (the facility). This NOV/FOV is issued in accordance with Section 113(a) of the Clean Air Act (the Act), 42 U.S.C. § 7413(a).

EPA has determined that Dow Corning is violating the Michigan State Implementation Plan and Title V of the Act, 42 U.S.C. § 7401 *et seq.*, including the requirements of the Title V permit issued to Dow Corning for the facility. Additionally, EPA has determined that Dow Corning is violating Sections 111 and 112 of the Act, 42 U.S.C. §§ 7411 and 7412, and their respective implementing regulations.

EPA is offering you an opportunity to confer with us about the violations cited in the NOV/FOV. At the conference, you may present information on the identified violations, any efforts you have taken to comply, and the steps you will take to prevent future violations. Please plan for your facility's technical and management personnel to take part in these discussions. You may have an attorney represent you at this conference.

You may contact Molly DeSalle at (312) 353-8773 to request a conference. You should make the request for a conference no later than 10 calendar days after receipt of this letter, and we should hold any conference within 30 calendar days after receipt of this letter.

Sincerely,

A handwritten signature in black ink that reads "George T. Czerniak".

George T. Czerniak
Acting Director
Air and Radiation Division

cc: Chris Hare, District Supervisor
Michigan Department of Natural Resources and Environment
Saginaw Bay District Office
401 Ketchum Street
Bay City, Michigan 48708

Tom Hess
Michigan Department of Environmental Quality
Air Quality Division
P.O. Box 30260
Lansing, Michigan 48909

Steven Moser
Dow Corning Corporation
2200 West Salzburg Road, #CO1282
P.O. Box 994
Midland, Michigan 48686

Enclosure

5. The NESHAP are national technology-based performance standards for HAP sources in each category that become effective on a specified date. The purpose of these standards is to ensure that all sources achieve the maximum degree of reduction in emissions of HAP that EPA determines is achievable for each source category.
6. Section 112(i)(3) of the Act, 42 U.S.C. § 7412(i)(3), and 40 C.F.R. §§ 61.05 and 63.4, prohibit the owner or operator of any source from operating such source in violation of any NESHAP applicable to such source.

NESHAP for Equipment Leaks at 40 C.F.R. Part 61, Subpart V

7. On June 6, 1984, EPA promulgated the NESHAP for Equipment Leaks (Fugitive Emission Sources) at 40 C.F.R. Part 61, Subpart V (the NESHAP for Equipment Leaks). 49 *Fed. Reg.* 23513.
8. As of June 6, 1984, the NESHAP for Equipment Leaks at 40 C.F.R. Part 61, Subpart V, applies to each of the following sources that are intended to operate in volatile hazardous air pollutant (VHAP) service: pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and control devices or systems required by Subpart V. *See* 40 C.F.R. § 61.240(a).
9. The NESHAP for Equipment Leaks, at 40 C.F.R. § 61.241, defines "volatile hazardous air pollutant or VHAP" to mean a substance regulated by 40 C.F.R. Part 61 for which a standard for equipment leaks of the substance has been promulgated, and includes benzene and vinyl chloride.
10. The NESHAP for Equipment Leaks, at 40 C.F.R. § 61.241, defines "in VHAP service" to mean that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight a volatile hazardous air pollutant.
11. The NESHAP for Equipment Leaks, at 40 C.F.R. § 61.241, defines "in vacuum service" to mean that equipment is operating at an internal pressure which is at least 5 kilopascals (kPa) (0.7 psia) below ambient pressure.
12. The NESHAP for Equipment Leaks, at 40 C.F.R. § 61.246(e)(5) provides that a list of identification numbers for equipment in vacuum service shall be recorded in a log that is kept in a readily accessible location.
13. The NESHAP for Equipment Leaks, at 40 C.F.R. § 61.245(d)(1), provides that each piece of equipment within a process unit that can conceivably contain equipment in VHAP service is presumed to be in VHAP service unless an owner or operator demonstrates that the piece of equipment is not in VHAP service in accordance with the requirements of 40 C.F.R. § 61.245(d).

14. The NESHAP for Equipment Leaks, at 40 C.F.R. § 61.246(i)(2), provides that the following information shall be recorded in a log that is kept in a readily accessible location for determining applicable exemptions: an analysis demonstrating that equipment is not in VHAP service.
15. The NESHAP for Equipment Leaks, at 40 C.F.R. § 61.246(j), provides that information and data used to demonstrate that piece of equipment is not in VHAP service shall be recorded in a log that is kept in a readily accessible location.
16. The NESHAP for Equipment Leaks, at 40 C.F.R. § 61.242-2(a)(1), requires that each pump be monitored monthly to detect leaks by the methods specified in 40 C.F.R. § 61.245(b).
17. The NESHAP for Equipment Leaks, at 40 C.F.R. § 61.242-2(e), provides that any pump that is designated for no detectable emissions, as indicated by an instrument reading of less than 500 parts per million (ppm) above background, is exempt from pump monitoring and leak detection requirements in 40 C.F.R. § 61.242-2(a), (c) and (d) if, among other things, the pump is tested for compliance initially upon designation and annually thereafter.
18. The NESHAP for Equipment Leaks, at 40 C.F.R. § 61.242-7(a), provides that each valve shall be monitored monthly to detect leaks by the methods specified in 40 C.F.R. § 61.245(b), and shall comply with the leak detection requirements specified in 40 C.F.R. § 61.242-7(b)-(e).
19. The NESHAP for Equipment Leaks, at 40 C.F.R. § 61.246(e)(2)(i) and (ii), provides that the following shall be recorded in a log that is kept in a readily accessible location: a list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background, and that the designation of this equipment for no detectable emissions shall be signed by the owner or operator.
20. The NESHAP for Equipment Leaks, at 40 C.F.R. § 61.245(b), provides that the monitoring of pumps and valves as described in paragraphs 16 through 18, above, shall comply with, among other things, Method 21 of Appendix A of 40 C.F.R. Part 60.
21. Method 21 of Appendix A of 40 C.F.R. Part 60 provides that this method is applicable for the determination of VOC leaks from process equipment; including valves, flanges and other connections, pumps and compressors, pressure relief devices, process drains, open-ended valves, pump and compressor seal system degassing vents, accumulator vessel vents, agitator seals, and access door seals.
22. Method 21 of Appendix A of 40 C.F.R. Part 60, Section 8.3.1, provides that, among other things, proper sampling should be conducted at the surface of the component interface where leakage could occur, and if the maximum observed meter reading is greater than the leak definition in the applicable regulation, the results should be recorded and reported as specified in the applicable regulation.

NESHAP for Miscellaneous Organic Chemical Manufacturing at 40 C.F.R. Part 63,
Subpart FFFF

23. The NESHAP, at 40 C.F.R. Part 63, Subpart A, contain general provisions applicable to the owner or operator of any stationary source that contains an affected facility subject to the NESHAP at Part 63. These include definitions at 40 C.F.R. § 63.2.
24. The NESHAP, at 40 C.F.R. § 63.2, defines “existing source” as any affected source that is not a new source.
25. The NESHAP, at 40 C.F.R. § 63.2, defines “new source” any affected source the construction or reconstruction of which is commenced after EPA first proposes a relevant emission standard under 40 C.F.R. Part 63 establishing an emission standard applicable to such source.
26. The NESHAP, at 40 C.F.R. § 63.2, defines “fugitive emissions” as those emissions from a stationary source that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening. Under Section 112 of the Act, all fugitive emissions are to be considered in determining whether a stationary source is a major source.
27. On November 10, 2003, EPA promulgated the NESHAP for Miscellaneous Organic Chemical Manufacturing (MON), codified at 40 C.F.R. Part 63, Subpart FFFF. *68 Fed. Reg.* 63888. The NESHAP for MON establishes emission standards, requirements to demonstrate initial and continuous compliance with emission limits, operating limits, work practice standards, and recordkeeping requirements associated with miscellaneous organic chemical manufacturing. *See* 40 C.F.R. § 63.2430.
28. The NESHAP for MON, at 40 C.F.R. § 63.2445(b), provides that owners and operators of existing sources subject to the MON must comply with the requirements for existing sources no later than May 10, 2008.
29. The NESHAP for MON, at 40 C.F.R. § 63.2435(a), provides that owners and operators are subject to the MON if they operate miscellaneous organic chemical manufacturing process units (MCPU) that are located at, or are part of, a major source of HAP emissions as defined in Section 112(a) of the Clean Air Act.
30. The NESHAP for MON, at 40 C.F.R. § 63.2550, defines “miscellaneous organic chemical manufacturing process” as all equipment which collectively functions to produce a product or isolated intermediate that is “material” described in 40 C.F.R. § 63.2435(b). Process includes any, all or a combination of reaction, recovery, separation, purification, or other activity, operation, manufacture, or treatment which are used to produce a product or isolated intermediate.
31. The NESHAP for MON, at 40 C.F.R. § 63.2435(b), provides that a MCPU includes equipment necessary to operate a miscellaneous organic chemical manufacturing process that, among other things, processes, uses or generates any of the organic HAPs listed in Section 112(b) of the Act. A MCPU also includes any assigned storage tanks and transfer

racks; equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater; and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open ended valves or lines, valves, connectors, and instrumentation systems that are used to manufacture any material or family, including but not limited to an organic chemical with an SIC code listed in 40 C.F.R. § 63.2435(b)(1)(i).

32. The NESHAP for MON, at 40 C.F.R. § 63.2550, defines “in organic HAP service” to mean a piece of equipment that either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic as determined according to Method 18 of 40 C.F.R. Part 60, Appendix A. *See also* 40 C.F.R. § 63.180(d)(1).
33. The NESHAP for MON, at 40 C.F.R. § 63.2480 and Table 6, lists the requirements for leaks for equipment that is in organic HAP service, and includes the standards set forth in the NESHAP for Organic Hazardous Air Pollutants for Equipment Leaks (HON) at 40 C.F.R. Part 63 Subpart H.
34. The NESHAP for HON, at 40 C.F.R. § 63.169(b), provides that a leak is detected if an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured.

NESHAP for Benzene Waste Operations at 40 C.F.R. Part 61, Subpart FF

35. On March 7, 1990, EPA promulgated the NESHAP for Benzene Waste Operation at 40 C.F.R. Part 61, Subpart FF. *55 Fed. Reg.* 8346.
36. The NESHAP for Benzene Waste Operations, applies to, among other things, owners and operators of chemical manufacturing plants. 40 C.F.R. § 61.340(a).
37. The NESHAP for Benzene Waste Operations, at 40 C.F.R. § 61.341, defines “chemical manufacturing plant” as any facility engaged in the production of chemicals by chemical, thermal, physical, or biological processes for use as a product, co-product, by-product, or intermediate including but not limited to industrial organic chemicals. Examples of chemical manufacturing plants include facilities at which process units are operated to produce, among other things, benzene.
38. The NESHAP for Benzene Waste Operations, at 40 C.F.R. § 61.341, defines “benzene concentration” as the fraction by weight of benzene in a waste as determined in accordance with the procedures specified in 40 C.F.R. § 61.355.
39. The NESHAP for Benzene Waste Operations, at 40 C.F.R. § 61.341, defines “process unit” to mean equipment assembled and connected by pipes or ducts to produce intermediate or final products.

40. The NESHAP for Benzene Waste Operations, at 40 C.F.R. § 61.341, defines “point of waste generation” as the location where the waste stream exits the process unit component or storage tank prior to handling or treatment in an operations that is not an integral part of the production process, or in the case of waste management units that generate new wastes after treatment, the location where the waste stream exits the waste management unit component.
41. The NESHAP for Benzene Waste Operations, at 40 C.F.R. § 61.341, defines “waste stream” to mean the waste generated by a particular process unit, product tank, or waste management unit. The characteristics of the waste stream (e.g., flow rate, benzene concentration, water content) are determined at the point of waste generation. Examples of a waste stream include, among other things, process wastewater.
42. The NESHAP for Benzene Waste Operations, at 40 C.F.R. § 61.355(a)(1), sets forth the procedures for determining the total annual benzene quantity from facility waste. For purposes of calculating the total annual benzene quantity from facility waste, 40 C.F.R. § 61.355(b) provides that an owner or operator shall determine the annual waste quantity at the point of waste generation, with exceptions not relevant here.
43. The NESHAP for Benzene Waste Operations, at 40 C.F.R. § 61.355(a)(2), provides that the total annual benzene quantity from facility waste is calculated by, among other things, adding together the annual benzene quantity for each waste stream generated during the year.
44. The NESHAP for Benzene Waste Operations, at 40 C.F.R. § 61.342(a), provides that the total annual benzene quantity from facility waste is the sum of the annual benzene quantity for each waste stream at the facility that has a flow-weighted annual average water content greater than 10 percent or that is mixed with water, or other wastes, at any time and the mixture has an annual average water content greater than 10 percent. The benzene quantity in a waste stream is to be counted only once without multiple counting if other waste streams are mixed with or generated from the original waste stream.
45. The NESHAP for Benzene Waste Operations, at 40 C.F.R. § 61.342(a)(1) through (4), provide additional specific requirements for calculating the total annual benzene waste quantity at a facility. Of relevance here, 40 C.F.R. § 61.342(a)(1) provides that wastes that are exempted under certain conditions, are included in the calculation if they have an annual average water content greater than 10 percent, or if they are mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10 percent. Additionally, 40 C.F.R. § 61.342(a)(2) provides that the benzene in a material subject to the NESHAP for Benzene Waste Operations that is sold is included in the calculation of the total annual benzene quantity if the material has an annual average water content greater than 10 percent.

Standards of Performance for New Stationary Sources

46. Section 111(b) of the Act, 42 U.S.C. § 7411(b), requires EPA to publish a list of categories of sources, which, in EPA's judgment, cause or contribute significantly to air pollution that may reasonably be anticipated to endanger public health or welfare, and to promulgate standards of performance for new stationary sources within these categories. These standards are known as "new source performance standards" or "NSPS."
47. The NSPS are national technology-based performance standards for air pollutant sources constructed or modified after a specified date. The purpose of the standards is to ensure that all new or modified sources of air pollutants will be designed to meet emission limitations achievable through the application of the best demonstrated system for emission reduction considering the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements. *See* Section 111(a)(1) of the Act, 42 U.S.C. § 7411(a)(1).
48. Section 111(e) of the Act, 42 U.S.C. § 7411(e), prohibits the owner or operator of any new source from operating such source in violation of any standard of performance applicable to such source.
49. Under Section 111(a)(2) of the Act, 42 U.S.C. § 7411(a)(2), "new source" means any stationary source, the construction or modification of which is commenced after the publication of regulations (or if earlier, proposed regulations) prescribing a standard of performance which will be applicable to such source.
50. Under Section 111(a)(3) of the Act, 42 U.S.C. § 7411(a)(3), "stationary source" means any building, structure, facility, or installation which emits or may emit any air pollutant.
51. Under Section 111(b) of the Act, 42 U.S.C. § 7411(b), EPA promulgates NSPS for categories of sources and codifies those requirements at 40 C.F.R. Part 60.
52. 40 C.F.R. Part 60, Subpart A contains general provisions applicable to the owner or operator of any stationary source which contains an affected facility subject to NSPS. These general provisions include definitions at 40 C.F.R. § 60.2 and monitoring requirements at 40 C.F.R. § 60.13.
53. Under 40 C.F.R. § 60.2, an "affected facility" means any apparatus subject to a performance standard under the NSPS regulations.
54. The NSPS, at 40 C.F.R. § 60.13(e), provides that all continuous monitoring systems shall be in continuous operation and shall meet certain minimum frequency of operation requirements, except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 C.F.R. § 60.13(d).

55. On June 13, 2007, EPA promulgated NSPS for Industrial-Commercial-Institutional Steam Generating Units (ICI SGU), codified at 40 C.F.R. Part 60 Subpart Db. *72 Fed. Reg.* 32742. The affected facility to which the NSPS for ICI SGU applies is to each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr). *See* 40 C.F.R. § 61.40b(a).
56. Continuous emission monitoring system (CEMS), as defined at 40 C.F.R. § 60.51b, means a monitoring system for continuously measuring the emissions of a pollutant from a facility.
57. The NSPS for ICI SGU, at 40 C.F.R. § 60.48b(b), provides that the owner or operator of an affected facility subject to a nitrogen oxides (NO_x) standard shall comply with either 40 C.F.R. § 60.48b(b)(1) or (b)(2), with exceptions not relevant here.
58. The NSPS for ICI SGU, at 40 C.F.R. § 60.48b(b)(1), provides that the owner or operator subject to a NO_x standard shall install calibrate, maintain, and operate CEMS for measuring NO_x and oxygen (O₂) (or carbon dioxide (CO₂)) emissions discharged to the atmosphere, and shall record the output of the system.
59. The NSPS for ICI SGU, at 40 C.F.R. § 60.48b(c), provides that the CEMS required by 40 C.F.R. § 60.48b(b) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data must be recorded during calibration checks, and zero and span adjustments.

Michigan State Implementation Plan

60. Section 110 of the Act, 42 U.S.C. § 7410, requires each state to adopt and submit to EPA a plan that provides for the implementation, maintenance, and enforcement of primary and secondary National Ambient Air Quality Standards in the state. Upon approval by EPA, the plan becomes part of the applicable State Implementation Plan (SIP) for the state.
61. On February 24, 2003, EPA approved the Michigan SIP requirement at R 336.1105, Definitions, as part of the federally approved Michigan SIP (effective April 25, 2003). *68 Fed. Reg.* 8550.
62. On June 1, 2006, EPA approved the Michigan SIP requirements at R 336.1701 and R 336.1702, New Sources of Volatile Organic Compound Emissions, as part of the federally approved Michigan SIP (effective July 3, 2006). *71 Fed. Reg.* 31903.
63. R 336.1105(b) defines "emission unit," as any part of a stationary source that emits or has the potential to emit an air contaminant.

64. The Michigan SIP at R 336.1701 defines “new source” as any process or process equipment which is either placed into operation on or after July 1, 1979, or for which an application for a permit to install, pursuant to the SIP, is made to the Michigan Department of Environmental Quality (MDEQ) on or after July 1, 1979, or both, except for any process or process equipment which is defined as an “existing source” under the SIP.
65. The Michigan SIP at R 336.1702(a) and (c) provides that a person who is responsible for any new source of volatile organic compound emissions shall not cause or allow the emission of volatile organic compound emissions from the new source in excess of the lowest maximum allowable emission rate listed by the MDEQ on its own initiative or based upon the application of the best available control technology, or the maximum allowable emission rate specified as a condition of a permit to install or a permit to operate.

Federal Title V Requirements

66. Pursuant to Section 502(a) of the Act, 42 U.S.C. § 7661a(a), it is unlawful for any person to, among other things, operate a major source subject to Title V except in compliance with a Title V permit after the effective date of any permit program approved or promulgated under Title V of the Act. EPA first promulgated regulations governing state operating permit programs on July 21, 1992. *See 57 Fed. Reg. 32295; 40 C.F.R. Part 70.*
67. Section 502(a) of the Act provides that after the effective date of any permit program approved or promulgated under Title V, it shall be unlawful for any person to violate any requirement of a permit issued under Title V.
68. 40 C.F.R. § 70.6(b)(1) provides that Title V permits are federally enforceable and that all terms and conditions in a Title V permit, including any provisions designed to limit a source’s potential to emit, are enforceable by EPA.
69. 40 C.F.R. § 70.2 defines “major source,” in part, as any stationary source belonging to a single major industrial grouping and that directly emits or has the potential to emit greater than 100 tons per year (tpy) of any criteria air pollutant, 10 tpy of a single HAP, or 25 tpy of all HAP combined.
70. Section 503 of the Act, 42 U.S.C. § 7661b, sets forth the requirement to submit a timely, accurate, and complete permit application for a permit, including information required to be submitted with the application.
71. Section 504(a) of the Act, 42 U.S.C. § 7661c(a), requires that each Title V permit include enforceable emission limitations and standards, a schedule of compliance, and compliance certification requirements to assure compliance with the permit terms and conditions.
72. 40 C.F.R. § 70.1(b) provides that all sources subject to Title V shall have a permit to operate that assures compliance by the source with all applicable requirements.

73. 40 C.F.R. § 70.2 defines “applicable requirement” to include, among other things, any standard or other requirements provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under Title I of the Act that implements the relevant requirements of the Act.
74. 40 C.F.R. § 70.5(b) provides that no source subject to 40 C.F.R. Part 70 requirements may operate without a permit as specified in the Act.
75. 40 C.F.R. 70.5(a) and (c) require timely and complete permit applications for Title V permits with required information that must be submitted and 40 C.F.R. § 70.6 specifies required permit content. 40 C.F.R. § 70.6(c) requires that Title V permits include requirements for compliance certification with terms and conditions contained in the permit, including emission limitations, standards, or work practices and the status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance was continuous or intermittent.
76. 40 C.F.R. § 70.5(b) provides that any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit.

Michigan Title V Requirements

77. EPA granted interim approval of the Michigan Title V program on January 10, 1997. *See* 62 *Fed. Reg.* 1387 (effective on February 10, 1997). EPA fully approved the Michigan Title V program on December 4, 2001. *See* 66 *Fed. Reg.* 62949 (effective on November 30, 2001). The Michigan regulations governing the Title V permit program, also known as the “renewable operating permit program,” are codified at R 336.1210 through R 336.1219.
78. R 336.1210 provides that a person shall not operate any emission units located at a stationary source required to obtain a renewable operating permit except in compliance with all applicable terms and conditions of a renewable operating permit.
79. R 336.1213 provides that each renewable operating permit shall contain, among other things, emission limits and standards, including operational requirements and limits that ensure compliance with all applicable requirements at the time of permit issuance.
80. R 336.1210 and R 336.1212 require that a source submit a complete permit application which, among other things, shall contain all information that is necessary to implement and enforce all applicable requirements that include a process-specific emission limitation or standard to determine the applicability of those requirements and a certification that the statements and information in the application are true, accurate and complete.

81. R 336.1213 provides that all documents, including reports, required to be submitted to MDEQ as a term or conditions of a renewable operating permit, shall include a certification by a responsible official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Title V Permit Requirements for Dow Corning

82. On September 15, 2008, the MDEQ issued a renewable operating permit, permit number MI-ROP-A4043-2008 (Title V permit) and a source-wide permit to install, permit number MI-PTI-A4043-2008 (PTI), to Dow Corning for the facility.
83. Dow Corning's Title V permit, at Section A-1, General Conditions, General Provisions, Certification and Reporting, Number 19, provides that a responsible official shall certify to the appropriate Air Quality Division District Office and to EPA that the stationary source is and has been in compliance with all terms and conditions contained in the renewable operating permit except for deviations that have been or are being reported to the appropriate AQD District Office. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete.
84. Dow Corning's Title V permit, at Section A-1, General Conditions, General Provisions, Certification and Reporting, Number 20, provides that the certification of compliance shall be submitted annually for the term of the ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in the ROP.
85. Dow Corning's Title V permit, at Section D-1, Flexible Group Conditions, FGThrox, III. Process/Operational Restrictions, Number 2, provides that the permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 C.F.R. Part 60, Subpart A and Db, as they apply to the equipment in FGThrox.
86. Dow Corning's Title V permit at Section B-1, Source-Wide Conditions, VI. Monitoring/Recordkeeping, Number 5, provides that the permittee shall keep, in a satisfactory manner, monthly and 12-month rolling emissions calculations for individual and total HAP. The permittee shall keep all records on file for a period of at least five years and make them available to the Department [Michigan Department of Environmental Quality] upon request. This condition shall not apply until the effective date of 40 CFR 63, Subpart FFFF (Miscellaneous Organic NESHAP (MON)).
87. Dow Corning's Title V permit at Section B-1, Source-Wide Conditions, I. Emission Limits, limits emissions of individual HAP from the facility to less than 10 tpy, and limits emissions of aggregate HAP from the facility to less than 25 tpy.

88. Dow Corning's Title V permit at Section C-1, Emission Unit Conditions, EU 207-01, I. Emission Limits, Number 1, limits volatile organic compounds (VOC) emissions from all silicone rubber manufacturing processes in EU-207-01 to 35.4 pounds per hour (pph).
89. Dow Corning's Title V permit at Section C-1, Emission Unit Conditions, EU 303-01, III. Process/Operational Restrictions, Number 1, provides that if the exit gas temperature of condenser No. 3469 . . . exceeds 50 degrees Fahrenheit (F) . . . the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. Exceeding this parameter is an excursion.
90. Dow Corning's Title V permit at Section C-1, Emission Unit Conditions, EU 303-01, VI. Monitoring/Recordkeeping, Number 1, provides that the permittee shall monitor and record, on a continuous basis, the exit gas temperature of condenser no. 3469 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.
91. Dow Corning's Title V permit at Section C-1, Emission Unit Conditions, EU 303-06 III. Process/Operational Restrictions, Number 3, provides that if the exhaust gas temperature at the outlet of condenser No. 1637 exceeds 50 degrees F, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. Exceeding this parameter is an excursion.
92. Dow Corning's Title V permit at Section C-1, Emission Unit Conditions, EU 303-06 VI. Monitoring/Recordkeeping, Number 1, provides that the permittee shall monitor and record, on a continuous basis, the exhaust gas temperature of condenser No. 1637, No. 3458, No. 3475, No. 1623, No. 1645, No. 3303 and No. 3307, respectively, with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period.
93. Dow Corning's Title V permit at Section C-1, Emission Unit Conditions, EU 303-07, III. Process/Operational Restriction(s), Number 1, provides that if the exhaust gas temperature of condenser No. 1637, No. 1634, No. 1635, and No. 3458 exceeds 50 degrees F, respectively, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. As stated above the exhaust gas temperature of condenser No. 1634 shall not exceed 50 degrees F except when processing Amino products then the temperature of the exhaust gas may reach 105 degrees F. If the exhaust gas temperature exceeds 105 degrees F while processing amino products the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. Exceeding this parameter is an excursion.

94. Dow Corning's Title V permit at Section C-1, Emission Unit Conditions, EU 303-07, VI. Monitoring/Recordkeeping, Number 1, provides that the permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD. The exhaust gas temperature of condensers No. 1634, No. 1635 and No. 1637, respectively. The coolant flow rate and the coolant exit temperature of condenser No. 1602 and No. 3420. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes."
95. Dow Corning's Title V permit at Section C-1, Emission Unit Conditions, EU 501-49 III. Process/Operational Restriction(s), Number 1, provides that proper operation of the refrigerated vent condenser (15091) means that the exit gas temperature will not exceed 2 degrees C or 36 degrees F. Exceeding this parameter is an excursion.
96. Dow Corning's Title V permit at Section C-1, Emission Unit Conditions, EU 501-49 VI. Monitoring/Recordkeeping, Number 1, provides that the permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD: the exit gas temperature of condenser no. 15091; and the service water return temperature of condenser no. 4358. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.
97. Dow Corning's Title V permit at Section C-1, Emission Unit Conditions, EU 502-01, III. Process/Operational Restriction(s), Number 2, provides that the proper operation of the 337 wet scrubber (spray towers 9950 and 9960) means a minimum flow rate of 45.0 gallons per minute (gpm). Exceeding this parameter is an excursion.
98. Dow Corning's Title V permit at Section C-1, Emission Unit Conditions, EU 502-01 VI. Monitoring/Recordkeeping, Number 3, provides that the permittee shall monitor and record, on a continuous basis, the following operational parameters with instrumentation acceptable to the AQD: the exit gas temperature of condenser no. 2204; and the liquid flow rate for 337 wet scrubber (spray towers 9950 and 9960). For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.
99. Dow Corning's Title V permit at Section D-1, Flexible Group Conditions, FG322Scrubbers, III. Process/Operational Restriction(s), Number 1, provides that the liquid flow rate of scrubber No. 22452 shall not be less than 10.0 gpm.
100. Dow Corning's Title V permit at Section D-1, Flexible Group Conditions, FG322Scrubber VI. Monitoring/Recordkeeping, Number 1, provides that the permittee shall monitor and record, on a continuous basis, the liquid flow rate of scrubber No. 22452 with instrumentation acceptable to the AQD. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. These records shall be kept on file for a period of five years and made available to the AQD upon request.

101. Dow Corning's Title V permit at Section D-1, Flexible Group Conditions, FGLeakDetection, VI. Monitoring/Recordkeeping, Number 1, and IX. Other Requirements, Number 3, requires Dow Corning to comply with all applicable requirements of the NESHAP for Equipment Leaks at 40 C.F.R. Part 61, Subpart V.
102. Dow Corning's Title V Permit, at Section B-1, Source-Wide Conditions, IX. Other Requirements, Number 3, requires Dow Corning to comply with all applicable requirements of the NESHAP for Benzene Waste Operations at 40 C.F.R. Part 61, Subpart FF, including but not limited to 40 C.F.R. §§ 61.342 and 61.355.
103. Dow Corning's Title V permit, Section D-1, Flexible Group Conditions, FGThrox, VI. Monitoring/Recordkeeping, Number 2, provides that the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record NOx emissions for FGThrox on a continuous basis and according to the procedures outlines in Appendix 3 and 40 C.F.R. Part 60.48(b)(1),(c),(d),(e),(f).
104. Dow Corning's Title V permit, Section D-1, Flexible Group Conditions, FG432Boilers, VI. Monitoring/Recordkeeping, Number 2, provides that the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record NOx emissions for each of the three boilers included in FG432Boilers, which are Boilers #12, #13, and #14, at the facility.
105. Dow Corning's Title V permit, Appendix 1-3, Number 6, provides that CEMS equipment shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 C.F.R. § 60.13.

FINDINGS OF FACT

General

106. Dow Corning owns and operates a facility located at 3901 South Saginaw Road, Midland, Michigan 48686 (the facility). The facility was founded in 1943.
107. At the facility, Dow Corning processes and manufactures industrial organic chemicals. The chemicals that Dow Corning processes at the facility include, but are not limited to, benzene, toluene, and xylene.
108. On October 18 through 21, 2011, and on October 24 through 26, 2011, EPA conducted an inspection at the facility.

NESHAP

NESHAP for Equipment Leaks at 40 C.F.R. Part 61, Subpart V

- 109. Dow Corning operates equipment at the facility, including but not limited to pumps and valves, that are intended to operate in VHAP service as defined in 40 C.F.R. § 61.241, and are therefore subject to the NESHAP for Equipment Leaks at 40 C.F.R. Part 61, Subpart V.
- 110. During EPA's inspection, Dow Corning provided EPA with the facility's leak, detection, and repair database for components monitored at the facility since August of 1999 (LDAR data). The LDAR data included monitoring data for compliance with the requirements of 40 C.F.R. Part 61, Subpart V.
- 111. The LDAR data identified 1,029 valves subject to 40 C.F.R. Part 61, Subpart V, as of January 1, 2006.
- 112. The LDAR data identified a number of valves at the facility operating in VHAP service that were in existence prior to 2006, but were not monitored monthly in accordance with the requirements of 40 C.F.R. Part 61, Subpart V, until the year listed in Table 1, below.

Table 1: Existing valves identified as subject to 40 C.F.R. Subpart Part 61, Subpart V after January 1, 2006

| Year of Identification | Existing valves identified as subject to Subpart V after January 1, 2006 |
|-------------------------------|---|
| 2006 | 23 |
| 2007 | 104 |
| 2008 | 49 |
| 2009 | 324 |
| 2010 | 4 |
| 2011 | 8 |

- 113. Dow Corning has designated certain pumps at the facility for no detectable emissions under 40 C.F.R. § 61.242-2(e), and provided monitoring data for these designated pumps. The relevant monitoring data, summarized in Table 2, below, shows that Dow Corning did not conduct timely annual monitoring on these pumps.

Table 2: List of untimely monitoring for pumps designated for no detectable emissions

| Building Number | Component Tag Number | Date of Annual Monitoring Event | Date Required for Annual Monitoring Event | Date Actually Monitored | Number of Days After 1-year Required Monitoring Date |
|-----------------|----------------------|---------------------------------|---|-------------------------|--|
| 308 | 50862 | 10/1/2007 | 10/1/2008 | 2/13/2009 | 136 |
| 505 | 51106 | 9/9/2007 | 9/9/2008 | 11/7/2008 | 60 |
| 304 | 51395 | 4/9/2007 | 4/9/2008 | 7/2/2008 | 85 |
| 304 | 51396 | 4/9/2007 | 4/9/2008 | 7/2/2008 | 85 |
| 304 | 51593 | 4/9/2007 | 4/9/2008 | 7/2/2008 | 85 |
| 304 | 51628 | 4/9/2007 | 4/9/2008 | 7/2/2008 | 85 |
| 303 | 51026 | 4/24/2007 | 4/24/2008 | 7/9/2008 | 77 |
| 308 | 50310 | 4/25/2007 | 4/25/2008 | 12/3/2008 | 223 |
| 308 | 50394 | 4/25/2007 | 4/25/2008 | 12/3/2008 | 223 |
| 308 | 50403 | 4/25/2007 | 4/25/2008 | 12/3/2008 | 223 |
| 308 | 50020 | 4/25/2007 | 4/25/2008 | 12/3/2008 | 223 |
| 308 | 50171 | 4/25/2007 | 4/25/2008 | 12/3/2008 | 223 |
| 308 | 50216 | 4/25/2007 | 4/25/2008 | 12/3/2008 | 223 |
| 308 | 50245 | 4/25/2007 | 4/25/2008 | 12/3/2008 | 223 |
| 308 | 50225 | 4/25/2007 | 4/25/2008 | 12/3/2008 | 223 |
| 308 | 50273 | 4/25/2007 | 4/25/2008 | 12/3/2008 | 223 |
| 516 | 51231 | 6/7/2007 | 6/7/2008 | 11/21/2008 | 168 |
| 513 | 51347 | 4/25/2007 | 4/25/2008 | 12/3/2008 | 223 |
| 304 | 51514 | 4/9/2007 | 4/9/2008 | 7/2/2008 | 85 |
| 304 | 51521 | 4/9/2007 | 4/9/2008 | 7/2/2008 | 85 |
| 308 | 50059 | 6/6/2007 | 6/6/2008 | 12/3/2008 | 181 |
| 308 | 50071 | 6/6/2007 | 6/6/2008 | 12/3/2008 | 181 |
| 304 | 51556 | 4/9/2007 | 4/9/2008 | 7/7/2008 | 90 |

114. The LDAR data identified pump number 51026, designated for no detectable emissions, with a leak rate of 885 ppm on May 17, 2009. Pump 51026 was not monitored again to detect leaks until May 5, 2010.

115. During the inspection, EPA requested a list of identification numbers for the equipment in vacuum service at the facility, but was not provided with such a list.

116. Dow Corning has designated certain equipment at the facility as not in VHAP service. During the inspection, EPA requested information and data used to demonstrate that the equipment was not in VHAP service, but was not provided with any such information or data.

NESHAP for Miscellaneous Organic Chemical Manufacturing at 40 C.F.R. Part 63, Subpart FFFF

117. Dow Corning operates emission units that contain HAP. These units include the 123 Lift Station, emission units operating in VHAP service, and components operating in organic HAP service.
118. Dow Corning transfers all process wastewater and municipal wastewater through a chemical sewer system at the facility. The culmination point for the sewer system is the 123 Lift Station. The 123 Lift Station consists of two pumps that transfer collected wastewater off-site for treatment. The process wastewater contains VOC and HAP in varying concentrations.
119. At the time of EPA's inspection, the total organic carbon (TOC) monitor at the 123 Lift Station showed that the process wastewater contained 61 parts per million of TOC, which includes VOC and HAP.
120. Dow Corning's Title V permit identifies the following emission units at the facility which contain equipment that operate in VHAP service: 303-06, 304-03, 308-01, 308-02, 502-01, 505-01, 508-01, and 515-01.
121. At the time of EPA's inspection, Dow Corning identified the total number of valves, connectors, pumps and agitators that have been operating in organic HAP service since at least 2007 at the facility, as set forth in Table 3, below.

Table 3: Count of components operating in organic HAP service

| Component Type in Organic HAP Service | Identified Totals as of October 19, 2011 |
|--|---|
| Valves | 11,303 |
| Connectors | 48,429 |
| Pumps | 226 |
| Agitators | 58 |

122. The valves, connectors, pumps, and agitators identified in Table 3, above, meet the definition of a MCPU, as defined in 40 C.F.R. §§ 63.2435 and 63.2550.
123. According to the LDAR data, Dow Corning began conducting leak, detection and repair monitoring in November of 2008 on the sources in organic HAP service listed in Table 3, above.

124. During EPA's inspection, Dow Corning provided LDAR monitoring data for the components operating in organic HAP service listed in Table 3, above. The total number of leaks detected at the facility from January 1, 2009 to October 20, 2011 for each category of components identified in Table 3, above, is summarized in Table 4 below.

Table 4: Identified leaks for components in organic HAP service

| Year | Facility Building Number | Total Number of Leaks Identified for Connectors | Total Number of Leaks Identified for Valves | Total Number of Leaks Identified for Pumps | Total Number of Leaks Identified for Agitators |
|--------------|--------------------------|---|---|--|--|
| 2009 | 303 | 39 | 10 | 3 | 0 |
| 2009 | 505 | 55 | 17 | 6 | 4 |
| 2009 | 508 | 0 | 2 | 0 | 0 |
| 2010 | 106 | 7 | 11 | 1 | 0 |
| 2010 | 108 | 1 | 0 | 1 | 0 |
| 2010 | 109 | 12 | 3 | 2 | 0 |
| 2010 | 212 | 13 | 6 | 0 | 2 |
| 2010 | 2901 | 3 | 0 | 0 | 0 |
| 2010 | 303 | 42 | 13 | 10 | 3 |
| 2010 | 304 | 1 | 0 | 0 | 0 |
| 2010 | 321 | 19 | 4 | 2 | 3 |
| 2010 | 505 | 34 | 13 | 7 | 3 |
| 2010 | 601 | 4 | 4 | 1 | 0 |
| 2011 | 106 | 6 | 7 | 0 | 0 |
| 2011 | 109 | 0 | 3 | 3 | 0 |
| 2011 | 212 | 1 | 1 | 1 | 1 |
| 2011 | 2703 | 15 | 4 | 0 | 0 |
| 2011 | 303 | 19 | 8 | 8 | 3 |
| 2011 | 304 | 0 | 1 | 0 | 0 |
| 2011 | 308 | 1 | 0 | 0 | 0 |
| 2011 | 321 | 7 | 2 | 0 | 0 |
| 2011 | 322 | 12 | 9 | 4 | 0 |
| 2011 | 324 | 7 | 0 | 0 | 0 |
| 2011 | 505 | 12 | 9 | 11 | 3 |
| 2011 | 508 | 1 | 0 | 0 | 0 |
| 2011 | 515 | 0 | 2 | 0 | 0 |
| 2011 | 516 | 0 | 1 | 0 | 0 |
| 2011 | 601 | 4 | 3 | 1 | 0 |
| TOTAL | | 315 | 133 | 61 | 22 |

125. Dow Corning did not account for fugitive emissions from the following components at the facility in its required monthly and 12-month rolling emission calculations for individual and total HAP: the 123 Lift Station, components in VHAP service, and components in organic HAP service.
126. From May 2008 to the present, Dow Corning's total emissions for individual and total HAP, including fugitive emissions from HAP emission sources at the facility, have exceeded 10 tpy and 25 tpy.
127. Since at least May 10, 2008 to the present, Dow Corning has been a major source of HAP, and therefore subject to the requirements of the NESHAP for MON, at 40 C.F.R. Subpart FFFF.
128. From May 10, 2008 to the present, Dow Corning has not taken action to comply with the requirements of the NESHAP for MON, which include emission standards, requirements to demonstrate initial and continuous compliance with emission limits, operating limits, work practice standards, and recordkeeping requirements associated with miscellaneous organic chemical manufacturing. *See* 40 C.F.R. § 63.2430.

NESHAP for Benzene Waste Operations at 40 C.F.R. Part 61 Subpart FF

129. At the facility, Dow Corning operates process units to produce, among other chemicals, benzene, and is therefore a chemical manufacturer as defined by 40 C.F.R. § 61.341.
130. As a chemical manufacturer subject to the NESHAP for Benzene Waste Operations, Dow Corning is required to determine the total annual benzene quantity from facility waste by determining the annual waste quantity for each waste stream at the point of waste generation at the facility, in accordance with 40 C.F.R. §§ 61.342 and 61.355.
131. At the facility, Dow Corning operates a tank farm known as the 800 Tank Farm. The 800 Tank Farm is used to contain waste for off-site shipment, which has been through various production processes at the facility. The 800 Tank Farm consists of, among other things, four load-out tanks, which are identified by Dow Corning as follows: #19781, #19782, #19783, and #19786.
132. Dow Corning directs waste streams at the facility to the load-out tanks in the 800 Tank Farm. Dow Corning identifies waste streams and other solvent laden waste streams that are directed to the 800 Tank Farm with the code "Q86017."
133. To determine the total annual benzene quantity from facility waste, Dow Corning calculates the flow weighted annual average benzene concentration and the flow rate of six waste streams at the facility, identified as: 337 Scrubber, 6572 Column (in the 505 building), 4463 Separator (in the 109 building), Q86507 waste from Tank #57, Q86017 waste from the 800 Tank Farm, and the landfill.

134. There are 29 units at the facility which collect waste streams identified as Q86017 prior to being transferred to the 800 Tank Farm. Dow Corning identifies these tanks as follows:

| | |
|-----------------------|----------------|
| 1) Degreaser | 2) Tank 5616 |
| 3) Front Skimmer | 4) Tank 5636 |
| 5) IPA Column Rinse | 6) Tank 5853 |
| 7) Oil Drum | 8) Tank 5967 |
| 9) Parts Degreaser | 10) Tank 6059 |
| 11) Waste Oil | 12) Tank 6184 |
| 13) Tank 15030W | 14) Tank 6900E |
| 15) Tank 19781-3 | 16) Tank 6903 |
| 17) Tank 22733 | 18) Tank 7614 |
| 19) Tank 306 | 20) Tank 7632 |
| 21) Tank 4218 | 22) Tank 8330 |
| 23) Tank 500 | 24) Tank 8331 |
| 25) Tank 5332 | 26) Tank 8884 |
| 27) Tank 5355 Cyclics | 28) Tank 9011 |
| 29) Tank 9013 | |

135. The 29 units identified in paragraph 134, above, are locations where waste streams exit process units or storage tanks prior to handling or treatment in the 800 Tank Farm, and are therefore points of generation, as defined in 40 C.F.R. § 61.341.

136. Dow Corning calculates the total annual benzene quantity from facility waste for Q86017 waste streams using the total volume of Q86017 sent to the 800 Tank Farm and sampling performed after the waste streams have entered the four load-out tanks in the 800 Tank Farm.

137. Dow Corning has not determined the total annual benzene quantity from facility waste by taking into account the 29 points of waste generation identified in paragraph 134, above.

138. Since 2008, Dow Corning uses a Thermal Oxidizer (Throx) as the facility's primary control device. Dow Corning uses the Throx, in part, to control vent emissions containing benzene.

139. The Throx contains a quench and absorber system. As part of the quench and absorber system, a slip stream is generated as make-up water to the quench system, which may contain benzene. Dow Corning has not identified the Throx's quench and absorber system to be a point of waste generation and a waste stream under 40 C.F.R. §§ 61.341 and 61.354.

140. Prior to 2008, Dow Corning's "site scrubbers," identified by Dow Corning as units #2512-01 and #2512-02, controlled vent emissions containing benzene. The site-scrubbers are wet scrubbers.

141. Since 2008, the site scrubbers are the primary back-up control device when the Throx is out of operation. Thus, when the Throx is not operating, waste streams containing benzene may be processed by the site scrubbers. Dow Corning has not identified the site scrubbers to be point of generation and a waste stream under 40 C.F.R. §§ 61.341 and 61.354.
142. During EPA's inspection, Dow Corning provided information showing the periods of time the Throx was out of operation from June 6, 2008 through September 17, 2011. The total time the Throx has been out of operation is summarized in Table 5, below.

Table 5: Period of time the Throx was out of operation between June 2008 and September 2011

| Throx Downtime | | |
|-----------------------|-------------|--|
| Month | Year | Cumulative Downtime (Hours:Minutes) |
| June | 2008 | 120:45 |
| July | 2008 | 136:29 |
| August | 2008 | 133:30 |
| September | 2008 | 154:00 |
| October | 2008 | 1:00 |
| November | 2008 | 33:30 |
| December | 2008 | 47:00 |
| January | 2009 | 8:15 |
| February | 2009 | 32:00 |
| March | 2009 | 56:30 |
| April | 2009 | 0:30 |
| May | 2009 | 512:30 |
| June | 2009 | 5:45 |
| July | 2009 | 1:15 |
| August | 2009 | 9:45 |
| September | 2009 | 9:45 |
| October | 2009 | 179:15 |
| November | 2009 | 6:15 |
| December | 2009 | 90:15 |
| January | 2010 | 42:00 |
| February | 2010 | 15:30 |
| March | 2010 | 56:30 |
| April | 2010 | 0:30 |
| May | 2010 | 43:30 |
| June | 2010 | 5:45 |

| | | |
|-----------|------|--------|
| July | 2010 | 3:15 |
| August | 2010 | 372:30 |
| September | 2010 | 2:00 |
| October | 2010 | 0 |
| November | 2010 | 3:45 |
| December | 2010 | 4:30 |
| January | 2011 | 59:00 |
| February | 2011 | 0 |
| March | 2011 | 0 |
| April | 2011 | 27:00 |
| May | 2011 | 16:15 |
| June | 2011 | 36:30 |
| July | 2011 | 0 |
| August | 2011 | 12:00 |
| September | 2011 | 342:00 |

NSPS

143. Dow Corning operates steam generating units subject to the NSPS for ICI SGU at 40 C.F.R. § 60.40Db at the facility, and identifies these units as follows: Boiler #12, #13, and #14, and the Throx.
144. The emission units identified in paragraph 143, above, are subject to a NO_x standard at 40 C.F.R. § 60.44b.
145. Dow Corning operates CEMS, as defined by 40 C.F.R. § 60.2, to monitor pollutants for emission units at the facility, as described in Table 6, below.

Table 6: List of CEMS Units at the Dow Corning Facility

| Emission Unit | CEMS Type | Pollutant Monitored |
|---------------|---------------------------|---------------------|
| FGTHROX | | |
| | Thermo 42i/42i-LS | NO _x |
| | Brand Gaus 4705 | O ₂ |
| | California Analytical ZRE | CO ₂ |
| FG432BOILERS | | |
| Boiler #12 | Thermo 42i-HL | NO _x |
| | Brand Gaus 4705 | O ₂ |
| Boiler #13 | Thermo 42i-HL | NO _x |
| | Brand Gaus 4706 | O ₂ |
| Boiler #14 | Thermo 42i-HL | NO _x |

146. The CEMS listed in Table 6, above, are subject to 40 C.F.R. § 60.48b(b) and (c).

147. During EPA’s inspection, Dow Corning provided monitoring information for the CEMS at the facility. Table 7 below summarizes the time that the facility’s CEMS were out of operation for the emission units listed from 2007 through 2011.

Table 7: List of CEMS downtime at the Dow Corning Facility

| CEMS Type | Associated Process Unit | Reporting Period | Process Unit Operating Time During Reporting Period (Hours) | Time CEMS Was Out of Control (Downtime) (% of Operating Time) | Pollutant Unit Monitors |
|-----------------|-------------------------|--------------------|---|---|-------------------------|
| Brand Gaus 4705 | Boiler #12 | 7/1/2007-9/30/2007 | 2,100 | 17.40% | O ₂ |
| Thermo 42i-HL | Boiler #12 | 7/1/2007-9/30/2007 | 2,100 | 17.40% | NO _x |
| Thermo 42i-HL | Boiler #13 | 7/1/2007-9/30/2007 | 2,023 | 18.19% | NO _x |
| Brand Gaus 4706 | Boiler #13 | 7/1/2007-9/30/2007 | 2,023 | 18.10% | O ₂ |
| Brand Gaus 4705 | Boiler #14 | 7/1/2007-9/30/2007 | 2,207 | 16.80% | O ₂ |

| | | | | | |
|--------------------------|------------|--------------------------|-------|--------|-----|
| Thermo 42i-HL | Boiler #14 | 7/1/2007- 9/30/2007 | 2,207 | 16.80% | NOx |
| Thermo 42i-HL | Boiler #13 | 10/1/2008- 12/31/2008 | 2,208 | 10.26% | NOx |
| Brand Gaus 4706 | Boiler #13 | 10/1/2008- 12/31/2008 | 2,208 | 6.70% | O2 |
| Thermo 42i/42i- LS | Throx | 10/1/2008- 12/31/2008 | 2,190 | 31.60% | NOx |
| Brand Gaus 4705 | Throx | 10/1/2008- 12/31/2008 | 2,190 | 27.20% | O2 |
| TECO 42I | Boiler #12 | 7/1/2010- 9/30/2010 | 1,899 | 14.17% | NOx |
| Brand Gaus 4705 | Boiler #12 | 7/1/2010- 9/30/2010 | 1,899 | 13.16% | O2 |
| Thermo 42i/42i- LS | Throx | 4/1/2011- 6/30/2011 | 2,145 | 77.35% | NOx |
| Thermo 42i/42i- LS | Throx | 1/1/2011- 3/31/2011 | 2,132 | 17.26% | NOx |

148. Dow Corning did not operate CEMS for the Throx and Boilers #12, #13, and #14 during all periods of operation except for breakdowns and repairs, as required by 40 C.F.R. §§ 60.13(e) and 60.48b(c).

Title V

149. Dow Corning is a “major source” subject to Title V of the Act.

150. From May 10, 2008 to the present, Dow Corning has not included fugitive emissions from all HAP emission sources at the facility in its required monthly and 12-month rolling emissions calculations for individual and total HAP.

151. On March 13, 2008, March 12, 2009, March 10, 2010, and March 10, 2011, Dow Corning submitted an annual certification report, in accordance with its Title V Permit. In each instance, the certification did not include deviations from Dow Corning’s HAP limits.

152. Dow Corning operates a silicone rubber manufacturing process unit, identified in the facility’s Title V permit as emission unit 207-01. Emission unit 207-01 releases air emissions containing high concentrations of volatile organic compounds (VOC).

153. On November 9, 2010, Dow Corning conducted a VOC stack test on emission unit 207-01, using EPA Reference Method 25a. The average emission rate during the VOC stack test on emission unit 207-01 was calculated to be 35.76 pph, which exceeds the emission rate limit in the Title V permit of 35.4 pph.
154. During the inspection, EPA requested parametric monitoring data for the facility's condensers, scrubbers and absorbers listed in the Title V permit. On December 9, 2011 Dow Corning provided EPA with the requested parametric monitoring data.
155. Dow Corning operates the condensers and scrubbers listed in Table 8 below. Table 8 summarizes the times and percentages that each condenser and scrubber operated outside of the permitted temperature limits at various times since 2007, based on the data provided by Dow Corning. The data in Table 8 is based on readings taken every fifteen minutes, as required by Dow Corning's Title V permit.

Table 8: Condenser and Scrubbers Parametric Monitoring Data

| Year | Permitted Emission Unit | Emission Unit Number | Type of Unit | Time Out of Service (15 Minute Units) | Number of Times Out of Compliance with permitted limits (15 Minute Units) | Total Number of Readings | Percentage Out of Compliance with permitted limits |
|------|-------------------------|----------------------|--------------|---------------------------------------|---|--------------------------|--|
| 2011 | EU303-01 | 3469 | Condenser | 0 | 8,472 | 29,180 | 29.03% |
| 2007 | EU303-06/ EU303-07 | 1637 | Condenser | 0 | 23,597 | 35,040 | 67.34% |
| 2008 | EU303-06/ EU303-08 | 1637 | Condenser | 18 | 9,545 | 35,136 | 27.13% |
| 2007 | EU303-07 | 1635 | Condenser | 0 | 5,790 | 35,040 | 16.52% |
| 2009 | EU501-49 | 15091 | Condenser | 0 | 7,217 | 35,040 | 20.60% |
| 2007 | EU502-01 | 9950/9960 | Scrubber | 0 | 11,218 | 35,039 | 32.02% |
| 2009 | 337 Scrubbers | 22452 | Scrubber | 0 | 5,217 | 35,128 | 14.85% |

NOTICE AND FINDING OF VIOLATIONS

NESHAP Violations

40 C.F.R. Part 61, Subpart V Violations

156. Dow Corning failed to monitor monthly 512 valves at the facility in order to, among other things, detect and repair leaks by the methods specified in 40 C.F.R. § 61.245(b), as set forth in Table 1, above, in violation of 40 C.F.R. § 61.242-7 and Section 112 of the Act, 42 U.S.C. § 7412.
157. Dow Corning failed to annually monitor each pump at the facility designated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, for the pumps set forth in Table 2, above, in violation of 40 C.F.R. § 61.242-2(e)(3) and Section 112 of the Act, 42 U.S.C. § 7412.
158. Dow Corning failed to record in a log that is kept in a readily accessible location, a list of identification numbers for equipment in vacuum service, in violation of 40 C.F.R. § 61.246(e)(5) and Section 112 of the Act, 42 U.S.C. § 7412.
159. Dow Corning failed to perform an analysis demonstrating that equipment is not in VHAP service for equipment designated as not in VHAP service, in violation of 40 C.F.R. §§ 61.245(d)(1) and 61.246(i)(2) and Section 112 of the Act, 42 U.S.C. § 7412.
160. Dow Corning failed to record in a log that is kept in a readily accessible location, information and data used to demonstrate that piece of equipment is not in VHAP service, in violation of 40 C.F.R. § 61.246(j) and Section 112 of the Act, 42 U.S.C. § 7412.
161. From June 2009 to May 2010, Dow Corning failed to monitor monthly pump 51026 to detect leaks by the methods specified in 40 C.F.R. § 61.245(b), in violation of 40 C.F.R. § 61.242-2(a)(1) and Section 112 of the Act, 42 U.S.C. § 7412.

40 C.F.R. Part 63, Subpart FFFF Violations

162. From May 2008 to the present, Dow Corning has been a major source of HAP and therefore required to comply with the requirements of the NESHAP for MON at 40 C.F.R. Part 63, Subpart FFFF. Dow Corning has failed to comply with the requirements of the NESHAP for MON, which include emission standards, requirements to demonstrate initial and continuous compliance with emission limits, operating limits, work practice standards, and recordkeeping requirements associated with miscellaneous organic chemical manufacturing, in violation of 40 C.F.R. Part 63, Subpart FFFF and Section 112 of the Act, 42 U.S.C. § 7412.

40 C.F.R. Part 61, Subpart FF Violations

163. Dow Corning failed to determine the annual waste quantity for each waste stream at the point of waste generation for all points of waste generation at the facility, in violation of 40 C.F.R. § 61.355(a)(1)(i) and (b) and Section 112 of the Act, 42 U.S.C. § 7412.
164. Dow Corning failed to determine the total annual benzene quantity from facility waste, by calculating the sum of the annual benzene quantity for each waste stream at the facility, in violation of 40 C.F.R. §§ 61.355(a), (b), (c), 61.342(a) and Section 112 of the Act, 42 U.S.C. § 7412.

NSPS Violations

165. Dow Corning failed to operate CEMS for the Throx and Boilers #12, #13, and #14 during all periods of operation except for breakdowns and repairs, as set forth in Table 7, in violation of 40 C.F.R. §§ 60.48b(c) and 60.13(e), and Section 111 of the Act, 42 U.S.C. § 7411.

Michigan SIP Violation

166. On November 9, 2010, Dow Corning caused or allowed the emission of VOC emissions at 35.76 pph from emission unit 207-01, in excess of the lowest maximum allowable emission rate of 35.4 pph as specified in Dow Corning's Title V permit, in violation of R 336.1702, and Section 110 of the Act, 42 U.S.C. § 7410.

Title V Violations

167. Dow Corning is in violation of the facility's Title V permit at Section D-1, Flexible Group Conditions, FGLeakDetection, VI. Monitoring/Recordkeeping, Number 1, and IX. Other Requirements, Number 3, which requires compliance with 40 C.F.R. Part 61, Subpart V, and Title V of the Act, 40 U.S.C. § 7661 *et seq.*
168. Dow Corning is in violation of the facility's Title V permit at Section B-1, Source-Wide Conditions, IX. Other requirements, Number 3, which requires compliance with 40 C.F.R. Part 61, Subpart FF, and Title V of the Act, 42 U.S.C. § 7661 *et seq.*
169. Dow Corning is in violation of the facility's Title V permit at Section D-1, Flexible Group Conditions, FGThrox, III. Process/Operational Restrictions, Number 2, which requires the permittee to comply with 40 C.F.R. Part 60, Subparts A and Db, and Title V of the Act, 42 U.S.C. § 7661 *et seq.*
170. During the emissions test conducted on November 9, 2010, Dow Corning violated the facility's Title V permit volatile organic compound limit of 35.4 pph for emission unit 207-01, required by Section C-1, Emission Unit Conditions, EU-207-01, I. Emission Limits for VOC, and Title V of the Act, 40 U.S.C. § 7661 *et seq.*

171. From May 10, 2008 to the present, Dow Corning has been inaccurately calculating the facility's monthly and 12-month rolling emissions calculations for individual and total HAP, in violation of its Title V Permit, Section B-1, Source-Wide Conditions, VI. Monitoring/Recordkeeping, Number 5, and Title V of the Act, 42 U.S.C. § 7661 *et seq.*
172. From May 10, 2008 to the present, Dow Corning has failed to limit emissions of individual HAP from the facility to less than 10 tpy, and to limit emissions of aggregate HAP from the facility to less than 25 tpy, in violation of the Title V permit at Section B-1, Source-Wide Conditions, I. Emission Limits, and Title V of the Act, U.S.C. § 7661 *et seq.*
173. On March 13, 2008, March 12, 2009, March 10, 2010, and March 10, 2011, Dow Corning submitted incomplete and inaccurate Title V certification reports because each report failed to include violations of the facility's emission limits for individual and total HAP, in violation of Dow Corning's Title V permit and Title V of the Act, 42 U.S.C. § 7661 *et seq.*
174. Dow Corning failed to comply with the emission limits set forth in the Title V permit for emission units 303-01, 303-06, 303-07, 303-08, 501-49, 502-01, and FG337Scrubbers, as set forth in Table 8, above, in violation of the Title V Permit at Section C-1, Emission Unit Conditions, and Title V of the Act, 42 U.S.C. § 7661 *et seq.*
175. Dow Corning failed to operate CEMS for the Throx and Boilers #12, #13, and #14 during all periods of operation except for breakdowns and repairs, as set forth in Table 7, in violation of the Title V Permit at, Section D-1, Flexible Group Conditions, FGThrox, VI. Monitoring/Recordkeeping, Number 2, and FG432Boilers, VI. Monitoring/Recordkeeping, Number 2, and Title V of the Act, 42 U.S.C. § 7661 *et seq.*

ENVIRONMENTAL IMPACT OF VIOLATIONS

176. NO_x emissions increase the amount of acid rain and ground level ozone, which could cause respiratory inflammation.
177. VOC emissions increase the amount of pollutants that have the ability to create photochemical smog under certain conditions.
178. HAP emissions increase the amount of pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, and/or adverse environmental effects.

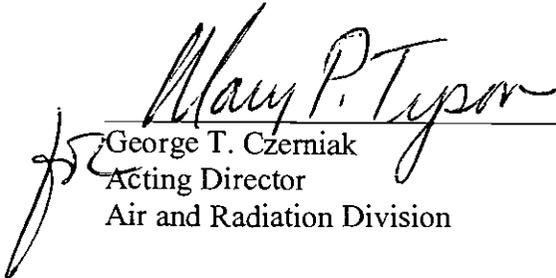
179. Benzene emissions increase the amount of benzene in the atmosphere. In acute (short-term) inhalation exposure of humans to benzene may cause drowsiness, dizziness, headaches, as well as eye, skin, and respiratory tract irritation, and, at high levels, unconsciousness. Chronic (long-term) inhalation exposure has caused various disorders in the blood, including reduced numbers of red blood cells and aplastic anemia, in occupational settings. Reproductive effects have been reported for women exposed by inhalation to high levels, and adverse effects on the developing fetus have been observed in animal tests. Increased incidences of leukemia (cancer of the tissues that form white blood cells) have been observed in humans occupationally exposed to benzene.

ENFORCEMENT AUTHORITY

180. Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1), provides in part that at any time after the expiration of 30 days following the date of the issuance of a Notice of Violation, EPA may, without regard to the period of violation, issue an order requiring compliance with the requirements of the applicable SIP, issue an administrative penalty order pursuant to Section 113(d), or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.
181. Section 113(a)(3) of the Act, 42 U.S.C. § 7413(a)(3), provides in part that if EPA finds that a person has violated or is in violation of any requirement or prohibition of any rule promulgated under Title I and/or Title V of the Act, EPA may issue an administrative penalty order under Section 113(d), issue an order requiring compliance with such requirement or prohibition, or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.

Date

03/30/12


George T. Czerniak
Acting Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Tracy Jamison, certify that I sent a Notice and Finding of Violation, No. EPA-5-12-MI-03, by Certified Mail, Return Receipt Requested, to:

Timothy Dyste
Midland Site Plant Manager
Dow Corning Corporation
Midland Plant
3901 South Saginaw Road
Midland, Michigan 48686

I also certify that I sent copies of the Notice of Violation and Finding of Violation by first-class mail to:

Chris Hare, District Supervisor
Michigan Department of Natural Resources and Environment
Saginaw Bay District Office
401 Ketchum Street
Bay City, Michigan 48708

Tom Hess
Michigan Department of Environmental Quality
Air Quality Division
P.O. Box 30260
Lansing, Michigan 48909

Steven Moser
Dow Corning Corporation
2200 West Salzburg Road, #CO1282
P.O. Box 994
Midland, Michigan 48686

On the 3rd day of April 2012.



Tracy Jamison,
Office Automation Assistant
AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER: 70091680 0000 2673 9535